Appendix R3-A

Kudz Ze Kayah Surface Water Quality Report

2018 Surface Water Quality Baseline Report

Kudz Ze Kayah Project

BMC-17-01-525_001_Surface Water Quality Baseline Report_Rev0_180508

08 May 2018

Prepared for:

BMC Minerals (No.1) Ltd.

DISTRIBUTION LIST

# of copies	Company/Agency name
1	BMC Minerals (No.1) Ltd.

ALEXCO ENVIRONMENTAL GROUP INC. SIGNATURES

Signature Redacted

Report prepared by:

Nichole Speiss, B.Sc., EPt
Environmental Scientist

MAY 8, 2018
DATE

Signature Redacted

Report prepared by:

Andrew Gault, M.Chem., Ph.D.
Environmental Chemist

MAY 8, 2018
DATE

Signature Redacted

Report reviewed by:

Kai Woloshyn, B.Sc.
Senior Environmental Manager

MAY 8, 2018
DATE

EXECUTIVE SUMMARY

BMC Minerals (No.1) Ltd. (BMC) is proposing to develop the Kudz Ze Kayah (KZK) Project (the Project), which is located approximately 110 km southeast of Ross River, Yukon Territory. The Project is currently undergoing a Screening Assessment by the Yukon Environmental and Socio-economic Assessment Board's (YESAB) Executive Committee, under the *Yukon Environmental and Socio-economic Assessment Act.* During the Adequacy stage of the Assessment, YESAB requested that BMC submit a number of updated water related reports, prior to YESAB preparing the draft Screening Report. This Surface Water Quality Baseline report is an update to the Kudz Ze Kayah Surface Water Quality Baseline Report (AEG, 2016) that was submitted as Appendix D-1 of the Project Proposal (BMC, 2017).

Alexco Environmental Group Inc. (AEG) was retained by BMC to conduct baseline water quality sampling for the Project in April 2015 and the program is ongoing. The program currently consists of monthly water quality sampling at twelve surface water stations located on South Creek, Fault Creek, Geona Creek, Finlayson Creek, and East Creek. This report presents the data collected between April 2015 and March 2018. These data were combined with the historical Cominco water quality surveys in 1994-1995 and subsequent water licence biannual sampling between 2002 and 2016 to evaluate the natural background chemistry of the major watercourses located on the KZK property. All creek waters were circumneutral to mildly alkaline (pH 6.7 – 8.7; median 7.7), with hardness increasing from moderately hard (South Creek and Fault Creek) to hard (Geona Creek) in the upper watershed to very hard (Finlayson Creek and East Creek) in the lower watershed.

Water quality was compared against the most recently revised water quality guidelines for protection of aquatic life established by the Canadian Council of Ministers of the Environment (CCME) or British Columbia Ministry of the Environment (BCMoE). Comparison to the guidelines indicated sporadic exceedances for fluoride, phosphorus, aluminum, arsenic, cadmium, chromium, copper, iron, selenium, and zinc. In general, more water quality guideline exceedances were noted for total metal concentrations than their dissolved counterparts, suggesting that a significant portion of the metals were particulate-bound, especially during freshet and/or other periods characterized by elevated total suspended solids (TSS) levels. The much less frequent water quality guideline exceedances observed for dissolved metals is important since it is the dissolved fraction that is the most bioavailable.

Higher total metal concentrations were measured during spring freshet due to the high run-off and associated stream flow which increased the particulate content of the streams. The exceptions to this trend were concentrations of fluoride, total selenium, uranium, and hardness, which were lowest during spring freshet and summer. Selenium, uranium, and hardness concentrations rose throughout the late fall and winter months, suggesting that groundwater is an important contributor to the surface water concentrations of these constituents. Elevated concentrations of these constituents are observed in shallow groundwaters of the Project area.

A comparison of the 1994 to 1995 results with those from April 2015 to March 2018 showed that the majority of parameters had a similar concentration range, suggesting the site water quality has remained largely unchanged in the past two decades of monitoring. Only total chromium and selenium exhibited clear differences between

the datasets, which may be attributable to differences in sampling frequency, flow conditions at the time of sampling, and pre-concentration used to improve the detection limits of these two elements in the historical dataset.

A higher frequency, five samples in 30 days sampling program was carried out at most monitoring locations in May-June 2017 and February-March 2018. Concentrations were broadly within the range of concentrations observed in May-June of 2015 and 2016 and peak concentrations in May 2017 were comparable to historical May peak concentrations. A similar observation was made for the February-March 2018 dataset, which exhibited limited variability for most parameters and returned concentrations comparable to those observed in February-March 2016 and 2017.

Overall, the three years of monthly water quality data collected between April 2015 and March 2018 have returned similar annual concentration spans and (where observed) seasonal trends at all sites. Only KZ-17 exhibited a marked difference, which is attributed to upstream beaver activity and an associated change in Geona Creek flow through a beaver dam located upstream.

LIST OF ACRONYMS

AEG	Alexco Environmental Group Inc.
BCMoE	British Columbia Ministry of Environment
BMC	BMC Minerals (No.1) Ltd.
CAEAL	Canadian Association for Environmental Analytical Laboratories
CCME	Canadian Council of Ministers of the Environment
COC	Chain of Custody
DL	Detection Limit
DOC	Dissolved Organic Carbon
IEE	Initial Environmental Evaluation
km	Kilometre
KZK	Kudz Ze Kayah
m	Metre
ORP	Oxidation-Reduction Potential
PAL	Protection of Aquatic Life
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TCU	True Colour Unit
TSS	Total Suspended Solids
WAD	Weak Acid Dissociable

GLOSSARY

Canadian Association for Environmental Analytical Laboratories: body that oversees the accreditation of analytical laboratories in Canada.

Chain of Custody: paperwork that chronologically documents the collection, transportation, processing, and analysis of a sample.

Detection Limit: the lowest quantity of a constituent that can be distinguished from the absence of that constituent using the analytical technique employed, generally at a 1% confidence limit (i.e., it is the smallest amount of a constituent that can be measured with a 99% certainty of detection).

Dissolved Organic Carbon: concentration of organic carbon present in a water sample that has been filtered (<0.45 µm) prior to analysis.

EQWin: database management software that is used to archive and interrogate water quality data collected for the Kudz Ze Kayah Project.

Initial Environmental Evaluation: document produced by Cominco in 1996 that summarises baseline studies at the Kudz Ze Kayah property, describes the Mine plan, waste material characterization, closure plan, environmental management, potential impacts and associated mitigation measures, and socio-economic impacts associated with the Project as it was defined in 1996.

Kudz Ze Kayah: exploration property owned by BMC Minerals (No. 1) Ltd. situated in southeast Yukon, Canada.

Oxidation-Reduction Potential: a measure of how oxidizing or reducing a water sample is and can shed light on the geochemical conditions of the water body from which the water sample was collected.

Protection of Aquatic Life: subset of the CCME guidelines for the protection of freshwater aquatic life.

Practical Quantitation Limit: defined here as five times the detection limit.

Relative Percent Difference: calculated as the difference between the constituent concentrations of two replicate samples divided by the average of the two constituent concentrations, expressed as a percentage.

True Colour Unit: units used to express colour measurements.

Total Suspended Solids: concentration of particulate material of size >2 µm present in water sample.

Weak Acid Dissociable: WAD-cyanide refers to the metal cyanide species that dissociate (i.e., release free cyanide) under weakly acidic conditions (pH 4.5 to 6). Such WAD-cyanide, alongside free cyanide, is considered to be the most toxic fraction of the total cyanide concentration present in a sample.

TABLE OF CONTENTS

1. INTRODUCTION 1
1.1 BACKGROUND 4
1.1.1 Initial Environmental Evaluation Baseline Data 4
1.1.2 Water Licence QZ09-026-01 Monitoring 8
2. METHODOLOGY 9
2.1 SAMPLE LOCATIONS 9
2.2 FIELD METHODOLOGY 10
2.3 ANALYSES 11
2.4 QUALITY ASSURANCE/QUALITY CONTROL 14
2.4.1 Laboratory Quality Control Sample Analysis 14
2.4.2 Field Variability 14
2.4.3 Field and Travel Blanks 17
2.5 SURFACE WATER QUALITY GUIDELINES 20
2.6 DATA QUALITY ASSESSMENT 21
3. RESULTS AND DISCUSSION 24
3.1 SOUTH CREEK 24
3.1.1 Setting 24
3.1.2 Physical Parameters and Nutrients 24
3.1.3 Metals 27
3.2 GEONA CREEK WATERSHED 29
3.2.1 Setting 29
3.2.2 Physical Parameters and Nutrients 29
3.2.3 Metals 42
3.3 GEONA CREEK SEEPS 52
3.3.1 Setting 52
3.3.2 Physical Parameters and Nutrients 52
3.3.3 Metals 55
3.4 FINLAYSON CREEK 61
3.4.1 Setting 61
3.4.2 Physical Parameters and Nutrients 61
3.4.3 Metals 69
3.5 EAST CREEK 75
3.5.1 Setting 75
3.5.2 Physical Parameters and Nutrients 75
3.5.3 Metals 78
3.6 COMPARISON OF HISTORICAL AND RECENT WATER QUALITY DATA 80
3.7 FIVE SAMPLES IN 30 DAYS EVENT MAY – JUNE 2017 82
3.8 FIVE SAMPLES IN 30 DAYS EVENT FEBRUARY – MARCH 2018 88
4. SUMMARY 93

5. REFERENCES 94

LIST OF TABLES

Table 1-1: Surface Water Quality Monitoring Stations from 1994 and 1995 5
Table 1-2: Surface Water Quality Monitoring Frequency in 1994 and 1995 6
Table 1-3: Surface Water Quality Parameters Monitored in 1994 and 1995 7
Table 2-1: KZK Surface Water Quality Monitoring Locations 9
Table 2-2: Analytical Methods used for Physical, Anion, and Nutrient Constituents Analyzed in the Laboratory 12
Table 2-3: Analytical Methods used for Element Constituents Analyzed in the Laboratory 13
Table 2-4: Duplicate Analytes with RPD greater than 25% that met the PQL 15
Table 2-5: Duplicate Analytes with RPD greater 25% that did not meet the PQL 16
Table 2-6: Field Blank Analytes with Concentrations Greater than twice the DL 19
Table 2-7: Generic Water Quality Guidelines for the Protection of Aquatic Life 20
Table 3-1: Summary Statistics for In Situ Parameters at Site KZ-13, South Creek 25
Table 3-2: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-13, South Creek 26
Table 3-3: Summary Statistics for Metals of Interest at Site KZ-13, South Creek 28
Table 3-4: Summary Statistics for In Situ Parameters at Site KZ-6, Tributary to Geona Creek 30
Table 3-5: Summary Statistics to March 2017 for In Situ Parameters at Site KZ-7, Geona Creek 30
Table 3-6: Summary Statistics for In Situ Parameters at Site KZ-9, Geona Creek 31
Table 3-7: Summary Statistics for In Situ Parameters at Site KZ-18, Tributary to Geona Creek 31
Table 3-8: Summary Statistics for In Situ Parameters at Site KZ-37, Geona Creek 32
Table 3-9: Summary Statistics for In Situ Parameters at Site KZ-17, Geona Creek 32
Table 3-10: Summary Statistics for In Situ Parameters at Site KZ-2, Fault Creek 33
Table 3-11: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-6, Tributary to Geona Creek 35
Table 3-12: Summary Statistics to March 2017 for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-7, Geona Creek 36
Table 3-13: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-9, Geona Creek 37
Table 3-14: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-18, Tributary to Geona Creek 38
Table 3-15: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-37, Geona Creek 39
Table 3-16: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-17, Geona Creek 40

Table 3-17: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-2, Fault Creek 41
Table 3-18: Summary Statistics for Metals of Interest at Site KZ-6, Tributary to Geona Creek 45
Table 3-19: Summary Statistics for Metals of Interest at Site KZ-7, Geona Creek 46
Table 3-20: Summary Statistics for Metals of Interest at Site KZ-9, Geona Creek 47
Table 3-21: Summary Statistics for Metals of Interest at Site KZ-18, Tributary to Geona Creek 48
Table 3-22: Summary Statistics for Metals of Interest at Site KZ-37, Geona Creek 49
Table 3-23: Summary Statistics for Metals of Interest at Site KZ-17, Geona Creek 50
Table 3-24: Summary Statistics for Metals of Interest at Site KZ-2, Fault Creek 51
Table 3-25: In Situ Parameters at Seep Sites 53
Table 3-26: CCME/BCMoE Guideline Anions and Nutrients at Seep Sites 54
Table 3-27: Concentrations of Metals of Interest at East Seep Near KZ-9 56
Table 3-28: Concentrations of Metals of Interest at West Seep Near KZ-9 57
Table 3-29: Concentrations of Metals of Interest at Seep 3 58
Table 3-30: Concentrations of Metals of Interest at Seep 4 59
Table 3-31: Concentrations of Metals of Interest at Seep 5 60
Table 3-32: Summary Statistics for In Situ Parameters at Site KZ-16, Finlayson Creek 62
Table 3-33: Summary Statistics for In Situ Parameters at Site KZ-15, Finlayson Creek 62
Table 3-34: Summary Statistics for In Situ Parameters at Site KZ-22, Finlayson Creek 63
Table 3-35: Summary Statistics for In Situ Parameters at Site KZ-26, Finlayson Creek 63
Table 3-36: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-16, Finlayson Creek 65
Table 3-37: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-15, Finlayson Creek 66
Table 3-38: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-22, Finlayson Creek 67
Table 3-39: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-26, Finlayson Creek 68
Table 3-40: Summary Statistics for Metals of Interest at Site KZ-16, Finlayson Creek 71
Table 3-41: Summary Statistics for Metals of Interest at Site KZ-15, Finlayson Creek 72
Table 3-42: Summary Statistics for Metals of Interest at Site KZ-22, Finlayson Creek 73
Table 3-43: Summary Statistics for Metals of Interest at Site KZ-26, Finlayson Creek 74
Table 3-44: Summary Statistics for In Situ Parameters at Site KZ-21, East Creek 76

Table 3-45: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-21, East Creek.....77

Table 3-46: Summary Statistics for Metals of Interest at Site KZ-21, East Creek.....79

Table 3-47: Summary Statistics for Constituents of Interest at Site KZ-6, Geona Creek in May-June 2017 84

Table 3-48: Summary Statistics for Constituents of Interest at Site KZ-9, Geona Creek in May-June 2017 84

Table 3-49: Summary Statistics for Constituents of Interest at Site KZ-18, Geona Creek in May-June 2017 84

Table 3-50: Summary Statistics for Constituents of Interest at Site KZ-37, Geona Creek in May-June 2017 85

Table 3-51: Summary Statistics for Constituents of Interest at Site KZ-17, Geona Creek in May-June 2017 85

Table 3-52: Summary Statistics for Constituents of Interest at Site KZ-2, Fault Creek in May-June 2017 85

Table 3-53: Summary Statistics for Constituents of Interest at Site KZ-16, Finlayson Creek in May-June 2017.....86

Table 3-54: Summary Statistics for Constituents of Interest at Site KZ-15, Finlayson Creek in May-June 2017.....86

Table 3-55: Summary Statistics for Constituents of Interest at Site KZ-22, Finlayson Creek in May-June 2017.....86

Table 3-56: Summary Statistics for Constituents of Interest at Site KZ-26, Finlayson Creek in May-June 2017.....87

Table 3-57: Summary Statistics for Constituents of Interest at Site KZ-21, East Creek in May-June 2017 87

Table 3-58: Summary Statistics for Constituents of Interest at Site KZ-2, Fault Creek in February-March 2018 90

Table 3-59: Summary Statistics for Constituents of Interest at Site KZ-9, Geona Creek in February-March 2018.....90

Table 3-60: Summary Statistics for Constituents of Interest at Site KZ-18, Geona Creek in February-March 2018 90

Table 3-61: Summary Statistics for Constituents of Interest at Site KZ-37, Geona Creek in February-March 2018 91

Table 3-62: Summary Statistics for Constituents of Interest at Site KZ-13, South Creek in February-March 2018.....91

Table 3-63: Summary Statistics for Constituents of Interest at Site KZ-15, Finlayson Creek in February-March 2018.....91

Table 3-64: Summary Statistics for Constituents of Interest at Site KZ-26, Finlayson Creek in February-March 2018.....92

LIST OF FIGURES

Figure 1-1: Project Location 2

Figure 1-2: Current Water Quality and Hydrology Monitoring Program.....3

LIST OF APPENDICES

APPENDIX A. HISTORIC AND APRIL 2015 TO MARCH 2018 SURFACE WATER MONITORING DATA

APPENDIX B. SURFACE WATER MONITORING PHOTO LOG

APPENDIX C. HISTORIC AND APRIL 2015 TO MARCH 2018 SURFACE WATER GRAPHS

APPENDIX D. AUGUST HISTORIC AND 2015-2017 SURFACE WATER GRAPHS

APPENDIX E. FIVE SAMPLES IN 30 DAYS MAY AND JUNE 2017 SURFACE WATER GRAPHS

APPENDIX F. FIVE SAMPLES IN 30 DAYS FEBRUARY AND MARCH 2018 SURFACE WATER GRAPHS

APPENDIX G. APRIL 2015 TO MARCH 2018 MAXXAM CERTIFICATES OF ANALYSIS

1. INTRODUCTION

BMC Minerals (No.1) Ltd. (BMC) is proposing to develop the Kudz Ze Kayah (KZK) Project (the Project), which is located approximately 110 km southeast of Ross River, Yukon Territory (Figure 1-1). The Project is currently undergoing a Screening Assessment by the Yukon Environmental and Socio-economic Assessment Board's (YESAB) Executive Committee, under the *Yukon Environmental and Socio-economic Assessment Act.* During the Adequacy stage of the Assessment, YESAB requested that BMC submit a number of updated water related reports, prior to YESAB preparing the draft Screening Report. Subsequently, this Surface Water Quality Baseline report is an update to the Kudz Ze Kayah Surface Water Quality Baseline Report (AEG, 2016) that was submitted as Appendix D-1 of the Project Proposal (BMC, 2017).

In March 2015, a gap analysis was undertaken to review the historical baseline surface water quality data available (described in Section 1.1) and based on the review of historical data and current regulatory requirements, the baseline water quality program was designed to update the dataset and fill in any data gaps. The baseline surface water quality program was implemented in April 2015 and monthly baseline monitoring is ongoing. This report discusses data collected between April 2015 and March 2018 (Figure 1-2). This report also presents and discusses the historical surface water quality collected as part of the baseline studies in 1994 and 1995 and previously presented in the Initial Environmental Evaluation (IEE) (Cominco, 1996). Surface water quality monitoring undertaken for the Project's Type A Water Licence QZ97-026-01 as part of the bi-annual aquatic monitoring program from 2002-2016 (Laberge Environmental Services and Can-Nic-A-Nick Environmental, 2003, 2005, 2007, 2009, 2011, 2013, 2015, 2017) is also included.

Given that site activities performed to date have centred around exploration activity and associated minimal infrastructure construction (accommodation, offices, core storage and equipment laydown areas), this baseline water quality monitoring documents the natural background chemistry of the surface watercourses in the Project's local and regional study area.

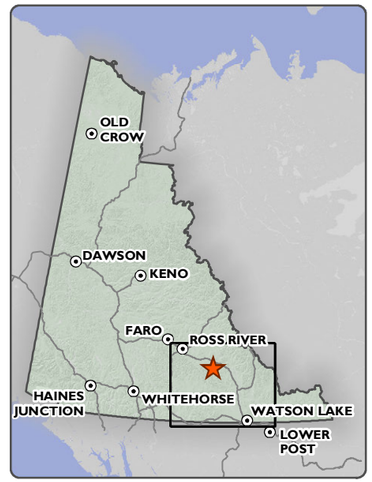
BMC MINERALS

KUDZ ZE KAYAH PROJECT

FIGURE 1 -1

PROJECT LOCATION

APRIL 2017



KUDZ ZE KAYAH PROJECT

ALEXCO ENVIRONMENTAL GROUP

Digital elevation model created by the Yukon Department of the Environment interpolated from the digital 1:50,000 Canadian National Topographic Database (NTDB Edition 2) contour and watercourse layers. Obtained from Geomatics Yukon.

Canvec compiled by Natural Resources Canada at a scale of 1:10,000 - 1:50,000. Reproduced under license from Her Majesty the Queen in Right of Canada, as represented by the Minister of Natural Resources Canada. All rights reserved. Drainage areas obtained from National Hydrology Network 2011

Datum: NAD 83; Projection UTM Zone 9N

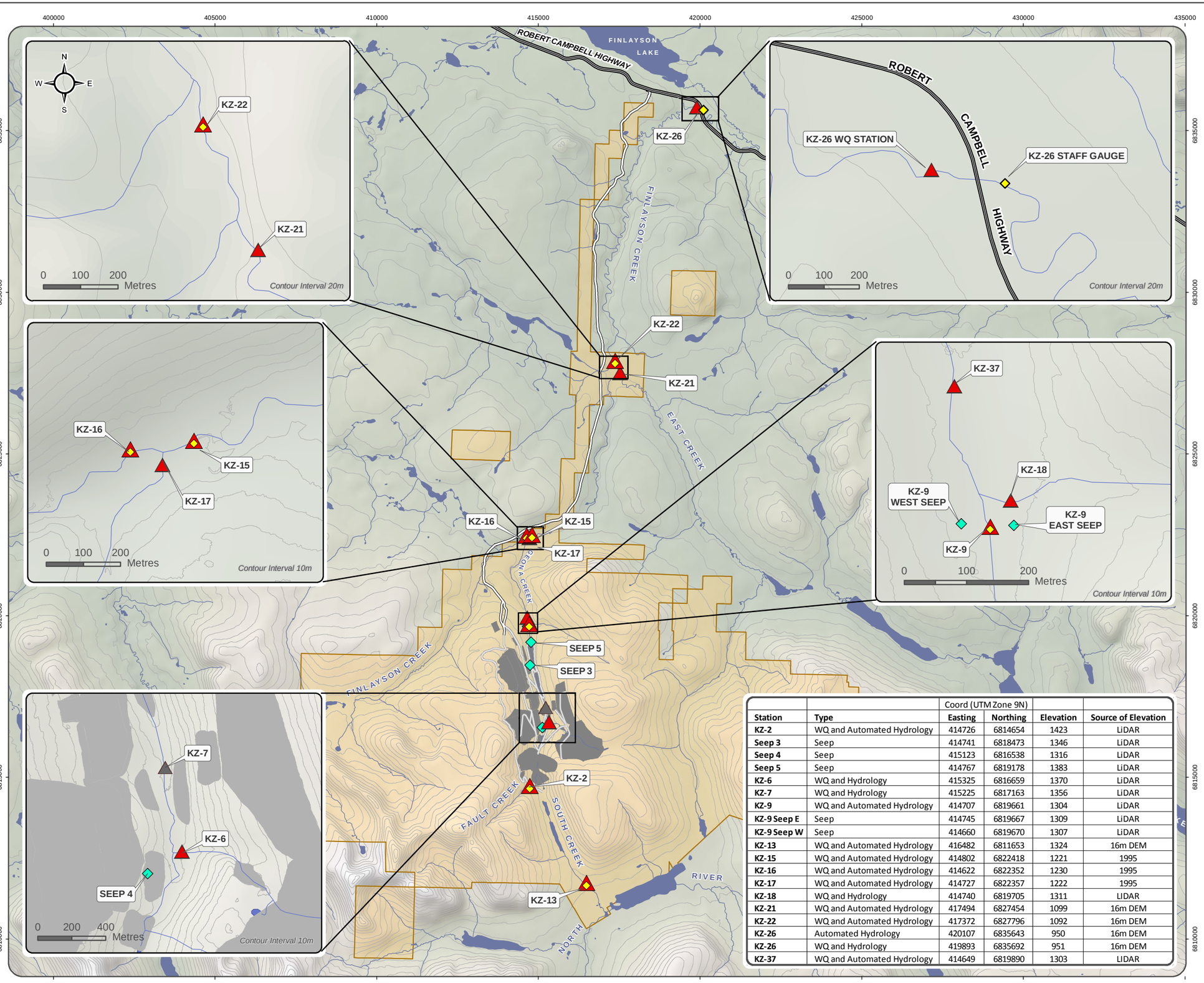
This drawing has been prepared for the use of Alexco Environmental Group Inc.'s client and may not be used, reproduced or relied upon by third parties, except as agreed by Alexco Environmental Group Inc. and its client, as required by law or for use of governmental reviewing agencies. Alexco Environmental Group Inc. accepts no responsibility, and denies any liability

1:1,500,000 when printed on 11 x 17 inch paper

0 20 40 60 80

Kilometres

D:\Project\AllProjects\Kudz_Ze_Kayah\Maps\01_Overview\03-Intermeditate\Project_Overview_20170117.mxd
(*Last edited by: mducharme; 2/13/2017/15:34 PM*)



		Coord (UTM Zone 9N)			
Station	**Type**	**Easting**	**Northing**	**Elevation**	**Source of Elevation**
KZ-2	WQ and Automated Hydrology	414726	6814654	1423	LiDAR
Seep 3	Seep	414741	6818473	1346	LiDAR
Seep 4	Seep	415123	6816538	1316	LiDAR
Seep 5	Seep	414767	6819178	1383	LiDAR
KZ-6	WQ and Hydrology	415325	6816659	1370	LiDAR
KZ-7	WQ and Hydrology	415225	6817163	1356	LiDAR
KZ-9	WQ and Automated Hydrology	414707	6819661	1304	LiDAR
KZ-9 Seep E	Seep	414745	6819667	1309	LiDAR
KZ-9 Seep W	Seep	414660	6819670	1307	LiDAR
KZ-13	WQ and Automated Hydrology	416482	6811653	1324	16m DEM
KZ-15	WQ and Automated Hydrology	414802	6822418	1221	1995
KZ-16	WQ and Automated Hydrology	414622	6822352	1230	1995
KZ-17	WQ and Automated Hydrology	414727	6822357	1222	1995
KZ-18	WQ and Hydrology	414740	6819705	1311	LiDAR
KZ-21	WQ and Automated Hydrology	417494	6827454	1099	16m DEM
KZ-22	WQ and Automated Hydrology	417372	6827796	1092	16m DEM
KZ-26	Automated Hydrology	420107	6835643	950	16m DEM
KZ-26	WQ and Hydrology	419893	6835692	951	16m DEM
KZ-37	WQ and Automated Hydrology	414649	6819890	1303	LiDAR

BMC MINERALS

KUDZ ZE KAYAH PROJECT

FIGURE 1-2

SURFACE WATER QUALITY AND HYDROLOGY MONITORING LOCATIONS

MAY 2018

- Hydrometric Station
- Water Quality and Hydrometric Station
- Water Quality Sampling Location
- Seep
- Water Quality Sampling Location, Discontinued
- Tote Road/Proposed Access Road
- Proposed Mine Road
- Contour (40 m interval)
- Watercourse
- Waterbody
- Location of Proposed Infrastructure
- BMC Minerals (No.1) Ltd. Mineral Claim Areas

ALEXCO ENVIRONMENTAL GROUP

Digital elevation model created by the Yukon Department of the Environment interpolated from the digital 1:50,000 Canadian National Topographic Database (NTDB Edition 2) contour and watercourse layers. Obtained from Geomatics Yukon.

Canvec compiled by Natural Resources Canada at a scale of 1:10,000 - 1:50,000. Reproduced under license from Her Majesty the Queen in Right of Canada, as represented by the Minister of Natural Resources Canada. All rights reserved.

Datum: NAD 83; Projection UTM Zone 9N

This drawing has been prepared for the use of Alexco Environmental Group Inc.'s client and may not be used, reproduced or relied upon by third parties, except as agreed by Alexco Environmental Group Inc. and its client, as required by law or for use of governmental reviewing agencies. Alexco Environmental Group Inc. accepts no responsibility, and denies any liability whatsoever, to any party that modifies this drawing without Alexco Environmental Group Inc.'s express written consent.

1:115,000 when printed on 11 x 17 inch paper

0 1 2 3 4 5 Kilometres

D:\Project\AllProjects\Kudz_Ze_Kayah\Maps\01_WaterQuality\01-Surface\General\WholeSite_150k_with Insets_and_all_Seeps_Baseline_20180216.mxd
(Last edited by: amallashevska; 04/05/2018/15:47 PM)

1.1 BACKGROUND

1.1.1 INITIAL ENVIRONMENTAL EVALUATION BASELINE DATA

Baseline studies for surface water quality were undertaken in 1994 and 1995 by Cominco Ltd. and included in the IEE. Table 1-1, Table 1-2, and Table 1-3 present the stations sampled in 1994 and 1995, their sampling frequency, and the parameters analyzed, respectively. The sampling methods and analytical techniques employed in the 1994-1995 Cominco work were performed to industry standard and are deemed fit for use here. The detection limits reported for many constituents in the 1994 through 1995 Cominco water quality dataset are comparable to those reported in the current (April 2015 through March 2018) baseline water quality program.

The surface water quality data collected by Cominco was imported into the KZK EQWin database and a data quality assessment was performed. Some data points from Cominco were removed from the database where it was determined they did not meet the data quality assessment guidelines (i.e., detection limit above regulatory guideline). For example, although thallium was analyzed for in 1994 and 1995, all results have been removed from the database due to laboratory detection limits above the applicable guideline. Most antimony results have also been removed due to high detection limits, with the exception of a few dissolved measurements in August 1994. These amended 1994 through 1995 surface water quality data have been included in APPENDIX A.

Table 1-1: Surface Water Quality Monitoring Stations from 1994 and 1995

Station Name	Description
KZ-1	South Creek headwaters between two lakes
KZ-2	Fault Creek
KZ-3	Unnamed west-side tributary to upper lake in Geona Creek
KZ-4	Geona Creek over ABM deposit (between two small lakes)
KZ-5	Geona Creek downstream of ABM deposit
KZ-6	Unnamed east-side trib. of Geona Creek downstream of ABM deposit
KZ-7	Upper Geona Creek
KZ-8	Geona Creek 0.5 km of KZ-7
KZ-9	Lower Geona Creek
KZ-10	Lowermost small lake in upper Geona Creek
KZ-11	Uppermost headwater lake in Geona Creek
KZ-12	Uppermost lake in South Creek
KZ-13	South Creek near mouth
KZ-14	North River downstream of South Creek confluence
KZ-15	Finlayson Creek 100 m downstream of confluence with Geona Creek
KZ-16	Finlayson Creek upstream of confluence with Geona Creek
KZ-17	Geona Creek at mouth
KZ-18	Unnamed east-side tributary to Geona Creek
KZ-19	Upper East Creek
KZ-20	Middle East Creek
KZ-21	East Creek at mouth
KZ-22	Finlayson Creek 100 m downstream of East Creek
KZ-23	Lower (southern) North Lake
KZ-24	Second small lake in upper South Creek
KZ-25	Second small lake in upper Geona Creek
KZ-26	Finlayson Creek at Robert Campbell Highway
KZ-27	North River below Upper North Lake upstream of South Lake
KZ-28	Small lake in mid-reach of East Creek

Table 1-2: Surface Water Quality Monitoring Frequency in 1994 and 1995

	18 Jul 1994	31 Aug 1994	2-3 Dec 1994	5-8 Apr 1995	8 May 1995	11 Jun 1995	23 Jul 1995	15 Aug 1995	22 Aug 1995	30 Aug 1995	6 Sep 1995	13 Sep 1995
KZ-1	x	x	x			x			x			x
KZ-2	x	x	x	x		x			x			x
KZ-3	x	x				x			x			x
KZ-4	x	x	x			x			x			x
KZ-5	x	x	x		x	x	x		x			x
KZ-6	x	x	x	x	x	x			x			x
KZ-7	x	x	x	x		x		x	x	x	x	x
KZ-8	x	x			x							
KZ-9	x	x	x	x		x			x			x
KZ-10	x	x				x			x			x
KZ-11	x	x		x		x			x			x
KZ-12	x	x		x		x			x			x
KZ-13		x	x	x	x	x	x	x	x	x	x	x
KZ-14		x	x			x			x			x
KZ-15			x	x	x	x	x	x	x	x	x	x
KZ-16				x	x	x	x	x	x	x	x	x
KZ-17			x	x		x			x			x
KZ-18				x		x			x			x
KZ-19						x			x			x
KZ-20				x		x			x			x
KZ-21				x	x	x	x	x	x	x	x	x
KZ-22				x		x			x			x
KZ-23						x			x			x
KZ-24						x			x			x
KZ-25						x			x			x
KZ-26				x	x	x	x	x	x	x	x	x
KZ-27				x		x			x			x
KZ-28						x			x			x

Table 1-3: Surface Water Quality Parameters Monitored in 1994 and 1995

Total Suspended Solids		Cobalt (Co), total		Boron (B), dissolved
Total Dissolved Solids		Copper (Cu), total		Cadmium (Cd), dissolved
Turbidity		Iron (Fe), total		Calcium (Ca), dissolved
pH		Lead (Pb), total		Chromium (Cr), dissolved
Specific Conductance		Magnesium (Mg), total		Cobalt (Co), dissolved
Hardness (from total)		Manganese (Mn), total		Copper (Cu), dissolved
Hardness (from dissolved)		Mercury (Hg), total		Iron (Fe), dissolved
Alkalinity, total		Molybdenum (Mo), total		Lead (Pb), dissolved
Alkalinity, bicarbonate HCO_3		Nickel (Ni), total		Magnesium (Mg), dissolved
Alkalinity, hydroxide OH		Phosphorus (P), total		Manganese (Mn), dissolved
Alkalinity, carbonate CO3		Potassium (K), total		Mercury (Hg), dissolved
Alkalinity, PP carbonate CO3		Selenium (Se), total		Molybdenum (Mo), dissolved
Sulphate, dissolved		Silicon (Si), total		Nickel (Ni), dissolved
Cyanide, total		Silver (Ag), total		Phosphorus (P), dissolved
Cyanide, Weak Acid Dissociable		Sodium (Na), total		Potassium (K), dissolved
Ammonia (N)		Strontium (Sr), total		Selenium (Se), dissolved
Nitrite (N)		Sulphur (S), total		Silicon (Si), dissolved
Nitrate (N)		Tellurium (Te), total		Silver (Ag), dissolved
Nitrite & Nitrate, as N		Thallium (Tl), total		Sodium (Na), dissolved
Ortho-Phosphorus (P)		Tin (Sn), total		Strontium (Sr), dissolved
Aluminum (Al), total		Titanium (Ti), total		Sulphur (S), dissolved
Antimony (Sb), total		Vanadium (V), total		Tellurium (Te), dissolved
Arsenic (As), total		Zinc (Zn), total		Thallium (Tl), dissolved
Barium (Ba), total		Zirconium (Zr), total		Tin (Sn), dissolved
Beryllium (Be), total		Aluminum (Al), dissolved		Titanium (Ti), dissolved
Bismuth (Bi), total		Antimony (Sb), dissolved		Vanadium (V), dissolved
Boron (B), total		Arsenic (As), dissolved		Zinc (Zn), dissolved
Cadmium (Cd), total		Barium (Ba), dissolved		Zirconium (Zr), dissolved
Calcium (Ca), total		Beryllium (Be), dissolved		
Chromium (Cr), total		Bismuth (Bi), dissolved		

1.1.2 WATER LICENCE QZ09-026-01 MONITORING

Surface water monitoring was also conducted by Cominco at stations KZ-7, KZ-9, KZ-15, KZ-16, KZ-17, KZ-21, KZ-26 and KZ-27 in August every two years between 2002 and 2016 to fulfill Water Licence QZ97-026-01 requirements. The 2016 Water Licence Monitoring report was submitted to the Yukon Water Board in February 2017 by BMC. As with the 1994 and 1995 data, some results from the Water Licence monitoring between 2002 and 2016 were removed from the database if they did not meet the data quality assessment guidelines (i.e., detection limit above regulatory guideline). These data have been included in APPENDIX A.

2. METHODOLOGY

2.1 SAMPLE LOCATIONS

The surface water quality monitoring program was re-evaluated and re-initiated in April 2015 and is currently being conducted monthly at 12 surface water sample stations (Table 2-1). Initially the current baseline program included 10 stations on South Creek, Fault Creek, Geona Creek, Finlayson Creek and East Creek (Figure 1-2). Station KZ-6, located on a Geona Creek tributary, was added to the program in December 2015. Station KZ-18, also located on a Geona Creek tributary, was added to the program in September 2016. Station KZ-37, located on Geona Creek downstream of the unnamed Geona Creek KZ-18 tributary, was added to the program in February 2017. Monitoring at station KZ-7 on upper Geona Creek was discontinued after the March 2017 sampling event. Groundwater seeps were also sampled during June, July and October 2015, and monthly June through October 2016, but were not sampled in 2017.

In addition to the regular monthly sampling, a "five samples in 30 days" sampling program was undertaken in May through June 2017 in Fault Creek (KZ-2), Geona Creek watershed (KZ-6, KZ-9, KZ-18, KZ-37, KZ-17), Finlayson Creek (KZ-16, KZ-15, KZ-22, KZ-26) and East Creek (KZ-21) to assess variability in the concentrations of major and trace constituents during the time of year when snowmelt and freshet typically causes high and variable stream flow rates. The results of these events are incorporated in the overall monitoring results and are discussed with respect to variability in Section 3.7.

A second "five samples in 30 days" sample program was carried out between February and March 2018 at seven monitoring stations on Fault Creek (KZ-2), South Creek (KZ-13), Geona Creek watershed (KZ-9, KZ-18, KZ-37) and Finlayson Creek (KZ-15, KZ-26) to assess variability of major and trace constituent concentrations during winter low flow conditions. The results of these events are also incorporated in the overall monitoring results and are discussed with respect to variability in Section 3.8.

Table 2-1 summarizes the sampling locations and their respective UTM coordinates are displayed as NAD83 UTM Zone 9.

Table 2-1: KZK Surface Water Quality Monitoring Locations

Station	Description	UTM Easting	UTM Northing
KZ-26	Finlayson Creek at Robert Campbell Highway	419,893	6,835,692
KZ-22	Finlayson Creek 100 m downstream of East Creek	417,372	6,827,796
KZ-21	East Creek at Mouth	417,494	6,827,454
KZ-16	Finlayson Creek immediately upstream of confluence with Geona Creek	414,622	6,822,352
KZ-15	Finlayson Creek 100 m downstream of confluence with Geona Creek	414,802	6,822,418
KZ-17	Geona Creek at Mouth. A new sampling station was re-established as close as possible to the original KZ-17 site. The original site is currently flooded due to a beaver dam constructed since 2008.	414,727	6,822,357
KZ-7	Upper Geona Creek near proposed ABM open pit (discontinued in April of 2017)	415,225	6,817,163
KZ-9	Geona Creek near proposed discharge location	414,686	6,819,717

Station	Description	UTM Easting	UTM Northing
KZ-18	Unnamed East tributary to Geona Creek	414,698	6,819,726
KZ-37	Geona Creek downstream of unnamed East tributary (KZ-18)	414,649	6,819,890
KZ-2	Fault Creek	414,726	6,814,654
KZ-13	South Creek near mouth	416,482	6,811,653
KZ-6	Tributary to Geona Creek	415,325	6,816,659
Seeps			
KZ-9 Seep East	Seep approximately 50 m east of Geona Creek at KZ-9	414,745	6,819,667
KZ-9 Seep West	Seep approximately 50 m west of Geona Creek at KZ-9	414,660	6,819,670
Seep 3	20 m wide seep located on west side of Geona Creek downstream of KZ-7	414,741	6,818,473
Seep 4	Wide seep network located on west side of Geona Creek upstream of KZ-7	415,123	6,816,538
Seep 5	Seep coming inside side channel of Geona Creek upstream of KZ-9	414,767	6,819,178

2.2 FIELD METHODOLOGY

Water sampling was conducted according to AEG's sampling protocols, developed following the "*Standard methods for the examination of water and wastewater*" (Rice et al., 2012), which was co-produced by the American Public Health Association, the American Water Works Association, and the Water Environment Federations. At each of the surface water monitoring stations, samples were collected midstream for analysis of general chemical parameters, total and dissolved metals, and nutrients. Samples for total and dissolved metals were filled to the brim with minimal headspace and were preserved and/or filtered. Samples for nutrients were collected and preserved with laboratory-supplied sulphuric acid. Samples for cyanide were preserved in the field with laboratory supplied sodium hydroxide.

Samples were collected in clean, laboratory prepared sample bottles appropriate for each analysis parameter. Sample collectors wore clean and new nitrile gloves at each sampling location. Bottles were capped immediately after filling. All samples were collected in labelled bottles that identified the sample location, date and time of collection, field filtering and/or preservation and analysis requested. Blind field replicates were collected during all sampling events. Trip blanks and field blanks were also collected at each sampling event.

Chain of Custody (COC) forms were completed at the time of sampling and contained all information from the sample bottle labels. COCs signed by the sampler were packed inside the coolers used to transport samples to the laboratory.

In situ water pH, specific conductance, dissolved oxygen, ORP, and temperature were measured and recorded at each surface water station using a YSI probe and multimeter calibrated according to the manufacturer's instructions on the morning of each sampling day. Water and substrate appearance was also noted for surface water stations. Field data are presented in APPENDIX A.

All samples were stored in coolers with freezer packs to remain cold (4°C), but not frozen, during sampling and during transport to Maxxam Analytics (Maxxam) in Burnaby, BC.

2.3 ANALYSES

During each of the sampling events from April 2015 to March 2018, surface water samples were analyzed for general chemical parameters, as well as total and dissolved metals, and nutrients. A list of the parameters is provided below. Stream flow measurements or stream flow estimates were made for all sites where possible. Field replicate samples were collected during each field visit to document variability between simultaneous grab samples. Photographic records of the sampling sites are provided in APPENDIX B.

Field parameters:

- pH;
- Specific conductivity;
- Temperature;
- Oxidation-reduction potential (ORP);
- Dissolved oxygen; and
- Turbidity.

Parameters measured in the laboratory:

- pH;
- Specific conductivity;
- Total suspended solids;
- Colour;
- Anion scan (chloride, fluoride, sulphate, nitrate, nitrite);
- Alkalinity and acidity;
- Ammonia;
- Dissolved organic carbon (DOC);
- Total metals (ultra-low level metals package including hardness, phosphorus and mercury);
- Dissolved metals (ultra-low level metals package including hardness, phosphorus and mercury); and
- Total and Weak Acid Dissociable (WAD) cyanide.

On March 15, 2018 monthly samples were collected to include dissolved selenium speciation (selenite [Se(IV)] and selenite [Se(VI)] for all sites. Samples were also collected at KZ-15 and KZ-37 for dissolved arsenic speciation, comprising arsenite [As(III)], arsenate [As(V)], monomethylarsonic acid (MMAs), and dimethylarsinic acid (DMAs). Brooks Applied Labs (Bothell, WA, USA) performed the selenium and arsenic speciation analysis on behalf of

Maxxam Analytics (Maxxam) in Burnaby, BC, which performed all other laboratory analyses since 2006. Maxxam is certified with the Canadian Association for Environmental Analytical Laboratories (CAEAL). The certificates of analysis provided by Maxxam for the April 2015 to March 2018 samples have been included in APPENDIX G.

The March 2018 selenium and arsenic speciation analysis was performed by ion chromatography coupled to an inductively coupled plasma collision reaction cell mass spectrometer (IC-ICP-CRC-MS). A summary of the analytical techniques used for the main constituents and the source method upon which the analyses were based are presented in Table 2-2 and Table 2-3.

Table 2-2: Analytical Methods used for Physical, Anion, and Nutrient Constituents Analyzed in the Laboratory

Constituent	Units	Reporting Detection Limit	Analytical Method	Source Method
Acidity	mg/L	0.5	Titration	2310 B (Rice et al., 2012)
Alkalinity	mg/L	0.5	Titration	2320 B (Rice et al., 2012)
True Colour	Colour units	5	Visual Comparison	2120 B (Rice et al., 2012)
Dissolved Organic Carbon	mg/L	0.5	Persulphate Oxidation	5310 C (Rice et al., 2012)
Total Suspended Solids	mg/L	1	Dry to Constant Weight	2540 D (Rice et al., 2012)
Chloride	mg/L	0.5	Automated Colourimetry	4500-Cl- G (Rice et al., 2012)
Fluoride	mg/L	0.01	Ion Specific Electrode	4500-F C (Rice et al., 2012)
Sulphate	mg/L	0.5	Automated Colourimetry	4500-SO42- E (Rice et al., 2012)
Phosphorus	mg/L	0.002	Ascorbic Acid Method (Colourimetry)	4500-P E (Rice et al., 2012)
Nitrite-N	mg/L	0.002	Cadmium Reduction Flow Injection	4500-NO3- I (Rice et al., 2012)
Nitrate-N	mg/L	0.002		4500-NO3- I (Rice et al., 2012)
Ammonia-N	mg/L	0.005	Automated Phenate (Colourimetry)	4500-NH3- G (Rice et al., 2012)
Cyanide	mg/L	0.0005	Flow Injection	4500-CN O (Rice et al., 2012)

Table 2-3: Analytical Methods used for Element Constituents Analyzed in the Laboratory

Constituent	Units	Reporting Detection Limit	Analytical Method	Source Method
Hardness	mg/L	0.5	ICP-MS	USEPA (2007)
Aluminum	mg/L	0.0005	ICP-MS	USEPA (2007)
Antimony	mg/L	0.00002	ICP-MS	USEPA (2007)
Arsenic	mg/L	0.00002	ICP-MS	USEPA (2007)
Barium	mg/L	0.00002	ICP-MS	USEPA (2007)
Beryllium	mg/L	0.00001	ICP-MS	USEPA (2007)
Bismuth	mg/L	0.000005	ICP-MS	USEPA (2007)
Boron	mg/L	0.01	ICP-MS	USEPA (2007)
Cadmium	mg/L	0.000005	ICP-MS	USEPA (2007)
Calcium	mg/L	0.05	ICP-MS	USEPA (2007)
Chromium	mg/L	0.0001	ICP-MS	USEPA (2007)
Cobalt	mg/L	0.000005	ICP-MS	USEPA (2007)
Copper	mg/L	0.00005	ICP-MS	USEPA (2007)
Iron	mg/L	0.001	ICP-MS	USEPA (2007)
Lead	mg/L	0.000005	ICP-MS	USEPA (2007)
Lithium	mg/L	0.0005	ICP-MS	USEPA (2007)
Magnesium	mg/L	0.05	ICP-MS	USEPA (2007)
Manganese	mg/L	0.00005	ICP-MS	USEPA (2007)
Molybdenum	mg/L	0.00005	ICP-MS	USEPA (2007)
Nickel	mg/L	0.00002	ICP-MS	USEPA (2007)
Phosphorus	mg/L	0.002	ICP-MS	USEPA (2007)
Potassium	mg/L	0.05	ICP-MS	USEPA (2007)
Selenium	mg/L	0.00004	ICP-MS	USEPA (2007)
Silicon	mg/L	0.05	ICP-MS	USEPA (2007)
Silver	mg/L	0.000005	ICP-MS	USEPA (2007)
Sodium	mg/L	0.05	ICP-MS	USEPA (2007)
Strontium	mg/L	0.00005	ICP-MS	USEPA (2007)
Sulphur	mg/L	3	ICP-MS	USEPA (2007)
Thallium	mg/L	0.000002	ICP-MS	USEPA (2007)
Tin	mg/L	0.0002	ICP-MS	USEPA (2007)
Titanium	mg/L	0.0005	ICP-MS	USEPA (2007)
Uranium	mg/L	0.000002	ICP-MS	USEPA (2007)
Vanadium	mg/L	0.0002	ICP-MS	USEPA (2007)
Zinc	mg/L	0.0001	ICP-MS	USEPA (2007)
Zirconium	mg/L	0.0001	ICP-MS	USEPA (2007)
Mercury	mg/L	0.000002	Cold Vapour Atomic Fluorescence	BCMoE (2013)

2.4 QUALITY ASSURANCE/QUALITY CONTROL

Quality assurance/quality control measures implemented as part of this program generally consisted of:

- Collection, handling, storage and chemical analysis in accordance with "Standard Methods for Examination of Water and Wastewater" (Rice et al., 2012) and AEG Protocols; and
- Establishment of Data Quality Objectives and documentation of sample variability due to natural variability and analytical variability.

Relative Percent Difference (RPD) was used to determine field variability and is the difference between the sample result and replicate result, divided by the average of the sample result and replicate result and expressed as a percentage. Where analyte results have RPD greater than 25% a subsequent check was completed against the laboratory detection limit (DL) to establish if the practical quantitation limit (PQL) was met. The PQL is five times the DL and is defined as the minimum concentration that can be measured within specified limits of precision and accuracy. Both results need to be above the PQL for the analyte to be considered as 'meeting the PQL'. If one result from the sample or duplicate is greater than five times the DL and the other result is less than five times the DL then the 'PQL is not met'. An analyte with results not meeting the PQL indicates that the constituent being analyzed is not present in a sufficient amount to be reliably quantified. Typically, as parameters approach their detection limit, high variability is more likely to occur. The RPD of 25% can be used as a benchmark whereby an RPD greater than 25% warrants further comment or consideration.

2.4.1 LABORATORY QUALITY CONTROL SAMPLE ANALYSIS

Overall quality control sample analysis from method blanks, laboratory duplicates, matrix spikes and blank spikes met the Maxxam laboratory acceptability criteria and consequently the data were issued.

2.4.2 FIELD VARIABILITY

During the monitoring program, field replicates were collected to measure field variability between simultaneous grab samples. A total of 43 field replicates were collected over 36 months between April 2015 and March 2018 as part of the surface water quality monitoring program. Extra monitoring events and duplicate collection took place during spring freshet in 2016 and 2017 and during winter low flow February and March 2018. The highest variability was observed in June 2015 for a duplicate collected from KZ-9; twenty analytes had an RPD greater than 25% of which 16 met the PQL. In January 2017, duplicate analysis from KZ-26 showed 26 analytes with RPD greater than 25%, 16 of which met the PQL. The next highest variability was observed in February and August 2016 where 11 and 10 duplicate analytes met the PQL at stations KZ-7 and KZ-22, respectively. The remaining 39 duplicate samples had between zero and five analytes with RPD greater than 25% that satisfied the PQL.

For all 43 field replicates, analytes with RPD greater than 25% and meeting the PQL are provided in Table 2-4 whereas analytes that had an RPD greater than 25% and did not meet the PQL are listed in Table 2-5.

Except for the June 2015, February and August 2016, and January 2017 sampling events, there is relatively low variability between simultaneous grab samples; however, results indicate that there is natural variability at any

given sampling location. This natural variability appears to be more than the variability resulting from laboratory analytical methods. More variability was typically noted in total than dissolved samples, particularly for total aluminum (14 instances where the PQL was met; Table 2-4), total iron (13 instances), and total lead and manganese (10 instances each).

Table 2-4: Duplicate Analytes with RPD greater than 25% that met the PQL

Analyte	Number of times RPD >25% and PQL met
Aluminum (Al), total	14
Iron (Fe), total	13
Lead (Pb), total	10
Manganese (Mn), total	10
Cobalt (Co), total	7
Copper (Cu), total	7
Ammonia (N)	5
Cadmium (Cd), total	5
Phosphorus (P), total	5
Zinc (Zn), dissolved	5
Iron (Fe), dissolved	4
Arsenic (As), total	3
Copper (Cu), dissolved	3
Manganese (Mn), dissolved	3
Zinc (Zn), total	3
Aluminum (Al), dissolved	2
Arsenic (As), dissolved	2
Cadmium (Cd), dissolved	2
Calcium (Ca), total	2
Dissolved Organic Carbon	2
Lead (Pb), dissolved	2
Nickel (Ni), total	2
Selenium (Se), total	2
Alkalinity, bicarbonate HCO3	1
Alkalinity, carbonate CO3	1
Alkalinity, PP carbonate CO3	1
Alkalinity, total	1
Antimony (Sb), total	1
Barium (Ba), dissolved	1
Hardness (from total)	1
Lithium (Li), total	1
Nickel (Ni), dissolved	1
Nitrate (N)	1
Nitrite & Nitrate, as N	1
Phosphate, total	1
Phosphorus, Total Dissolved	1
Selenium (Se), dissolved	1
Sodium (Na), dissolved	1
Sodium (Na), total	1
Total Acidity	1

Table 2-5: Duplicate Analytes with RPD greater 25% that did not meet the PQL

Analyte	Number of times RPD >25% and PQL not met
Ammonia (N)	14
Phosphorus (P), total	11
Lead (Pb), dissolved	10
Phosphorus, Total Dissolved	10
Aluminum (Al), dissolved	9
Phosphorus (P), dissolved	9
Lead (Pb), total	8
Thallium (Tl), total	8
Cobalt (Co), total	7
Phosphorus,total-colourimetric	6
Dissolved Organic Carbon	5
Total Suspended Solids	5
Aluminum (Al), total	4
Cadmium (Cd), dissolved	4
Chloride	4
Cobalt (Co), dissolved	4
Cyanide, Weak Acid Dissociable	4
Cadmium (Cd), total	3
Iron (Fe), total	3
Manganese (Mn), dissolved	3
Vanadium (V), total	3
Zinc (Zn), total	3
Antimony (Sb), dissolved	2
Antimony (Sb), total	2
Colour	2
Copper (Cu), dissolved	2
Copper (Cu), total	2
Iron (Fe), dissolved	2
Lithium (Li), total	2
Silver (Ag), total	2
Thallium (Tl), dissolved	2
Zinc (Zn), dissolved	2
Alkalinity, carbonate CO3	1
Alkalinity, PP carbonate CO3	1
Arsenic (As), dissolved	1
Arsenic (As), total	1
Chromium (Cr), total	1
Lithium (Li), dissolved	1
Manganese (Mn), total	1
Mercury (Hg), dissolved	1
Phosphate, total	1
Total Acidity	1
Zirconium (Zr), total	1

2.4.3 FIELD AND TRAVEL BLANKS

Additional field quality control samples include field blanks and trip blanks, where de-ionized water is handled, processed and analyzed in the same manner as the site water samples. Blanks can provide an indication of sample contamination occurring in the field (field blank) or lab (method blanks) and at some point between these locations (trip blanks).

Concentrations of parameters should not be detectable, though a PQL of less than or equal to twice the reportable detection limit allows for slight "noise" around the detection limit.

Field blanks were processed by taking de-ionized water (analyte free media) to the sample station, opening it and exposing it to ambient air and 'collecting' it in the sample bottles. These samples were treated the same as the actual water samples, preserved and filtered as necessary, and their analysis can provide an indication of contamination that may affect the actual samples.

Forty-three field blanks were collected between April 2015 and March 2018. Field blank analytes with concentrations greater than twice the DL are shown in Table 2-6. Ammonia and alkalinity (bicarbonate) were the most frequently detected analytes greater than twice the DL in the field blanks (eleven and twelve instances, respectively). Total aluminum and zinc were detected at greater than twice the DL in eight and nine instances, respectively. Total barium and lead, and dissolved strontium were each detected in six instances at greater than twice the DL. Alkalinity (bicarbonate) was not calculated to be more than three times the DL and ammonia was also typically between two and four times the DL, with a couple of slightly higher results. Total zinc concentrations were typically between two and five times the DL in the field blanks. Aluminum concentrations in the field blanks were typically more than an order of magnitude below their respective CCME and BCMoE guidelines for the pH range of the surface waters draining the KZK Project area. Only the October 2015 field blank had a total aluminum concentration (0.017 mg/L) that was within an order of magnitude of the CCME guideline (0.1 mg/L). Nevertheless, all the samples collected for this sampling event were well below the CCME guideline, and had concentrations that spanned the blank result (0.011 – 0.028 mg/L), suggesting they were not significantly impacted by this elevated blank result. In addition, total aluminum concentrations observed across the watershed for sampling events where total aluminum was detected in the field blanks were consistent with those measured in samples collected at other non-freshet times of the year where the field blanks contained no detectable aluminum. Such contamination is likely related to the bottles, preservative and/or laboratory handling, although sporadic contamination during fieldwork cannot be ruled out.

Field blank re-analysis requests to Maxxam have indicated that sample carry-over during laboratory analysis had impacted the January, February, March and April 2016 field blank samples. Subsequent re-analysis returned fewer analytes present at twice the detection limit in these field blanks (data reported in Table 2-6). Older field blanks were not available for re-analysis and it is possible that such laboratory carry-over may have also impacted the 2015 field blank samples. This laboratory issue has been identified by Maxxam and appears to be rectified. It is AEG's opinion that the contaminant concentrations observed in the field blanks collected as part of the water quality monitoring program do not affect the data quality.

Trip blanks (sample of de-ionized water) are supplied and prepared by the lab and accompany the sample bottles provided by the lab for the monitoring program. The trip blank travels with the sample bottles to the sample stations and is returned unopened back to the lab with the collected samples. The purpose of the trip blank is to identify any potential contamination (e.g. cross contamination from other samples or ambient air conditions) to which the samples may be exposed.

Forty-three trip blanks were analyzed between April 2015 and March 2018. Seven of these trip blanks in September 2015, December 2015, May 2016, February 2017, November 2017, January 2018 and March 15, 2018 had alkalinity concentrations present at slightly greater than twice the DL. The October 2016 trip blank also showed total mercury at 2.2 times the DL. The second trip blank from June 2017 showed dissolved phosphorus at 2.2 times the DL. Dissolved barium was detected at 3.2 times the DL in the July 2017 field blank while total barium was detected at 5.9 and 7.2 times the DLs in the September and November 2017 trip blanks respectively. The remaining travel blanks had no analyte concentrations greater than twice the DL.

Since laboratory method blanks showed no notable results greater than twice the DL, it can be assumed that the original lab water is not a source of contamination. For the purposes of this data quality assessment, periodic field and trip blank results greater than twice the DL do not call sample results into question; rather the relevance and potential for actual sample results to have been affected have been considered when interpreting results.

Table 2-6: Field Blank Analytes with Concentrations Greater than twice the DL

Parameter	Units	Result	DL	Result / DL (where >2)
April 2015				
Alkalinity, bicarbonate HCO3	mg/L	1.12	0.5	2.2
Ammonia (N)	mg/L	0.0106	0.005	2.1
Nickel (Ni), total	mg/L	0.000102	0.00002	5.1
May 2015				
Dissolved Organic Carbon	mg/L	1.38	0.5	2.8
Nickel (Ni), dissolved	mg/L	0.000042	0.00002	2.1
June 2015				
Aluminum (Al), dissolved	mg/L	0.00219	0.0005	4.4
Manganese (Mn), dissolved	mg/L	0.000159	0.00005	3.2
Nickel (Ni), total	mg/L	0.000129	0.00002	6.5
Phosphorus (P), dissolved	mg/L	0.0109	0.002	5.5
July 2015				
Ammonia (N)	mg/L	0.0104	0.005	2.1
Nickel (Ni), total	mg/L	0.000079	0.00002	4.0
Phosphorus (P), dissolved	mg/L	0.0053	0.002	2.7
August 2015				
Nickel (Ni), dissolved	mg/L	0.000203	0.00002	10.2
Zinc (Zn), total	mg/L	0.00028	0.0001	2.8
September 2015				
Alkalinity, bicarbonate HCO3	mg/L	1.02	0.5	2.0
Aluminum (Al), dissolved	mg/L	0.00285	0.0005	5.7
Aluminum (Al), total	mg/L	0.00391	0.0005	7.8
Arsenic (As), total	mg/L	0.000049	0.00002	2.5
Barium (Ba), total	mg/L	0.0003	0.00002	15.0
Iron (Fe), total	mg/L	0.0205	0.001	20.5
Lead (Pb), total	mg/L	0.000042	0.000005	8.4
Manganese (Mn), total	mg/L	0.000184	0.00005	3.7
Phosphorus (P), total	mg/L	0.0041	0.002	2.1
Vanadium (V), dissolved	mg/L	0.00074	0.0002	3.7
October 2015				
Alkalinity, bicarbonate HCO3	mg/L	1.35	0.5	2.7
Alkalinity, total	mg/L	1.11	0.5	2.2
Aluminum (Al), total	mg/L	0.0174	0.0005	34.8
Barium (Ba), dissolved	mg/L	0.000041	0.00002	2.1
Barium (Ba), total	mg/L	0.000087	0.00002	4.4
Lead (Pb), total	mg/L	0.000011	0.000005	2.2
Strontium (Sr), total	mg/L	0.000239	0.00005	4.8
Titanium (Ti), total	mg/L	0.00174	0.0005	3.5
Vanadium (V), dissolved	mg/L	0.00069	0.0002	3.5
Vanadium (V), total	mg/L	0.00054	0.0002	2.7
November 2015				
Alkalinity, bicarbonate HCO3	mg/L	1.18	0.5	2.4
Aluminum (Al), total	mg/L	0.00144	0.0005	2.9
Barium (Ba), dissolved	mg/L	0.000261	0.00002	13.1
Barium (Ba), total	mg/L	0.000232	0.00002	11.6
Specific Conductance (lab)	µS/cm	2.5	1	2.5
Strontium (Sr), dissolved	mg/L	0.000151	0.00005	3.0
Strontium (Sr), total	mg/L	0.000153	0.00005	3.1
Uranium (U), dissolved	mg/L	0.000005	0.000002	2.5
Uranium (U), total	mg/L	0.000005	0.000002	2.5
December 2015				
Aluminum (Al), total	mg/L	0.00609	0.0005	12.2
January 2016				
Ammonia (N)	mg/L	0.022	0.005	4.4
Copper (Cu), total	mg/L	0.000378	0.00005	7.6
Strontium (Sr), dissolved	mg/L	0.000161	0.00005	3.2
Zinc (Zn), total	mg/L	0.00025	0.0001	2.5
February 2016				
Aluminum (Al), total	mg/L	0.00138	0.0005	2.8
March 2016				
n/a	-	-	-	-
April 2016				
Alkalinity, bicarbonate HCO3	mg/L	1.15	0.5	2.3
Ammonia (N)	mg/L	0.0165	0.005	3.3
Phosphorus (P), dissolved	mg/L	0.0043	0.002	2.2
Strontium (Sr), dissolved	mg/L	0.000134	0.00005	2.7
Uranium (U), dissolved	mg/L	0.000014	0.000002	7.0
Uranium (U), total	mg/L	0.000009	0.000002	4.5
May 3, 2016				
Alkalinity, bicarbonate HCO3	mg/L	1.43	0.5	2.9
Alkalinity, total	mg/L	1.17	0.5	2.3
Ammonia (N)	mg/L	0.0116	0.005	2.3
Zinc (Zn), total	mg/L	0.0004	0.0001	4.0
May 19, 2016				
Ammonia (N)	mg/L	0.011	0.005	2.2
Copper (Cu), total	mg/L	0.000546	0.00005	10.9
Lead (Pb), total	mg/L	0.000025	0.000005	5.0
June 2016				
n/a	-	-	-	-
July 2016				
Zinc (Zn), total	mg/L	0.00022	0.0001	2.2
August 2016				
n/a	-	-	-	-
September 2016				
Lead (Pb), total	mg/L	0.000011	0.000005	2.2
Zinc (Zn), total	mg/L	0.00023	0.0001	2.3
October 2016				
Ammonia (N)	mg/L	0.013	0.005	2.6
November 2016				
Ammonia (N)	mg/L	0.019	0.005	3.8
December 2016				
Alkalinity, bicarbonate HCO3	mg/L	1.07	0.5	2.1
Ammonia (N)	mg/L	0.013	0.005	2.6
Mercury (Hg), total	mg/L	0.0000053	0.000002	2.7
Phosphorus, Total Dissolved	mg/L	0.0041	0.002	2.1
January 2017				
Ammonia (N)	mg/L	0.033	0.005	6.6
Lead (Pb), total	mg/L	0.000012	0.000005	2.4
Zinc (Zn), dissolved	mg/L	0.00021	0.0001	2.1
February 2017				
n/a	-	-	-	-
March 2017				
n/a	-	-	-	-
April 2017				
Alkalinity, bicarbonate HCO3	mg/L	1.12	0.5	2.2
Ammonia (N)	mg/L	0.02	0.005	4.0
Uranium (U), dissolved	mg/L	0.000005	0.000002	2.5
May 16, 2017				
Alkalinity, bicarbonate HCO3	mg/L	1.24	0.5	2.5
May 26, 2017				
Aluminum (Al), total	mg/L	0.00303	0.0005	6.1
Barium (Ba), total	mg/L	0.000086	0.00002	4.3
Iron (Fe), total	mg/L	0.0045	0.001	4.5
Manganese (Mn), total	mg/L	0.000216	0.00005	4.3
Nitrate (N)	mg/L	0.0064	0.002	3.2
Nitrite & Nitrate, as N	mg/L	0.0064	0.002	3.2
Strontium (Sr), dissolved	mg/L	0.000231	0.00005	4.6
Strontium (Sr), total	mg/L	0.000134	0.00005	2.7
Zinc (Zn), total	mg/L	0.00025	0.0001	2.5
May 31, 2017				
n/a	-	-	-	-
June 7, 2017				
Zinc (Zn), dissolved	mg/L	0.00075	0.0001	7.5
Zinc (Zn), total	mg/L	0.0003	0.0001	3.0
June 13, 2017				
n/a	-	-	-	-
July 2017				
Lead (Pb), total	mg/L	0.0000102	0.000005	2.0
August 2017				
Aluminum (Al), dissolved	mg/L	0.00106	0.0005	2.1
Aluminum (Al), total	mg/L	0.00173	0.0005	3.5
September 2017				
n/a	-	-	-	-
October 2017				
Aluminum (Al), total	mg/L	0.00475	0.0005	9.5
Barium (Ba), dissolved	mg/L	0.000123	0.00002	6.2
Barium (Ba), total	mg/L	0.000067	0.00002	3.4
Iron (Fe), total	mg/L	0.0054	0.001	5.4
Manganese (Mn), total	mg/L	0.000212	0.00005	4.2
Nitrate (N)	mg/L	0.0139	0.002	7.0
Nitrite & Nitrate, as N	mg/L	0.0139	0.002	7.0
Strontium (Sr), dissolved	mg/L	0.000253	0.00005	5.1
Strontium (Sr), total	mg/L	0.000293	0.00005	5.9
Zinc (Zn), dissolved	mg/L	0.00063	0.0001	6.3
Zinc (Zn), total	mg/L	0.0005	0.0001	5.0
November 2017				
Alkalinity, bicarbonate HCO3	mg/L	1.09	0.5	2.2
Barium (Ba), total	mg/L	0.000144	0.00002	7.2
Lead (Pb), dissolved	mg/L	0.000018	0.000005	3.6
Nitrate (N)	mg/L	0.0046	0.002	2.3
Nitrite & Nitrate, as N	mg/L	0.0046	0.002	2.3
Strontium (Sr), total	mg/L	0.000227	0.00005	4.5
December 2017				
Zinc (Zn), dissolved	mg/L	0.00066	0.0001	6.6
January 2018				
Alkalinity, bicarbonate HCO3	mg/L	1.01	0.5	2.0
Aluminum (Al), dissolved	mg/L	0.00486	0.0005	9.7
Barium (Ba), dissolved	mg/L	0.000085	0.00002	4.3
Lead (Pb), dissolved	mg/L	0.0000187	0.000005	3.7
Nickel (Ni), dissolved	mg/L	0.000047	0.00002	2.4
Strontium (Sr), dissolved	mg/L	0.000105	0.00005	2.1
Zinc (Zn), dissolved	mg/L	0.00084	0.0001	8.4
February 13, 2018				
Alkalinity, bicarbonate HCO3	mg/L	1.04	0.5	2.1
Zinc (Zn), total	mg/L	0.00027	0.0001	2.7
February 21, 2018				
Copper (Cu), dissolved	mg/L	0.000287	0.00005	5.7
Lead (Pb), dissolved	mg/L	0.0000111	0.000005	2.2
Zinc (Zn), dissolved	mg/L	0.00064	0.0001	6.4
March 1, 2018				
n/a	-	-	-	-
March 7, 2018				
n/a	-	-	-	-
March 15, 2018				
Copper (Cu), dissolved	mg/L	0.000273	0.00005	5.5
Lead (Pb), dissolved	mg/L	0.0000175	0.000005	3.5
Phosphorus (P), dissolved	mg/L	0.0041	0.002	2.1
Zinc (Zn), dissolved	mg/L	0.00086	0.0001	8.6

2.5 SURFACE WATER QUALITY GUIDELINES

Surface water quality guidelines for protection of aquatic life have been published both by Canadian Council of Ministers of the Environment (CCME, 2018) and British Columbia's Ministry of Environment (BCMoE, 2017). Both CCME and BCMoE guidelines have been considered in the discussion of the KZK surface water quality data, with preference given to the most recently revised guideline, since this will reflect the most recent science used to derive the guideline (Table 2-7).

Table 2-7: Generic Water Quality Guidelines for the Protection of Aquatic Life

Parameter	Guideline	Source
pH	6.5-9	CCME
Nitrate as N	3 mg/L	CCME
Nitrite as N	0.02 mg/L-0.2 (chloride dependent)	BCMoE
Ammonia as N	pH and temperature dependent	CCME
Free CN	0.005 mg/L	CCME
Chloride	120 mg/L	CCME
Fluoride	0.12 mg/L	CCME
Sulphate	128 – 429 mg/L (hardness dependent)	BCMoE
Total Phosphorus	>0.035 mg/L classed as eutrophic	CCME
Total Metals		
Aluminum	0.005 mg/L if pH < 6.5 0.1 mg/L if pH ≥ 6.5	CCME
Antimony	0.009 mg/L	BCMoE
Arsenic	0.005 mg/L	CCME
Boron	1.5 mg/L	CCME
Cadmium	0.00006 - 0.00037 mg/L (hardness dependent)	CCME
Chromium	0.001 mg/L (hexavalent chromium)	CCME
Copper	0.002 - 0.01 mg/L (hardness dependent)	BCMoE
Iron	0.3 mg/L	CCME
Lead	0.0034- 0.020 mg/L (hardness dependent)	BCMoE
Manganese	0.77 – 2.6 mg/L (hardness dependent)	BCMoE
Mercury	0.000026 mg/L	CCME
Molybdenum	0.073 mg/L	CCME
Nickel	0.025 – 0.15 mg/L (hardness dependent)	CCME
Selenium	0.002 mg/L	BCMoE
Silver	0.00025 mg/L	CCME
Thallium	0.0008 mg/L	CCME
Uranium	0.015 mg/L	CCME
Zinc	0.0075 – 0.188 mg/L (hardness dependent)	BCMoE
Dissolved Metals		

Parameter	Guideline	Source
Aluminum	pH dependent	BCMoE
Cadmium	0.00012 – 0.00046 mg/L (hardness dependent)	BCMoE

Concentrations of water quality analytes were examined for each station to determine percent exceedance of the associated guideline. Analytes that exhibited frequent (i.e., greater than 10% of samples collected) water quality guideline exceedances were:

- Fluoride: KZ-15 (11%), KZ-21 (80%), KZ-22 (53%), KZ-26 (24%);
- Total phosphorus (colourimetric): KZ-18 (60%), KZ-21 (10.2%);
- Total aluminum: KZ-13 (12%), KZ-26 (21%), KZ-37 (15%), KZ-9 (13%);
- Total arsenic: KZ-21 (11%);
- Total cadmium: KZ-2 (88%), KZ-7 (32%);
- Dissolved cadmium: KZ-2 (44%);
- Total chromium: KZ-13 (14%), KZ-7 (11%);
- Total copper: KZ-2 (12%);
- Total iron: KZ-21 (91%), KZ-22 (52%), KZ-26 (29%), KZ-37 (85%), KZ-9 (76%), KZ-7 (51%);
- Total selenium: KZ-2 (36%); and
- Total zinc: KZ-2 (58%), KZ-7 (37%), KZ-37 (20%), KZ-9 (11%).

2.6 DATA QUALITY ASSESSMENT

All water quality data, including the historical data collected prior to 2015, have been compiled into an EQWin database. This continually growing database allows for the assessment of temporal water quality trends for specific parameters of interest, although it is noted that higher detection limits for some parameters in the historical data limit the value of some of the older data.

An assessment of outliers has been carried out for water quality data from monitoring stations from July 1994 to March 2018. Outliers for a station dataset are considered to be results exceeding the average concentration ±3 standard deviations. There were many outliers in the historical data where the DLs were greater than the 2015 to 2018 dataset range and those values were removed from the database (not used in statistical analysis or graphs). Suspect outlier results affected by poor DLs that were within three times the detection limit were also removed from the database. It is not unexpected for historical data that have poorer detection limits relative to present standards to have a relatively high number of outliers.

Water quality data are reviewed after each monthly monitoring event in comparison to the historical data. Results that show variance from historical data are reviewed in detail to determine if lab rechecks may be required or whether or not they are representative of the station water quality.

The initial outlier assessment showed high numbers of outliers or maxima in the May 2015 spring freshet sample event for most stations, accompanied by maximum total suspended solids (TSS) concentrations for the sites. Nitrite DLs in May 2015 were raised due to sample matrix interference, subsequently these elevated DLs appeared as outliers/maxima and were removed from the dataset. Such maxima are also typical in the historical May sample event in 1995, which also had higher associated TSS concentrations. Compared to the May 2016 and May 2017 sample events, May 2015 generally had the higher discharge measurements accompanied by higher TSS and total metal concentrations. May 2016 water quality data did not vary greatly in comparison to previous samples in the six month seasonal window queried (results typically less than 3 standard deviations in comparison to historical results in the seasonal window). May 2017 water quality data showed some higher concentrations observed at several stations, particularly for sites KZ-18 and KZ-37 for which this was the first May sampling event. These observations are shown on the water quality graphs provided in APPENDIX C. Station KZ-13 had a notable outlier event on August 31, 1994 with many results establishing maximum analyte concentrations for the station detected to date. No TSS analysis was available for this event but this outlier sample could be due to a precipitation and run-off event.

The August 2008 sample event was noted to contain elevated cadmium results, many of which were also outliers, for all sites sampled with the exception of KZ-26. The reasons for this are unclear since the reported detection limit (0.00001 mg/L) was adequate; however, the field duplicate returned an RPD of 28%, suggesting there was relatively high natural variability in the sample collected. No field or trip blank data are available for this sampling event, so cadmium contamination also cannot be ruled out.

In March 2016, maxima for total acidity were observed for a number of stations (KZ-13, KZ-16, KZ-17, KZ-21 and KZ-22); however, these circumneutral to mildly alkaline waters have low acidity (less than 10 mg/L) and the majority of these maxima were within an order of magnitude of the detection limit (0.5 mg/L).

During the August 2016 sampling event, high water levels and increased discharge were noted at many stations along with turbid water. Consistent with the high flow conditions, turbidity maxima were observed at sites KZ-15, KZ-17, KZ-2, KZ-21, KZ-22, KZ-7 and KZ-9. Sites KZ-2, KZ-7, KZ-9, KZ-21, KZ-22 and KZ-26 experienced elevated TSS during the August 2016 sampling event and most of these sites also had outliers or maxima established for several total metals and a few of the dissolved counterparts as well.

Outliers for ammonia concentrations were also observed during the October 2016 sample event (KZ-15, KZ-16, KZ-17, KZ-22 and KZ-26). These samples, alongside KZ-21 which also returned an elevated ammonia concentration relative to its dataset, comprised the entire sample submission, suggesting that laboratory error may have been responsible for these high ammonia levels. These results were reported after the hold time for ammonia (10 days) had elapsed, therefore, a re-run was not requested; however, the ammonia data for these samples should be treated with caution.

On December 19, 2016 KZ-26 showed elevated TSS for this site (32.1 mg/L) with associated elevated total aluminum and iron. While TSS remains in the database the elevated aluminum and iron results were deemed non-representative and removed from the database.

In February 2017, due to sediment disturbance by the ice auger at KZ-15, notably elevated results for total metals and colourimetric phosphorus were deemed non-representative and removed from the dataset.

On February 21, 2018, site KZ-26 was visited in the morning with no water located. The site was revisited in the afternoon with water located between layers of overflow further upstream. Prior to KZ-26 being revisited, salt slug flow measurements were conducted several kilometers upstream earlier in the day. Water quality results appeared to be non-representative with the upstream salt slug having affected sample results, therefore, KZ-26 water quality results from February 21, 2018 were removed from the database.

Results removed from the database are typically historic data that are less than an elevated DL or near to these poor DLs between 1994 and 2010. Some outlier historic results have also been removed due to suspected contamination as noted by the lab. As noted above, challenges with winter sampling can also result in non-representative water quality data that is removed from the database.

3. RESULTS AND DISCUSSION

To simplify the discussion of water quality data, results are delineated by geography in terms of the major watercourse. The in situ and CCME/BCMoE-regulated anion (sulphate, chloride, fluoride, cyanide, nitrite, nitrate) and nutrient (ammonia, phosphorus) parameters are discussed for each watercourse. Constituents such as hardness and dissolved organic carbon that act as modifiers of metal toxicity are also discussed, whereas only those elements that exhibited BCMoE or CCME exceedances in greater than 10% of samples collected at any site across the KZK surface water quality monitoring locations are examined (aluminum, arsenic, cadmium, chromium, copper, iron, selenium, and zinc). Ongoing waste rock geochemical testing has indicated that antimony and uranium may be constituents of concern from a waste rock metal leaching perspective, so they have also been included in the summary statistic tables; however, they have not exceeded the applicable BCMoE/CCME guidelines in surface water quality sampling performed to date. All the summary statistics tables are based on the water quality dataset collated from the Cominco sampling (1994 and 1995), water licence sampling (biannual sampling in August between 2002 and 2016), and currently available baseline water quality sampling data (April 2015 to March 2018). Where results were below laboratory detection levels one half the detection limit was used in the calculation of summary statistics, as well as presented on graphs. Figures that present the temporal changes in the concentration of metals of interest are present in APPENDIX C.

3.1 SOUTH CREEK

3.1.1 SETTING

South Creek is approximately 5 km long and originates upstream of two small ponds located at the watershed divide between South Creek and Geona Creek (Figure 1-2). The creek flows south through two small ponds before entering a scrub-birch and subalpine fir dominated area before finally entering the North River. The creek has been influenced by historical beaver activity, but still maintains a main channel that runs from the outlet of the second pond until it reaches the North River. One water quality station is located on South Creek at KZ-13, which is situated at the mouth of South Creek before entering the North River. Photos of KZ-13 can be found in APPENDIX B (page B-1).

3.1.2 PHYSICAL PARAMETERS AND NUTRIENTS

South Creek waters, monitored at KZ-13, were circumneutral (pH range 6.82 to 8.08; median pH 7.7; Table 3-1) and well oxygenated (68 to 110% saturated). Water sampled at KZ-13 was also relatively dilute (median field specific conductance 158 µS/cm and total hardness of 71 mg/L) compared to the other surface water quality monitoring sites that are regularly sampled as part of the Project. Temperature ranged seasonally between 0°C and 10°C.

No CCME or BCMoE exceedances were recorded for any of the anions or nutrients monitored at KZ-13. Nitrogen species (nitrate, nitrite, cyanide, and ammonia) were typically below or marginally above the detection limit, with the exception of nitrate-N, which was detected in the majority of samples (0.0046 to 0.16 mg/L, median 0.062 mg/L; Table 3-2), but well below its CCME guideline (3 mg/L). Nitrate-N concentrations were typically

highest during the winter months; primary producers are significant consumers of nitrate in aquatic systems, therefore, lower primary productivity due to winter conditions may be responsible for the higher nitrate-N levels observed at this time.

Dissolved organic carbon (DOC) has only been monitored since 2015 and ranged between less than 0.5 and 11 mg/L (median 3.3 mg/L). DOC peaked during the May 2015 and 2017 freshets as snowmelt rinsed the surrounding organic soils, flushing organic carbon into the streams. The freshet DOC peak in 2015 coincided with the peak in colour (122 true colour units (TCU); median 17 TCU), likely due to the presence of humic substances in the DOC that lend a brown colouration to the water.

Table 3-1: Summary Statistics for In Situ Parameters at Site KZ-13, South Creek

	KZ-13					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
Guideline	6.5 – 9.0	-	-	6.5	-	-
CCME/BCMoE	CCME	-	-	CCME	-	-
Average	7.64	160.3	2.6	10.98	92.3	162.7
Count	39	37	39	39	39	38
Minimum	6.82	60.9	0.5	9.3	68.1	39.7
Maximum	8.08	237.1	10.3	13.58	110.4	414.5
Geometric Mean	7.64	153.9	3.1	10.93	91.7	133.1
Standard Deviation	0.24	43.7	3.8	0.97	10.2	104.7
1st Quartile	7.52	128.2	-0.1	10.38	87	82.2
Median	7.69	157.7	0.4	10.82	92	112.5
3rd Quartile	7.77	196.8	5.7	11.57	99.2	251.1
Count Over Guideline	0	-	-	0	-	-
% Over Guideline	0%	-	-	0%	-	-

Table 3-2: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-13, South Creek

	KZ-13							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
Guideline [b]	120	0.12	218 - 429	0.005	0.90 – 26.6	0.02	3	0.035
CCME/BCMoE	CCME	CCME	BCMoE	CCME	CCME	BCMoE	CCME	CCME
Average	0.50	0.048	13.2	0.00052	0.018	0.0013	0.075	0.0064
Count	39	39	50	47	49	47	49	49
Minimum	<0.50	0.033	<0.50	<0.00050	<0.0050	<0.0020	0.0046	<0.0020
Maximum	1.2	0.064	41.3	0.0012	0.078	<0.005	0.16	0.031
Geometric Mean	0.44	0.047	10.9	0.00046	0.0107	0.0012	0.057	0.0047
Count <DL	16	0	2	25	12	45	2	6
Standard Deviation	0.25	0.008	6.26	0.00026	0.020	0.00062	0.048	0.0061
1st Quartile	<0.50	0.043	9.36	<0.00050	0.0063	<0.0020	0.034	0.003
Median	0.54	0.045	13.5	<0.001	0.0102	<0.0020	0.062	0.0044
3rd Quartile	0.67	0.054	16.2	0.00067	0.024	<0.0020	0.11	0.0068
Count Over Guideline	0	0	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	0%	0%	0%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.
[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness/pH/temperature-dependent guidelines indicated by a range.

3.1.3 METALS

Total concentrations of arsenic, cadmium, copper, iron and zinc showed sporadic water quality guidelines exceedances (Table 3-3). Exceedances were typically coincident with elevated levels of particulate; the exceedances on May 12, 2015 (0.00011 mg/L cadmium, 1.34 mg/L iron, 0.0026 mg/L copper) were accompanied by a relatively high TSS measurement. While there was no TSS measurement in the August 31, 1994, total arsenic (0.007 mg/L), iron (9.43 mg/L), and copper (0.022 mg/L) were over an order of magnitude higher than their dissolved counterpart, indicating significant particulate transport at the time of sampling (APPENDIX A). Sporadic BCMoE exceedances for total zinc were also observed during high TSS conditions during the freshet events of 1995 (May and June) and 2015 (May). Dissolved zinc concentrations for these three sampling events were markedly lower than their total counterparts and below the BCMoE threshold. Such elevated TSS is related to higher amounts of run-off during snowmelt and precipitation, resulting in a higher particulate load due to erosive transport and potential resuspension of stream sediments during higher flows.

More frequent exceedances (12 to 14% of samples) were observed for total aluminum and chromium (Table 3-3). The average total aluminum concentration was in exceedance of its guideline, although it should be noted that the maximum total aluminum concentration observed (3.25 mg/L) was almost an order of magnitude higher than the next highest concentration, which has skewed the average concentration. The guideline exceedances observed for total aluminum concentrations generally occurred during periods of elevated TSS, typically during freshet (May-June). Although total chromium concentrations also exceeded the CCME guideline during high TSS sampling events, total chromium was also elevated at other sampling events that were not characterized by high levels of TSS or discharge. In general, more water quality guideline exceedances were noted for total metal concentrations than their dissolved counterparts, suggesting that a significant portion of the metals were particulate-bound, especially during freshet and/or other periods characterized by elevated TSS levels.

Overall, total concentrations of most elements of interest (with the exception of selenium) were at their highest during freshet, when enhanced run-off and associated higher flow rates resulted in erosive transport of particulate material. The concentration of most elements did not follow a clear seasonal trend for the remainder of the year with the exception of selenium, uranium, and hardness. Concentrations of total selenium, uranium, and hardness were typically at their lowest over freshet and summer, then increased over the late fall and winter months (APPENDIX C, Figures C-18, C-24, and C-22, respectively). This suggests that selenium, uranium, and hardness levels are influenced by groundwater, since the groundwater contribution to surface waters is highest during winter baseflow conditions. Indeed, groundwater monitoring data from wells installed on the Project site indicate that selenium (less than 0.00004 to 0.0032 mg/L), uranium (0.0006 to 0.014 mg/L), and hardness (96 to 750 mg/L) concentrations in shallow groundwater either overlap or markedly exceed the range of concentrations observed in South Creek. Speciation analysis of the March 15, 2018 KZ-13 sample indicated that dissolved selenium was exclusively present in its oxidized form, selenate.

Table 3-3: Summary Statistics for Metals of Interest at Site KZ-13, South Creek

	KZ-13										
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.00004	0.000002	0.0001
Guideline [b]	-	0.1	0.009	0.005	0.00007 - 0.00034	0.001	**0.002 - 0.01**	**0.3**	0.002	0.015	0.0075 - 0.129
CCME/BCMoE	-	CCME	BCMoE	CCME	CCME	CCME	BCMoE	CCME	BCMoE	CCME	BCMoE
Average	81.4	**0.12**	0.000034	0.00039	0.000036	0.00046	0.0013	0.36	0.00022	0.00094	0.0060
Count	50	49	39	49	48	49	49	48	49	39	49
Minimum	36.1	0.0065	<0.000020	<0.00005	<0.00001	<0.00010	0.000269	0.0649	<0.00005	0.00033	0.0018
Maximum	252	**3.25**	0.000207	**0.0069**	**0.00014**	**0.008**	**0.022**	**9.43**	0.0009	0.0026	0.07
Geometric Mean	76.6	0.031	0.000028	0.00021	0.000030	0.00016	0.00070	0.14	0.000176	0.00080	0.0044
Count <DL	0	0	12	4	2	24	0	0	4	0	0
Standard Deviation	33.3	0.47	0.000031	0.0010	0.000024	0.00119	0.0032	1.35	0.00014	0.00058	0.010
1st Quartile	61.2	0.016	<0.000050	0.00018	0.000025	<0.00010	0.00048	0.085	0.00014	0.00049	0.0033
Median	70.8	0.026	0.00003	0.00023	0.00003	0.00013	0.00058	0.12	0.00018	0.00073	0.0039
3rd Quartile	97.0	0.036	0.000038	0.00026	0.000041	<0.00050	0.00083	0.19	0.00030	0.0014	0.0046
Count Over Guideline	-	6	0	1	2	7	4	4	0	0	3
% Over Guideline	-	12%	0%	2%	4%	14%	8%	8%	0%	0%	6%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.

[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines indicated by a range.

3.2 GEONA CREEK WATERSHED

3.2.1 SETTING

Geona Creek is approximately 8 km in length, originating on the north side of the watershed divide of South Creek and Geona Creek (Figure 1-2). Geona Creek's headwaters consist of a series of small ponds that flow north for approximately 2 km before eventually entering a well-defined channel. This channel flows north for approximately 6 km through a broad valley until it eventually converges with Finlayson Creek. A few small ponds can be found intermittently throughout Geona Creek and are suspected to be the result of historical beaver activity. Four water quality stations are located on Geona Creek: KZ-17, KZ-37, KZ-9, and KZ-7 (discontinued after March 2017). KZ-17 is located at the mouth of Geona Creek, KZ-37 is located downstream of the tributary monitored at KZ-18, KZ-9 is located near the proposed discharge location, and KZ-7 is located in upper Geona Creek near the proposed open pit. Water quality station KZ-6 is located on a tributary to Geona Creek, upstream of KZ-7. Station KZ-18 is located on a tributary which enters Geona Creek approximately 100 m downstream of KZ-9. Photos of KZ-18, KZ-17, KZ-37, KZ-9, KZ-7 and KZ-6 can be found in APPENDIX B (pages B-2 to B-7).

Fault Creek is approximately 2 km in length and is a mountainous alpine stream confined by a narrow valley. Fault Creek converges with Geona Creek near its headwaters and is highly braided before entering Geona Creek. One water quality station is located on Fault Creek at KZ-2. Photos of KZ-2 can be found in APPENDIX B (page B-8).

3.2.2 PHYSICAL PARAMETERS AND NUTRIENTS

Geona Creek waters (KZ-7, KZ-9, KZ-37 and KZ-17) and its tributaries (KZ-6 and KZ-18) were circumneutral (pH range 6.7 to 8.7; Table 3-4 to Table 3-9) and well oxygenated (median 78 to 92% saturated). The median pH at KZ-9 (pH 7.42) was lower than that of the upstream sites KZ-7 and KZ-6 (median pH 7.67 and 7.95, respectively), perhaps due to the influence of the nearby KZ-9 East Seep, which had a much lower pH range (pH 5.78 to 5.99; Table 3-25). Seep 5, located upstream of KZ-9, also had sporadically low pH waters (pH 5.95 to 7.85; median pH 6.73) which may contribute to the lower pH observed at KZ-9 relative to the upstream Geona Creek waters. Temperature varied seasonally between -0.5 and 12°C. The pH in Geona Creek at KZ-37 (median pH 7.42), downstream of KZ-9 and the confluence with the unnamed creek monitored at KZ-18, was comparable to that at KZ-9.

Fault Creek waters, as monitored at KZ-2, were also circumneutral (pH 7.2 to 8.2) and typically well oxygenated (median 90% saturation; Table 3-10). Fault Creek was more dilute than Geona Creek, as indicated by its lower conductivity (median 223 µS/cm at KZ-2 compared to median 276 – 336 µS/cm at sites on Geona Creek) and lower total hardness (median 111 mg/L compared to median 148 to 189 mg/L in Geona Creek).

Table 3-4: Summary Statistics for In Situ Parameters at Site KZ-6, Tributary to Geona Creek

	KZ-6					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
Guideline	6.5 – 9.0	-	-	6.5	-	-
CCME/BCMoE	CCME	-	-	CCME	-	-
Average	7.94	263.9	2.4	10.6	90.0	177.3
Count	30	29	30	30	30	30
Minimum	7.3	95.7	-0.5	7.96	62.2	69
Maximum	8.38	385.6	8.9	12.8	104	376
Geometric Mean	7.94	251.4	2.1	10.6	89.3	156
Standard Deviation	0.22	72.0	3.2	0.99	10.6	95.9
1st Quartile	7.80	227.3	-0.1	10.1	84.6	106
Median	7.95	286.5	0.2	10.7	92.4	124
3rd Quartile	8.08	314.3	5.0	11.2	97.9	261
Count Over Guideline	0	-	-	0	-	-
% Over Guideline	0%	-	-	0%	-	-

Table 3-5: Summary Statistics to March 2017 for In Situ Parameters at Site KZ-7, Geona Creek

	KZ-7					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
Guideline	6.5 – 9.0	-	-	6.5	-	-
CCME/BCMoE	CCME	-	-	CCME	-	-
Average	7.69	278	3.6	10.5	90.8	123
Count	30	30	30	28	28	25
Minimum	7.06	74.7	-0.2	8.7	81.6	23.9
Maximum	8.3	376	10.7	12.3	100.1	288
Geometric Mean	7.69	270	1.8	10.5	90.6	98.3
Standard Deviation	0.31	59.3	3.9	0.9	6.2	79.9
1st Quartile	7.45	245	0.1	9.92	86	58.3
Median	7.67	276	0.8	10.3	91	108
3rd Quartile	7.88	334	7.6	11.1	98	173
Count Over Guideline	0	-	-	0	-	-
% Over Guideline	0%	-	-	0%	-	-

Table 3-6: Summary Statistics for In Situ Parameters at Site KZ-9, Geona Creek

	KZ-9					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
Guideline	6.5 – 9.0	-	-	6.5	-	-
CCME/BCMoE	CCME	-	-	CCME	-	-
Average	7.40	315	3.0	10.6	88.2	124.1
Count	48	46	48	46	46	43
Minimum	6.65	81.1	-0.5	8.03	62.1	-32.2
Maximum	8.71	516.8	12	12.2	105	387
Geometric Mean	7.39	299.9	4.5	10.5	87.5	81.2
Standard Deviation	0.41	88.1	3.6	1.01	10.9	110
1st Quartile	7.10	259	-0.1	9.82	85	36.2
Median	7.42	324	0.8	10.6	90	85
3rd Quartile	7.59	382	6.3	11.3	97	188
Count Over Guideline	0	-	-	0	-	-
% Over Guideline	0%	-	-	0%	-	-

Table 3-7: Summary Statistics for In Situ Parameters at Site KZ-18, Tributary to Geona Creek

	KZ-18					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
Guideline	6.5 – 9.0	-	-	6.5	-	-
CCME/BCMoE	CCME	-	-	CCME	-	-
Average	7.27	339	1.2	11.0	87.5	155
Count	26	24	26	25	25	26
Minimum	6.87	67.6	-0.3	8.15	59.9	24.7
Maximum	7.84	538	4.9	12.4	101	383
Geometric Mean	7.26	319	1.3	11.0	86.7	124
Standard Deviation	0.25	99	1.7	0.96	11.3	101
1st Quartile	6.99	305	-0.1	10.8	79.1	73.3
Median	7.27	343	0.3	11.1	90.3	109
3rd Quartile	7.46	392	2.2	11.7	97.1	205
Count Over Guideline	0	-	-	0	-	-
% Over Guideline	0%	-	-	0%	-	-

Table 3-8: Summary Statistics for In Situ Parameters at Site KZ-37, Geona Creek

	KZ-37					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
Guideline	6.5 – 9.0	-	-	6.5	-	-
CCME/BCMoE	CCME	-	-	CCME	-	-
Average	7.49	319	1.8	10.7	85.0	157
Count	20	18	20	20	20	20
Minimum	6.77	100	-0.4	8.11	62	12.7
Maximum	8.71	513	7.3	12.4	99.8	360
Geometric Mean	7.48	297	1.9	10.6	83.9	109
Standard Deviation	0.50	112	2.7	1.14	13.3	110
1st Quartile	7.03	242	-0.02	10.1	73.4	82.4
Median	7.42	328	0.2	10.5	85.3	142
3rd Quartile	7.87	398	3.9	11.5	97.2	204
Count Over Guideline	0	-	-	0	-	-
% Over Guideline	0%	-	-	0%	-	-

Table 3-9: Summary Statistics for In Situ Parameters at Site KZ-17, Geona Creek

	KZ-17					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
Guideline	6.5 – 9.0	-	-	6.5	-	-
CCME/BCMoE[a]	CCME	-	-	CCME	-	-
Average	7.52	355	2.81	9.23	76.9	197
Count	42	40	42	42	42	40
Minimum	6.97	109	-0.3	**4.84**	43.9	56.7
Maximum	8.50	621	8.6	12.7	103	401
Geometric Mean	7.52	336	1.60	9.06	75.6	176
Standard Deviation	0.36	114	3.06	1.70	13.8	96.1
1st Quartile	7.18	270	0.20	8.22	72.0	123
Median	7.49	336	1.05	9.3	78.4	165
3rd Quartile	7.75	449	5.60	10.0	85.0	280
Count Over Guideline	0	-	-	2	-	-
% Over Guideline	0%	-	-	4.8%	-	-

[a] **Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance.**

Table 3-10: Summary Statistics for In Situ Parameters at Site KZ-2, Fault Creek

	KZ-2					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
Guideline	6.5 – 9.0	-	-	6.5	-	-
CCME/BCMoE[a]	CCME	-	-	CCME	-	-
Average	7.76	219	2.0	10.6	88.5	192
Count	44	42	44	44	44	44
Minimum	7.22	82.7	-0.5	**4.8**	39	78.7
Maximum	8.16	423	8.2	12.5	109	400
Geometric Mean	7.76	209	1.8	10.6	87.3	171
Standard Deviation	0.23	66.2	2.7	1.20	13.2	94.2
1st Quartile	7.63	176	-0.1	10.3	82.5	113
Median	7.79	223	0.5	10.8	89.8	155
3rd Quartile	7.93	257	4.7	11.2	98.8	276
Count Over Guideline	0	-	-	1	-	-
% Over Guideline	0%	-	-	2%	-	-

[a] **Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance.**

Fluoride and phosphorus were the only anions or nutrients monitored on Geona Creek to exceed the CCME or BCMoE guidelines. Fluoride marginally exceeded the CCME guideline (0.12 mg/L) for the April 2015 sampling event at KZ-17 (0.14 mg/L). The median fluoride concentration at this site was 0.086 mg/L (Table 3-16). Phosphorus marginally exceeded the CCME eutrophic total phosphorus threshold (0.035 mg/L) for the May 2017 sampling event at KZ-9 (0.035 mg/L) and at KZ-37 (0.045 mg/L). The median phosphorus concentrations at KZ-9 and KZ-37 were 0.0044 and 0.0090 mg/L, respectively.

No water quality guideline exceedances were noted for anions or nutrients in either of the tributaries to Geona Creek, with the exception of total phosphorus at station KZ-18 (Table 3-14). The CCME phosphorus threshold was exceeded in 60% of the samples at KZ-18 (median 0.036 mg/L). Phosphorus loading to Geona Creek from this tributary is reflected in the increase in phosphorus concentrations from KZ-9 to KZ-37, which are upstream and downstream of the tributary, respectively.

Nitrogen species (nitrate, nitrite, cyanide, ammonia) were typically below or marginally above the detection limit, with the exception of nitrate-N, which was detected in the majority of samples collected at the Geona Creek sites (less than 0.010 – 0.72 mg/L, median 0.06 – 0.17 mg/L; Table 3-11 to Table 3-16), but well below its CCME guideline (3 mg/L). Nitrate-N concentrations were close to an order of magnitude higher during the winter months, likely due to a lack of primary productivity over these months, which would otherwise limit dissolved nitrate concentrations.

DOC, monitored only since 2015, ranged from less than 0.5 and 24.6 mg/L (median 1.4 to 1.8 mg/L) for the Geona Creek and associated tributary sites. DOC peaked during the May 2015 and May 2017 freshets as snow melt rinsed the surrounding organic soils, flushing organic carbon into the streams. The May 2015 freshet DOC peak coincided with the peak in colour measurements in Geona Creek (218 to 242 TCU; median 8.0 to 15 TCU), due to the high DOC concentrations (colour measurements were not obtained in 2017). A spike in DOC and colour levels was also observed in May 2016, however, the DOC peaks were more muted than in 2015 and 2017. It is hypothesized that the higher DOC levels observed in May 2015 and 2017 likely reflect sampling closer to peak freshet conditions, whereas the May 2016 sampling event possibly captured early freshet conditions.

No CCME or BCMoE exceedances were recorded for any of the anions or nutrients monitored on Fault Creek (Table 3-17). As noted for Geona Creek, the nitrogen species concentrations in Fault Creek were typically below the detection limit or slightly above it (Table 3-17). Only nitrate-N was consistently detected, with higher concentrations observed during the winter months. DOC concentrations in Fault Creek (median 0.9 mg/L), which were approximately two-fold lower than those observed in Geona Creek, exhibited a peak during freshet (5.8, 2.5, and 6.7 mg/L in May 2015, 2016 and 2017, respectively), coincident with the peak colour observed at these periods (APPENDIX A).

Table 3-11: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-6, Tributary to Geona Creek

	KZ-6							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
Guideline [b]	120	0.12	218 - 429	0.005	0.485-23.9	0.02	3	0.035
CCME/BCMoE	CCME	CCME	BCMoE	CCME	CCME	BCMoE	CCME	CCME
Average	0.62	0.060	19.2	0.00049	0.014	0.0013	0.091	0.0060
Count	30	30	38	35	36	35	36	36
Minimum	<0.50	0.029	<0.50	<0.00050	<0.0050	<0.0020	0.0046	<0.0020
Maximum	1.2	0.077	27.9	0.0013	0.065	<0.005	0.214	0.025
Geometric Mean	0.55	0.059	16.5	0.00042	0.0088	0.0012	0.051	0.0039
Count <DL	7	0	1	20	11	34	3	7
Standard Deviation	0.27	0.013	6.35	0.00028	0.015	0.00056	0.076	0.0068
1st Quartile	0.50	0.052	15.7	<0.00050	<0.005	<0.0020	0.018	0.0024
Median	0.60	0.062	20.7	<0.001	0.011	<0.0020	0.066	0.0037
3rd Quartile	0.78	0.070	23.8	0.00063	0.023	<0.0020	0.163	0.0054
Count Over Guideline	0	0	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	0%	0%	0%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.
[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines indicated by a range.

Table 3-12: Summary Statistics to March 2017 for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-7, Geona Creek

	KZ-7							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
Guideline [b]	120	0.12	218 - 429	0.005	0.555 – 16.0	0.02	3	0.035
CCME/BCMoE	CCME	CCME	BCMoE	CCME	CCME	BCMoE	CCME	CCME
Average	0.53	0.062	30.64	0.00048	0.021	0.0018	0.064	0.0052
Count	25	25	42	32	40	38	40	32
Minimum	0.25	0.033	0.25	0.00025	0.0025	0.001	0.005	0.001
Maximum	1.3	0.1	52.3	0.0015	0.18	0.0044	0.16	0.032
Geometric Mean	0.45	0.06	27.36	0.00042	0.011	0.0016	0.039	0.0036
Count <DL	11	0	1	20	9	33	8	6
Standard Deviation	0.3	0.014	8.24	0.00027	0.031	0.0009	0.052	0.0062
1st Quartile	0.25	0.054	27	0.00025	0.0055	0.001	0.011	0.0022
Median	0.54	0.061	30.9	0.0005	0.01	0.0015	0.056	0.0031
3rd Quartile	0.71	0.069	35.95	0.00055	0.025	0.0025	0.106	0.0051
Count Over Guideline	0	0	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	0%	0%	0%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2017). Occasional samples had higher detection limits due to dilution required for some analyses.
[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines indicated by a range.

Table 3-13: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-9, Geona Creek

	KZ-9							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
Guideline [b]	120	0.12	218 - 429	0.005	0.386 – 42.5	0.02	3	0.035
CCME/BCMoE	CCME	CCME	BCMoE	CCME	CCME	BCMoE	CCME	CCME
Average	0.90	0.072	29.3	0.00050	0.023	0.0014	0.13	0.0075
Count	43	43	57	47	55	53	55	48
Minimum	<0.50	0.032	<0.50	<0.00050	<0.0050	<0.0020	<0.020	<0.0020
Maximum	8.5	0.11	67.3	0.0015	0.12	0.0027	0.72	**0.035**
Geometric Mean	0.65	0.069	24.8	0.00043	0.015	0.0013	0.075	0.0050
Count <DL	9	0	2	25	9	48	4	4
Standard Deviation	1.3	0.019	10.1	0.00030	0.022	0.00067	0.135	0.0083
1st Quartile	0.5	0.058	24.8	<0.00050	0.010	<0.0020	0.032	0.0028
Median	0.66	0.069	30.3	<0.001	0.019	<0.0020	0.090	0.0044
3rd Quartile	0.85	0.085	34.2	0.00067	0.027	0.0023	0.186	0.0069
Count Over Guideline	0	0	0	0	0	0	0	1
% Over Guideline	0%	0%	0%	0%	0%	0%	0%	2%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.
[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines indicated by a range.

Table 3-14: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-18, Tributary to Geona Creek

	KZ-18							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
Guideline [b]	120	0.12	218 - 429	0.005	1.52 – 25.6	0.02	3	0.035
CCME/BCMoE	CCME	CCME	BCMoE	CCME	CCME	BCMoE	CCME	CCME
Average	0.60	0.068	19.7	0.00053	0.015	0.0015	0.15	**0.041**
Count	26	26	30	30	30	30	30	30
Minimum	<0.50	0.027	1.1	<0.00050	<0.0050	<0.0020	<0.020	<0.003
Maximum	1.8	0.091	28.5	0.0017	0.06	<0.020	0.25	**0.089**
Geometric Mean	0.51	0.066	16.9	0.00045	0.011	0.0012	0.11	0.033
Count <DL	9	0	1	16	7	30	2	1
Standard Deviation	0.35	0.016	6.92	0.00031	0.013	0.0017	0.091	0.022
1st Quartile	<0.50	0.059	16.3	<0.00050	0.0071	<0.0020	0.060	0.026
Median	0.63	0.068	22.3	<0.001	0.014	<0.0020	0.17	**0.036**
3rd Quartile	0.74	0.082	23.9	0.00070	0.020	<0.0020	0.24	**0.059**
Count Over Guideline	0	0	0	0	0	0	0	18
% Over Guideline	0%	0%	0%	0%	0%	0%	0%	60%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.
[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines indicated by a range.

Table 3-15: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-37, Geona Creek

	KZ-37							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
Guideline [b]	120	0.12	218 - 429	0.005	0.370 – 32.2	0.02	3	0.035
CCME/BCMoE	CCME	CCME	BCMoE	CCME	CCME	BCMoE	CCME	CCME
Average	0.58	0.078	27.1	0.00060	0.028	0.0016	0.14	0.013
Count	20	20	20	20	20	20	20	20
Minimum	<0.50	0.034	<0.50	<0.00050	<0.0050	<0.0020	<0.020	0.0053
Maximum	1.4	0.11	34.5	0.0018	0.097	<0.020	0.23	**0.045**
Geometric Mean	0.50	0.074	22.1	0.00052	0.020	0.0012	0.11	0.011
Count <DL	7	0	1	6	2	18	1	0
Standard Deviation	0.32	0.026	8.16	0.00035	0.022	0.0020	0.075	0.0092
1st Quartile	<0.50	0.054	25.6	<0.00050	0.014	<0.0020	0.073	0.0076
Median	0.60	0.078	30.2	0.00060	0.023	<0.0020	0.17	0.0090
3rd Quartile	0.73	0.099	31.3	0.00071	0.033	<0.0020	0.20	0.016
Count Over Guideline	0	0	0	0	0	0	0	1
% Over Guideline	0%	0%	0%	0%	0%	0%	0%	5%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., February 2017 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.
[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines indicated by a range.

Table 3-16: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-17, Geona Creek

	KZ-17							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
Guideline [b]	120	0.12	218 - 429	0.005	0.325 – 20.4	0.02	3	0.035
CCME/BCMoE	CCME	CCME	BCMoE	CCME	CCME	BCMoE	CCME	CCME
Average	0.59	0.087	29.0	0.00045	0.020	0.0013	0.13	0.0048
Count	40	40	49	44	49	47	49	45
Minimum	<0.50	0.046	<0.50	<0.00050	<0.0050	<0.0020	0.0065	<0.0020
Maximum	1.3	**0.14**	50.2	0.0015	0.29	<0.005	0.32	0.035
Geometric Mean	0.52	0.085	25.8	0.00040	0.010	0.0012	0.074	0.0036
Count <DL	13	0	1	26	13	45	7	6
Standard Deviation	0.30	0.018	9.1	0.00026	0.041	0.00061	0.10	0.0053
1st Quartile	<0.50	0.075	25.1	<0.00050	<0.005	<0.0020	0.023	0.0027
Median	0.59	0.086	28.9	0.00038	0.011	<0.0020	0.10	0.0036
3rd Quartile	0.73	0.096	33.7	0.00059	0.021	<0.0020	0.21	0.0047
Count Over Guideline	0	1	0	0	0	0	0	0
% Over Guideline	0%	3%	0%	0%	0%	0%	0%	0%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.
[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines indicated by a range.

Table 3-17: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-2, Fault Creek

	KZ-2							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
Guideline [b]	120	0.12	218 - 429	0.005	0.890 – 11.1	0.02	3	0.035
CCME/BCMoE	CCME	CCME	BCMoE	CCME	CCME	BCMoE	CCME	CCME
Average	0.59	0.042	46.6	0.00043	0.011	0.00120	0.12	0.0024
Count	43	43	50	47	48	47	48	48
Minimum	<0.50	0.023	14.7	<0.00050	<0.0050	<0.0020	0.045	<0.0020
Maximum	5.4	0.058	76.8	0.001	0.047	0.0033	0.19	0.0082
Geometric Mean	0.43	0.042	43.8	0.00038	0.0078	0.0011	0.12	0.0018
Count <DL	23	0	0	29	14	45	0	28
Standard Deviation	0.80	0.008	15.2	0.00022	0.0097	0.00054	0.046	0.0021
1st Quartile	<0.50	0.036	35.6	<0.00050	<0.005	<0.0020	0.082	<0.0020
Median	<0.50	0.043	48.0	<0.00050	0.0079	<0.0020	0.13	<0.003
3rd Quartile	0.67	0.050	58.7	0.00060	0.016	<0.0020	0.17	0.0028
Count Over Guideline	0	0	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	0%	0%	0%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.
[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines indicated by a range.

3.2.3 METALS

The tributary sites exhibited the fewest water quality guideline exceedances (one total aluminum and chromium exceedance at KZ-18 and three for total aluminum, two for total iron and one each of cadmium, chromium, and zinc for KZ-6; Table 3-21 and Table 3-18). The total aluminum, iron and zinc exceedances for KZ-6 in the May 1995 sampling event coincided with elevated TSS levels related to freshet. The total cadmium exceedance (0.000135 mg/L) at KZ-6 occurred in May 2017 along with a total aluminum and iron exceedance and relatively high flow and somewhat elevated TSS related to freshet. The dissolved cadmium concentration was two-fold lower than the total concentration in this sample indicating particulate transport by high spring flows was significant. The high chromium concentrations for KZ-6 and KZ-18 were observed in the August 1994 and August 1995 sampling events, respectively. The high total aluminum concentration at KZ-18 was observed in May 2017 during freshet.

Moving downstream, occasional exceedances were observed for total aluminum and copper at site KZ-7 (Table 3-19). These typically occurred during high flow periods such as freshet (April 1995, iron; May 2015, aluminum and copper) or following high rainfall events (August 2016, aluminum) when TSS levels were high and the particulate fraction hosted a significant portion of the metal load. The elevated total aluminum concentration (0.128 mg/L) observed at KZ-7 for the January 2017 sampling event was also associated with TSS (21 mg/L) and the dissolved aluminum concentration was approximately two orders of magnitude lower.

More frequent (greater than 10%) water quality guideline exceedances were observed at KZ-7 for total chromium (11% of samples), cadmium (32% of samples), zinc (37% of samples), and iron (51% of samples; Table 3-19). No clear seasonal trend was observed for these exceedances, although the lack of exceedances for dissolved chromium, and fewer exceedances observed for dissolved cadmium (8% of samples), dissolved zinc (12% of samples), and dissolved iron (3% of samples) suggests that particulate-associated metal was responsible for the majority of these exceedances (APPENDIX A). Total chromium exceedances were confined to the 1995 dataset.

Further downstream at site KZ-9, the same suite of elements exceeded their respective water quality guideline for at least one sampling event. Total concentrations in excess of their respective water quality guidelines were observed for aluminum (seven times, or 13% of samples), cadmium (three times, 6%), chromium (two, 4%), copper (two, 4%), iron (42, 76%), selenium (three, 6%), and zinc (six, 11%) (Table 3-20). High flow conditions associated with freshet (May 2015, 2016 and 2017 and June 2017) or heavy precipitation (August 2016) accounted for the majority of these exceedances. Dissolved metals were generally present at levels below their water quality guidelines for these sampling events, indicating the total exceedances were largely related to particulates. More total iron exceedances were noted for KZ-9 (76% of samples) than at upstream sites on Geona Creek (4%, 5%, and 51% of samples at KZ-17, KZ-6, and KZ-7, respectively). The high total iron concentrations were less freshet-dependent than other elements and may be related to inputs from the KZ-9 East Seep, which had particularly high concentrations of dissolved iron (0.5 to 13 mg/L, median 4.2 mg/L; Table 3-27). It is also important to note that a significant proportion of the iron at KZ-9 is particulate-bound as dissolved iron concentrations (median 0.11 mg/L) only exceeded the CCME guideline in three of 55 samples (6%).

Similar water quality was observed farther down Geona Creek at KZ-37, downstream of the unnamed tributary monitored by KZ-18, where total aluminum, cadmium, copper, and zinc concentrations were in excess of their respective guidelines in one to four samples (Table 3-22). These four elements all exceeded their respective guidelines in the May 17, 2017 sampling event when high flow and high TSS related to freshet was also observed. Additional aluminum and zinc exceedances were confined to May and June 2017 samples and were also related to relatively high flow and TSS conditions associated with freshet and snowmelt. Total iron concentrations were also commonly in excess of the CCME guideline (0.3 mg/L). As discussed for KZ-9, the higher iron concentrations are less dependent on freshet and high TSS events and could be related to inputs from the KZ-9 East Seep upstream. Like at KZ-9, particulate-bound iron contributes a high proportion of total iron at KZ-37; no dissolved iron concentrations exceeded the CCME guideline at KZ-37.

KZ-17, located farther downstream on Geona Creek, exhibited occasional exceedances for total aluminum (one), arsenic (one), cadmium (two), chromium (three), copper (one), iron (two), and zinc (one; Table 3-23). The majority of these guideline exceedances occurred in the May 2015 sampling event. As observed at other sites, the dissolved concentrations of these elements were markedly lower for this sampling event, pointing towards the particulate nature of these exceedances. The few other total cadmium and chromium exceedances did not appear to follow a seasonal trend.

Overall, total concentrations of most constituents of interest (with the exception of hardness, selenium and uranium) were at their highest during freshet or following the high rainfall event in August 2016, when enhanced run-off and associated higher flow rates resulted in erosive transport of particulate material. The concentration of most elements did not follow a clear seasonal trend for the remainder of the year with the exception of total iron, arsenic, selenium, uranium, and hardness. Total iron and arsenic concentrations broadly appeared to rise over the winter months for sites KZ-9 and KZ-18, and, to a lesser degree, downstream at KZ-37 (APPENDIX C, Figure C-14), which may be related to the greater proportional input of load from the iron-rich seeps located immediately upgradient of KZ-9 (Seep 5 and KZ-9 East Seep) during the lower flow winter period. Concentrations of total selenium, uranium, and hardness were typically at their lowest at freshet, then increased over the winter months (APPENDIX C, Figures C-18, C-24, and C-22, respectively). This suggests that selenium, uranium, and hardness levels are influenced by groundwater, since the groundwater contribution to surface waters is highest during winter baseflow conditions. Speciation analysis of the March 15, 2018 surface water samples indicated that dissolved selenium was exclusively present in its oxidized form, selenate, at all sites. Arsenic speciation conducted on the KZ-37 sample also indicated that arsenate, the most oxidized form of arsenic, was the only species that was detected.

Interestingly, although the concentrations and seasonal trends of most constituents were comparable for all three years of sampling, total concentrations of arsenic, aluminum, cadmium, iron, and zinc at KZ-17 appeared to be lower in the September 2016 to March 2018 sampling period than in the prior April 2015 to August 2016 sampling period (Figures C-3, C-7, C-9, C-15, and C-21). This was most pronounced for total iron (Figure C-15). This is ascribed to beaver activity immediately upstream of this site and a change in the flow of Geona Creek through a beaver dam located upstream of KZ-17. It is hypothesized that the retention of any Geona Creek water in the beaver dam was increased from September 2016 onwards, resulting in greater opportunity for removal of constituents via precipitation and adsorption.

Fault Creek waters showed sporadic exceedances for total chromium, aluminum (one sample each), and copper (six samples) with more frequent exceedances observed for total selenium (36% of samples), total zinc (58% of samples) and total cadmium (88% of samples). Total selenium exceedances appeared to occur during the winter months (April 2015, January to May 2016, December 2016 to April 2017, and December 2017 to March 2018), whereas total zinc concentrations generally did not exceed its water quality guideline during winter since the hardness-dependent BCMoE threshold was highest over winter due to the higher hardness observed during that time. Total cadmium exceedances occurred throughout the year. Dissolved zinc and cadmium concentrations showed a similar exceedance frequency to their total counterparts and comprised the bulk of the total concentration, indicating that both zinc and cadmium were primarily transported in dissolved form.

Similar to Geona Creek, the total concentrations of most analytes in Fault Creek exhibited maxima during periods of high flow (spring freshet, heavy rainfall events) with the exception of selenium, uranium, and hardness. These parameters were at their lowest between the spring and summer, then increased steadily through the late fall and winter. This suggests that selenium, uranium, and hardness levels are influenced by groundwater, since the groundwater contribution to surface waters is highest during winter baseflow conditions. Indeed, groundwater monitoring data from wells installed on the Project site indicate that selenium (less than 0.00004 to 0.0032 mg/L), uranium (0.0006 to 0.014 mg/L), and hardness (96 to 750 mg/L) concentrations in shallow groundwater either overlap or markedly exceed the range of concentrations observed in both Geona Creek and Fault Creek.

Table 3-18: Summary Statistics for Metals of Interest at Site KZ-6, Tributary to Geona Creek

	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.00004	0.000002	0.0001
Guideline [b]	-	0.1	0.009	0.005	0.00009 - 0.00026	0.001	**0.0021 - 0.0073**	**0.3**	0.002	0.015	0.0075 - 0.077
CCME/BCMoE	-	CCME	BCMoE	CCME	CCME	CCME	BCMoE	CCME	BCMoE	CCME	BCMoE
Average	141	0.026	0.000017	0.00010	0.000035	0.00067	0.00050	0.093	0.00077	0.00087	0.0041
Count	38	37	30	35	35	36	37	37	37	30	37
Minimum	52.8	0.0012	<0.000020	<0.00005	<0.00001	<0.00010	0.00010	0.0077	<0.00005	0.00013	0.00017
Maximum	183	**0.24**	0.000054	0.0007	0.00020	**0.018**	0.0023	**1.0**	0.0017	0.0014	**0.073**
Geometric Mean	134	0.011	0.000014	0.000084	0.000025	0.00012	0.00036	0.051	0.00056	0.00075	0.0014
Count <DL	0	4	25	5	1	24	2	0	4	0	6
Standard Deviation	38.0	0.049	0.000013	0.00011	0.000041	0.0030	0.00044	0.17	0.00047	0.00039	0.012
1st Quartile	125	0.0050	<0.000020	0.00007	0.000016	<0.00010	0.00018	0.027	0.00039	0.00065	0.00055
Median	152	0.0087	<0.000020	0.000085	0.000023	<0.00010	0.00035	0.052	0.00071	0.00091	0.0011
3rd Quartile	168	0.017	0.000021	0.00011	0.000032	<0.00050	0.00062	0.089	0.0011	0.0012	<0.0050
Count Over Guideline	-	3	0	0	1	1	0	2	0	0	1
% Over Guideline	-	8%	0%	0%	3%	3%	0%	5%	0%	0%	3%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.

[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines indicated by a range.

Table 3-19: Summary Statistics for Metals of Interest at Site KZ-7, Geona Creek

	KZ-7										
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.00004	0.000002	0.0001
Guideline [b]	-	0.1	0.009	0.005	0.00008 - 0.00027	0.001	**0.002 - 0.0076**	**0.3**	0.002	0.015	0.0075 - 0.083
CCME/BCMoE	-	CCME	BCMoE	CCME	CCME	CCME	BCMoE	CCME	BCMoE	CCME	BCMoE
Average	147	0.038	0.000062	0.00039	0.00019	0.00059	0.00094	**0.47**	0.00066	0.0011	0.039
Count	42	41	27	38	38	38	40	41	40	31	41
Minimum	46.6	0.0020	0.000026	0.000025	0.00002	0.00005	0.00018	0.062	0.000025	0.00028	0.005
Maximum	191	**0.33**	0.00012	0.0011	**0.00053**	**0.0056**	0.0036	**2.0**	0.0014	0.0017	**0.092**
Geometric Mean	142	0.020	0.000057	0.00031	0.00014	0.00017	0.00073	0.35	0.00049	0.00010	0.030
Count <DL	0	2	0	4	0	25	2	0	6	0	0
Standard Deviation	31.9	0.062	0.000024	0.00025	0.00014	0.0013	0.00077	0.42	0.00036	0.00039	0.025
1st Quartile	127	0.011	0.000044	0.00023	0.000082	0.00005	0.00050	0.22	0.00045	0.00080	0.020
Median	148	0.020	0.000057	0.00037	0.00016	0.00011	0.00075	**0.31**	0.00066	0.00097	0.032
3rd Quartile	177	0.030	0.000075	0.00049	0.00027	0.0005	0.0011	**0.61**	0.00093	0.0014	0.064
Count Over Guideline	-	3	0	0	12	4	1	21	0	0	15
% Over Guideline	-	7%	0%	0%	32%	11%	3%	51%	0%	0%	37%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2017). Occasional samples had higher detection limits due to dilution required for some analyses.

[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines indicated by a range.

Table 3-20: Summary Statistics for Metals of Interest at Site KZ-9, Geona Creek

	KZ-9										
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.00004	0.000002	0.0001
Guideline [b]	-	0.1	0.009	0.005	0.0001 - 0.00037	0.001	**0.0022 - 0.014**	**0.3**	0.002	0.015	0.0075 - 0.20
CCME/BCMoE	-	CCME	BCMoE	CCME	CCME	CCME	BCMoE	CCME	BCMoE	CCME	BCMoE
Average	171	0.056	0.000051	0.00044	0.00011	0.00027	0.00090	**0.66**	0.0010	0.0013	0.0165
Count	56	55	45	52	52	52	54	55	54	49	55
Minimum	54	0.0026	0.00002	0.00012	0.00002	<0.00010	0.000069	0.0028	<0.00005	0.00036	0.0017
Maximum	346	**0.69**	0.00012	0.0019	**0.0010**	0.0018	0.0047	**5.2**	**0.0050**	0.0038	**0.057**
Geometric Mean	162	0.023	0.000047	0.00037	0.000085	0.00016	0.00063	0.43	0.00078	0.0012	0.013
Count <DL	0	2	2	1	0	25	2	0	5	0	4
Standard Deviation	52.8	0.12	0.000021	0.00032	0.00014	0.00033	0.00091	0.77	0.00080	0.00069	0.010
1st Quartile	141	0.010	0.000035	0.00027	0.000062	<0.00010	0.00038	**0.31**	0.00061	0.00080	0.0094
Median	172	0.02	0.000051	0.00035	0.000083	0.00014	0.00055	**0.49**	0.00095	0.0013	0.016
3rd Quartile	201	0.038	0.000063	0.00046	0.00011	0.00040	<0.002	**0.70**	0.0012	0.0017	0.021
Count Over Guideline	-	7	0	0	3	2	2	42	3	0	6
% Over Guideline	-	13%	0%	0%	6%	4%	4%	76%	6%	0%	11%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.

[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines indicated by a range.

Table 3-21: Summary Statistics for Metals of Interest at Site KZ-18, Tributary to Geona Creek

	KZ-18										
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.00004	0.000002	0.0001
Guideline [b]	-	0.1	0.009	0.005	0.00008 - 0.00032	0.001	**0.002 - 0.009**	**0.3**	0.002	0.015	0.0075 - 0.114
CCME/BCMoE	-	CCME	BCMoE	CCME	CCME	CCME	BCMoE	CCME	BCMoE	CCME	BCMoE
Average	187	0.028	0.000040	0.00068	0.000046	0.00024	0.00036	0.054	0.0010	0.0023	0.0024
Count	30	30	26	30	30	30	30	30	30	26	30
Minimum	43.2	0.0062	<0.000020	0.00023	0.000018	<0.00010	0.000072	0.0043	<0.00005	0.00034	0.00060
Maximum	232	**0.30**	0.00013	0.0012	0.00017	**0.0017**	0.0017	0.18	0.0017	0.0035	0.0090
Geometric Mean	179	0.017	0.000033	0.00060	0.000040	0.00015	0.00025	0.034	0.00078	0.0021	0.0019
Count <DL	0	0	3	0	0	8	1	0	1	0	0
Standard Deviation	43.5	0.053	0.000027	0.00032	0.000030	0.00032	0.00039	0.050	0.00048	0.00091	0.0018
1st Quartile	177	0.011	0.000028	0.00043	0.000028	0.000062	0.00016	0.014	0.00076	0.0018	0.0014
Median	198	0.015	0.000033	0.00060	0.000042	0.00017	0.00019	0.039	0.0011	0.0025	0.0018
3rd Quartile	214	0.021	0.000040	0.0011	0.000054	0.00022	0.00038	0.083	0.0014	0.0032	0.0026
Count Over Guideline	-	1	0	0	0	1	0	0	0	0	0
% Over Guideline	-	3%	0%	0%	0%	3%	0%	0%	0%	0%	0%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.

[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines indicated by a range.

Table 3-22: Summary Statistics for Metals of Interest at Site KZ-37, Geona Creek

	KZ-37										
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.00004	0.000002	0.0001
Guideline [b]	-	0.1	0.009	0.005	0.0001 - 0.00032	0.001	**0.0024 - 0.0094**	**0.3**	0.002	0.015	0.0075 - 0.116
CCME/BCMoE	-	CCME	BCMoE	CCME	CCME	CCME	BCMoE	CCME	BCMoE	CCME	BCMoE
Average	171	0.061	0.000043	0.00045	0.000089	0.00018	0.00082	**0.48**	0.0010	0.0015	0.016
Count	20	20	20	20	20	20	20	20	20	20	20
Minimum	59	0.0054	0.000022	0.00027	0.000056	<0.00010	0.00015	0.2	0.00040	0.00038	0.011
Maximum	235	**0.50**	0.000072	0.0011	**0.00032**	0.00088	**0.0035**	**1.74**	0.0014	0.0022	**0.053**
Geometric Mean	160	0.021	0.000040	0.00043	0.000081	0.00010	0.00048	0.42	0.00095	0.0013	0.015
Count <DL	0	0	0	0	0	11	0	0	0	0	0
Standard Deviation	55.7	0.12	0.000015	0.00018	0.000057	0.00023	0.00094	0.33	0.00030	0.00062	0.0094
1st Quartile	123	0.0071	0.000032	0.00034	0.000065	<0.00010	0.00021	**0.32**	0.00074	0.00085	0.012
Median	189	0.0094	0.000040	0.00040	0.000078	<0.00010	0.00035	**0.39**	0.0011	0.0016	0.013
3rd Quartile	219	0.060	0.000052	0.00051	0.000085	0.00016	0.0011	**0.46**	0.0012	0.0020	0.015
Count Over Guideline	-	3	0	0	1	0	1	17	0	0	4
% Over Guideline	-	15%	0%	0%	5%	0%	5%	85%	0%	0%	20%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., February 2017 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.

[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines indicated by a range.

Table 3-23: Summary Statistics for Metals of Interest at Site KZ-17, Geona Creek

	KZ-17										
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.00004	0.000002	0.0001
Guideline [b]	-	0.1	0.009	0.005	0.00012 - 0.00037	0.001	**0.0027 - 0.014**	**0.3**	0.002	0.015	0.0075 - 0.193
CCME/BCMoE	-	CCME	BCMoE	CCME	CCME	CCME	BCMoE	CCME	BCMoE	CCME	BCMoE
Average	198	0.024	0.000038	0.00058	0.000050	0.00066	0.00075	0.18	0.00094	0.0028	0.0048
Count	49	48	40	47	47	47	47	48	47	43	48
Minimum	68	0.00098	<0.000020	0.00017	0.00001	<0.00010	0.0002	0.0012	<0.00005	0.00067	0.00076
Maximum	337	**0.60**	0.000082	**0.0060**	**0.00043**	**0.023**	**0.0047**	**4.4**	0.0018	0.0059	**0.043**
Geometric Mean	188	0.0068	0.000034	0.00042	0.000035	0.00010	0.00055	0.037	0.00075	0.0024	0.0032
Count <DL	0	0	4	2	0	40	0	0	4	0	3
Standard Deviation	61.8	0.086	0.000018	0.00084	0.000070	0.0033	0.00082	0.63	0.00048	0.0014	0.0062
1st Quartile	152	0.0026	0.000025	0.00023	0.000021	<0.00010	0.00033	0.0054	0.00055	0.0019	0.0016
Median	185	0.0054	0.000032	<0.001	0.000034	<0.00010	0.00050	0.088	0.00084	0.0025	0.0033
3rd Quartile	255	0.012	0.000051	0.00067	0.000050	0.00022	0.00069	0.15	0.0014	0.0034	0.0061
Count Over Guideline	-	1	0	1	2	3	1	2	0	0	1
% Over Guideline	-	2%	0%	2%	4%	6%	2%	4%	0%	0%	2%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.

[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines indicated by a range.

Table 3-24: Summary Statistics for Metals of Interest at Site KZ-2, Fault Creek

	KZ-2										
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.00004	0.000002	0.0001
Guideline [b]	-	0.1	0.009	0.005	0.00007 - 0.00023	0.001	**0.002 - 0.006**	**0.3**	0.002	0.015	0.0075 - 0.0585
CCME/BCMoE	-	CCME	BCMoE	CCME	CCME	CCME	BCMoE	CCME	BCMoE	CCME	BCMoE
Average	106	0.022	0.000029	0.000096	0.00024	0.00024	0.0013	0.028	0.0015	0.0031	0.035
Count	50	50	43	48	48	48	50	50	50	43	50
Minimum	36.7	0.0017	0.000020	<0.00005	0.000080	<0.00010	0.00043	0.0011	<0.00005	0.00068	0.017
Maximum	158	**0.17**	0.000053	0.00032	**0.00060**	**0.0057**	0.0059	0.23	**0.0032**	0.0057	**0.12**
Geometric Mean	101	0.011	0.000028	0.000088	0.00023	0.000079	0.00095	0.012	0.0011	0.0027	0.033
Count <DL	0	3	0	2	0	38	2	2	2	0	0
Standard Deviation	31.1	0.031	0.0000070	0.000045	0.000085	0.00083	0.0013	0.041	0.00092	0.0016	0.016
1st Quartile	81.1	0.0038	0.000024	0.000074	0.00020	<0.00010	0.00053	0.0052	0.00056	0.0017	0.025
Median	111	0.010	0.000027	0.000089	**0.00023**	<0.00010	0.00076	0.011	0.0014	0.0031	0.029
3rd Quartile	133	0.024	0.000033	0.00010	**0.00027**	<0.00010	0.0015	0.032	**0.0022**	0.0046	0.039
Count Over Guideline	-	1	0	0	42	1	6	0	18	0	29
% Over Guideline	-	2%	0%	0%	88%	2%	12%	0%	36%	0%	58%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.

[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines indicated by a range.

3.3 GEONA CREEK SEEPS

3.3.1 SETTING

Numerous seeps can be observed along the Geona Creek drainage, five of which were sampled between June 2015 and October 2016 to gain an understanding of their chemistry and how it compares to that of Geona Creek. KZ-9 East Seep and West Seep are located near water quality station KZ-9 on the east and west side of Geona Creek at about 50 m and 30 m from the creek, respectively (Figure 1-2). KZ-9 East Seep has an orange colour and bubbles can be seen coming up, whereas KZ-9 West Seep does not have a distinctive colouration or noticeable bubbles. Moving upstream along Geona Creek, Seep 5 is located on the east side of Geona Creek, and enters as a side channel of Geona Creek. It has a distinct orange colour and bubbles can be observed coming up. Further upstream, Seep 3 is located on the West side of Geona Creek and is approximately 20 m wide. It is located further up the hillside compared to the previous three seeps (about 100 m from the creek) and has no distinct colouration or noticeable bubbles. Finally, Seep 4 is located upstream of water quality station KZ-7 and about 140 m from Geona Creek, and is part of a wide seep network on the west side of Geona Creek; algae growth can be observed in some of the more stagnant areas. Photos of all seeps can be found in APPENDIX B (page B-9).

3.3.2 PHYSICAL PARAMETERS AND NUTRIENTS

Seep 3, Seep 4 and the KZ-9 West Seep shared similar circumneutral to mildly alkaline pH (pH 7.3 to 8.1) and oxygen content (72 to 98% saturation) ranges (Table 3-25). In contrast, the KZ-9 East Seep, and to a lesser extent Seep 5, had a lower pH range (pH 5.8 to 6.0 for KZ-9 East Seep and pH 6.0 to 7.9 for Seep 5) and lower oxygen content (21 to 54% saturation for KZ-9 East Seep and 26 to 128% saturation for Seep 5). Both of these seeps were also characterized by orange precipitates, likely composed of poorly crystalline iron oxyhydroxides. The measurable dissolved iron concentrations in these waters (Table 3-27 and Table 3-31), and typically lower dissolved oxygen content relative to the other seeps suggest that suboxic groundwater discharges here. Upon exposure to the atmosphere, the dissolved ferrous iron oxidizes rapidly to precipitates, producing the orange ochreous precipitates observed at the KZ-9 East Seep and Seep 5. This process also produces acidity, leading to the lower pH observed at both these sites.

No CCME or BCMoE guideline exceedances were recorded for any of the anions or nutrients monitored in the five seeps with the exception of fluoride in the KZ-9 East Seep (0.86 to 0.97 mg/L; Table 3-26), which was seven times higher than the CCME guideline (0.12 mg/L).

Table 3-25: In Situ Parameters at Seep Sites

Sampling Location	Sampling Date	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
			µS/cm	°C	mg/L	%	mV
Guideline [a]		6.5 – 9.0	-	-	6.5	-	-
CCME/BCMoE		CCME	-	-	CCME	-	-
KZ-9 East_Seep	24-Jun-15	**5.89**	1520	7.2	**2.98**	24.6	45.7
KZ-9 East_Seep	29-Jul-15	**5.94**	1577	5.8	**3.26**	26.5	76.1
KZ-9 East_Seep	15-Oct-15	**5.78**	1628	0.8	**2.6**	21	153.3
KZ-9 East_Seep	16-Jun-16	**5.91**	1517	6.4	**2.83**	27.1	80.8
KZ-9 East_Seep	27-Jul-16	**5.88**	1534	4.6	**5.16**	44.5	73.4
KZ-9 East_Seep	27-Aug-16	**5.99**	1882	2.9	**6.44**	53.5	127.2
KZ-9 East_Seep	7-Sep-16	**5.88**	1422	4.3	**3.17**	28.6	60.4
KZ-9 East_Seep	4-Oct-16	**5.84**	1360	0.4	**4.74**	39	74.4
KZ-9 West_Seep	24-Jun-15	7.66	443.6	6	10.19	80.9	94.7
KZ-9 West_Seep	29-Jul-15	7.71	473.4	4.4	9.63	74.4	74.3
KZ-9 West_Seep	15-Oct-15	7.7	484.7	0.2	9.4	75	249.9
KZ-9 West_Seep	14-Jun-16	7.88	465.6	4.2	8.91	80.6	39.9
KZ-9 West_Seep	27-Jul-16	7.41	475.8	4.2	8.18	73	107.3
KZ-9 West_Seep	27-Aug-16	7.92	516.6	2.7	11.22	96.5	262.7
KZ-9 West_Seep	7-Sep-16	7.6	428	3.5	8.96	80.1	93.5
KZ-9 West_Seep	4-Oct-16	7.28	450.1	-0.1	9.02	72	22.8
Seep-3	24-Jun-15	7.89	314.4	9.6	10.6	93.9	83
Seep-3	16-Oct-15	7.31	344.3	0.1	10.6	86	22.7
Seep-3	16-Jun-16	7.89	312.9	9.4	8.53	88.5	67.3
Seep-3	27-Jul-16	7.44	361	9.9	8.22	84.6	94.5
Seep-3	28-Aug-16	7.8	323.3	2.5	11.5	98	69.8
Seep-3	7-Sep-16	7.75	268.7	6.7	8.7	84.2	108.1
Seep-3	4-Oct-16	7.6	299.1	-0.2	10.73	85.7	109.8
Seep-4	24-Jun-15	7.51	272.4	7.7	10	84.3	71
Seep-4	15-Oct-15	7.29	320	2.4	9	78	273.8
Seep-4	16-Jun-16	7.6	301.1	2	10.76	91.8	130
Seep-4	27-Aug-16	8.08	374.2	8.2	8.41	84.4	271.8
Seep-4	8-Sep-16	7.93	274.6	2.7	9.38	81.6	103.9
Seep-4	3-Oct-16	7.49	273.3	2.4	8.62	74.5	145.1
Seep-5	24-Jun-15	**5.99**	563.9	12.6	7.06	65.7	19.7
Seep-5	16-Oct-15	**5.95**	557.5	0.6	**3.2**	26	99
Seep-5	16-Jun-16	7.02	516.4	11.1	8.23	89.2	13.6
Seep-5	27-Jul-16	7.28	234.9	9.1	6.8	69	-14.2
Seep-5	27-Aug-16	**6.04**	620.4	9.3	12.7	128	34.2
Seep-5	7-Sep-16	7.85	146.6	6.5	**6.43**	64.2	-7.3
Seep-5	4-Oct-16	6.73	447.3	1.2	7.07	59.2	22.4

[a] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance.

Table 3-26: CCME/BCMoE Guideline Anions and Nutrients at Seep Sites

Sampling Location	Sampling Date	Chloride	Fluoride	Dissolved Sulphate	Nitrite-N	Nitrate-N	Dissolved Phosphorus
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Guideline [a]		120	0.12	128 – 429	0.02 - 0.2	3	0.035
CCME/BCMoE		CCME	CCME	BCMoE	BCMoE	CCME	CCME
KZ-9 East_Seep	24-Jun-15	- [b]	-	-	-	-	0.0045
KZ-9 East_Seep	29-Jul-15	1.5	**0.86**	18.8	<0.0020	0.014	0.003
KZ-9 East_Seep	15-Oct-15	2.3	**0.91**	11.8	<0.0020	0.0074	0.0052
KZ-9 East_Seep	16-Jun-16	2.1	**0.97**	17.0	<0.0020	0.015	0.0086
KZ-9 East_Seep	27-Jul-16	-	-	-	-	-	<0.0020
KZ-9 East_Seep	27-Aug-16	1.4	**0.97**	16.2	<0.0020	0.049	<0.0020
KZ-9 East_Seep	7-Sep-16	2.0	**0.92**	24.6	<0.0020	0.016	<0.0020
KZ-9 East_Seep	4-Oct-16	-	-	-	-	-	0.006
KZ-9 West_Seep	24-Jun-15	-	-	-	-	-	0.0026
KZ-9 West_Seep	29-Jul-15	<0.50	0.061	37.6	<0.0020	0.38	<0.0020
KZ-9 West_Seep	15-Oct-15	0.67	0.056	45.8	<0.0020	0.59	0.0025
KZ-9 West_Seep	14-Jun-16	0.91	0.072	47.2	<0.0020	0.36	0.0041
KZ-9 West_Seep	27-Jul-16	-	-	-	-	-	<0.0020
KZ-9 West_Seep	27-Aug-16	0.77	0.067	26	0.0024	0.39	<0.0020
KZ-9 West_Seep	7-Sep-16	0.75	0.056	40.9	<0.0020	0.49	<0.0020
KZ-9 West_Seep	4-Oct-16	-	-	-	-	-	<0.0020
Seep-3	24-Jun-15	-	-	-	-	-	0.0027
Seep-3	16-Oct-15	0.7	0.036	31.1	<0.0020	0.57	0.0027
Seep-3	27-Jul-16	-	-	-	-	-	<0.0020
Seep-3	28-Aug-16	0.75	0.032	27.7	<0.0020	0.59	<0.0020
Seep-3	7-Sep-16	0.73	0.036	18.2	<0.0020	0.51	0.0022
Seep-3	4-Oct-16	-	-	-	-	-	<0.0020
Seep-4	24-Jun-15	-	-	-	-	-	<0.0020
Seep-4	15-Oct-15	<0.50	0.033	39.3	<0.0020	0.27	<0.0020
Seep-4	16-Jun-16	0.71	0.038	39.5	<0.0020	0.49	0.0048
Seep-4	27-Aug-16	<0.50	0.038	38.4	<0.0020	0.38	<0.0020
Seep-4	8-Sep-16	0.64	0.047	39.2	<0.0020	0.50	0.0034
Seep-4	3-Oct-16	-	-	-	-	-	0.0024
Seep-5	24-Jun-15	-	-	-	-	-	<0.0020
Seep-5	16-Oct-15	0.98	0.089	11.5	<0.020	<0.020	0.0033
Seep-5	16-Jun-16	11	0.17	8.6	<0.0020	0.0046	0.0166
Seep-5	27-Jul-16	-	-	-	-	-	0.0043
Seep-5	27-Aug-16	2.6	0.084	17.7	0.003	<0.0020	0.0086
Seep-5	7-Sep-16	2.6	0.074	7.51	<0.0020	<0.0020	0.0101
Seep-5	4-Oct-16	-	-	-	-	-	0.0192

[a] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines indicated by a range.

[b] Dash denotes no sample collected.

3.3.3 METALS

The dissolved concentrations of metals of interest in the seep waters are presented in Table 3-27 to Table 3-31. Dissolved aluminum and dissolved iron exceeded their respective BCMoE guidelines in the majority of KZ-9 East Seep samples (Table 3-27). The aluminum exceedance is partly due to the relatively low pH of the seep waters, which enhances aluminum solubility. Seep 5 waters also returned samples with dissolved iron exceedances (Table 3-31). The elevated iron concentrations (0.5 to 13 mg/L) observed in both these seeps are likely due to iron(III)-reducing conditions present in the aquifer which feeds them. This is evidenced by the low dissolved oxygen, low nitrate concentration, and elevated manganese concentrations (1.8 to 2.2 mg/L for KZ-9 East Seep and 0.016 to 0.58 mg/L for Seep 5) relative to the other seeps that were not characterized by an orange precipitate. Nitrate- and manganese(IV)-reduction are thermodynamically more favourable than iron(III)-reduction, hence the relatively low nitrate concentrations and elevated dissolved manganese (due to the reductive dissolution of oxidized manganese minerals) would be expected as precursors to iron(III)-reduction. Under iron(III)-reducing conditions, poorly crystalline ferric oxyhydroxide phases undergo reductive dissolution, resulting in the elevated levels of dissolved ferrous iron observed. Upon exposure to the atmosphere, oxidation of the dissolved ferrous iron and subsequent precipitation of ferric oxyhydroxide precipitates is rapid, giving rise to the orange colouration observed at these sites and the lower pH, since hydrolysis of ferric iron is an acid-producing reaction.

As noted in Section 3.2.2, the lower pH of the KZ-9 East Seep and Seep 5 may contribute to the slightly lower pH of Geona Creek water observed immediately downgradient at site KZ-9 relative to the upstream site KZ-7. The relatively high iron content of these two seeps, particularly KZ-9 East Seep, may also contribute to the rising trend in total iron concentrations noted at KZ-9 over the winter months. This is when the relative contribution of these seeps and other groundwater sources to Geona Creek might be expected to peak under the winter low surface flow conditions.

Seep 5 samples also showed occasional exceedances for dissolved cadmium, zinc, and copper (Table 3-31). The KZ-9 West Seep returned dissolved selenium concentrations (0.0020 – 0.0036 mg/L) that were marginally above the BCMoE guideline (0.002 mg/L). No parameters of interest in samples collected from Seeps 3 and 4 exceeded any water quality guidelines (Table 3-29 and Table 3-30).

Table 3-27: Concentrations of Metals of Interest at East Seep Near KZ-9

East Seep near KZ-9												
Sampling Date	Dissolved Hardness	Dissolved Aluminum	Dissolved Antimony	Dissolved Arsenic	Dissolved Cadmium	Dissolved Chromium	Dissolved Copper	Dissolved Iron	Dissolved Lead	Dissolved Selenium	Dissolved Uranium	Dissolved Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
CCME Guideline [a]	-	0.1		0.005		0.001					0.015	
BCMoE Guideline [a]	-	0.05 at pH ≥6.5; 0.038 - 0.047 for pH<6.5 samples	0.009		0.00046		0.033 - 0.040	0.35	0.051 - 0.063	0.002		0.24
24-Jun-15	993	**0.0585**	<0.000020	0.00188	0.0000505	<0.00010	<0.000050	**3.89**	<0.0000050	<0.000040	0.0019	0.0302
29-Jul-15	982	**0.126**	<0.000020	0.00275	0.0000752	<0.00010	<0.000050	**13**	<0.0000050	<0.000040	0.00189	0.0337
15-Oct-15	970	**0.0917**	<0.000020	0.0018	0.000069	<0.00010	<0.000050	**9.02**	<0.0000050	<0.000040	0.00178	0.0321
16-Jun-16	834	**0.0586**	<0.000020	0.000781	0.000061	<0.00010	<0.000050	**3.13**	<0.0000050	<0.000040	0.00149	0.0266
27-Jul-16	921	**0.0489**	<0.000020	0.000605	0.00007	<0.00010	0.000066	**1.85**	<0.0000050	<0.000040	0.00179	0.0263
27-Aug-16	852	**0.0952**	<0.000020	0.000579	0.000062	<0.00010	0.000052	**6.64**	<0.0000050	<0.000040	0.00183	0.0282
7-Sep-16	895	**0.0793**	<0.000020	0.000649	0.000069	<0.00010	<0.000050	**4.44**	<0.0000050	<0.000040	0.00185	0.0287
4-Oct-16	952	0.0276	<0.000020	0.00115	0.000039	<0.00010	0.000085	**0.497**	<0.0000050	<0.000040	0.00107	0.0269

[a] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines are indicated by a range.

Table 3-28: Concentrations of Metals of Interest at West Seep Near KZ-9

West Seep near KZ-9												
Sampling Date	**Dissolved Hardness**	**Dissolved Aluminum**	**Dissolved Antimony**	**Dissolved Arsenic**	**Dissolved Cadmium**	**Dissolved Chromium**	**Dissolved Copper**	**Dissolved Iron**	**Dissolved Lead**	**Dissolved Selenium**	**Dissolved Uranium**	**Dissolved Zinc**
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
CCME Guideline [a]	-	0.1		0.005		0.001					0.015	
BCMoE Guideline [a]	-	0.05 at pH ≥6.5	0.009		0.00040 - 0.00044		0.0095 - 0.011	0.35	0.013 - 0.014	0.002		0.119 - 0.141
24-Jun-15	260	0.00091	0.000025	0.000131	0.0000386	0.0002	0.000115	<0.0010	<0.0000050	**0.00247**	0.00301	0.00029
29-Jul-15	268	0.0012	0.000023	0.000121	0.0000324	0.00021	<0.000050	0.0011	<0.0000050	**0.00308**	0.00303	0.00053
15-Oct-15	250	0.00059	0.000025	0.000122	0.000016	0.00046	0.000103	<0.0010	0.000007	0.00197	0.0021	0.00056
14-Jun-16	251	0.00094	0.000024	0.000109	0.000041	0.00015	0.000095	<0.0010	<0.0000050	**0.0024**	0.00311	0.00038
27-Jul-16	259	0.00121	0.000021	0.000085	0.00004	0.00016	0.000084	<0.0010	<0.0000050	**0.00237**	0.00285	<0.00010
27-Aug-16	238	0.00107	0.000021	0.000085	0.000055	0.00015	0.000157	0.0027	<0.0000050	**0.00343**	0.00279	0.00115
7-Sep-16	257	0.00129	0.000027	0.000098	0.000012	0.00027	0.000112	<0.0010	0.000007	**0.00261**	0.00208	0.00128
4-Oct-16	258	0.0006	0.000021	0.000077	0.000039	0.00028	<0.000050	<0.0010	<0.0000050	**0.00362**	0.00289	0.00052

[a] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines are indicated by a range.

Table 3-29: Concentrations of Metals of Interest at Seep 3

Seep 3												
Sampling Date	Dissolved Hardness	Dissolved Aluminum	Dissolved Antimony	Dissolved Arsenic	Dissolved Cadmium	Dissolved Chromium	Dissolved Copper	Dissolved Iron	Dissolved Lead	Dissolved Selenium	Dissolved Uranium	Dissolved Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
CCME Guideline [a]	-	0.1		0.005		0.001					0.015	
BCMoE Guideline [a]	-	0.05 at pH ≥6.5	0.009		0.00029 - 0.00034		**0.0061 - 0.0077**	**0.35**	**0.0087 - 0.011**	0.002		0.054 - 0.085
24-Jun-15	173	0.00261	<0.000020	0.000175	0.0000092	<0.00010	0.00012	<0.0010	<0.0000050	0.000757	0.00097	0.00023
16-Oct-15	176	0.0037	<0.000020	0.000085	0.000014	0.00017	0.000098	<0.0010	<0.0000050	0.000799	0.00118	0.00029
16-Jun-16	-	-	-	-	-	-	-	-	-	-		-
27-Jul-16	193	0.00422	<0.000020	0.000096	0.000007	<0.00010	0.000167	0.0011	<0.0000050	0.000732	0.00112	<0.00010
28-Aug-16	163	0.00217	<0.000020	0.000125	0.000008	<0.00010	0.000131	<0.0010	<0.0000050	0.000765	0.000923	0.00064
7-Sep-16	152	0.00328	<0.000020	0.000074	0.000012	<0.00010	0.000234	<0.0010	<0.0000050	0.000627	0.000702	0.00043
4-Oct-16	172	0.00122	<0.000020	0.000149	0.000007	<0.00010	0.00008	<0.0010	0.0000270	0.000798	0.00101	0.00052

[a] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines are indicated by a range.

Table 3-30: Concentrations of Metals of Interest at Seep 4

Seep 4												
Sampling Date	Dissolved Hardness	Dissolved Aluminum	Dissolved Antimony	Dissolved Arsenic	Dissolved Cadmium	Dissolved Chromium	Dissolved Copper	Dissolved Iron	Dissolved Lead	Dissolved Selenium	Dissolved Uranium	Dissolved Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
CCME Guideline [a]	-	0.1		0.005		0.001					0.015	
BCMoE Guideline [a]	-	0.05 at pH ≥6.5	0.009		0.00027 - 0.00031		**0.0057 - 0.0067**	**0.35**	**0.0086 - 0.0094**	0.002		0.047 - 0.065
24-Jun-15	142	0.00126	<0.000020	0.000056	0.0000137	<0.00010	0.000295	<0.0010	<0.0000050	0.000709	0.000944	0.00026
15-Oct-15	167	0.00146	<0.000020	0.000087	0.000018	<0.00010	0.000178	<0.0010	<0.0000050	0.00082	0.00137	0.00015
16-Jun-16	156	0.00155	<0.000020	0.000062	0.00001	0.00094	0.000352	0.0070	<0.0000050	0.000833	0.00131	0.00037
27-Aug-16	159	0.00234	<0.000020	0.000052	0.000013	<0.00010	0.000347	0.0025	0.0000060	0.00086	0.00119	0.00084
8-Sep-16	151	0.00159	<0.000020	0.000062	0.000013	<0.00010	0.000319	<0.0010	<0.0000050	0.000826	0.000879	0.00014
3-Oct-16	152	0.00103	<0.000020	0.000044	0.000015	<0.00010	0.00021	<0.0010	<0.0000050	0.000814	0.00106	0.00027

[a] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines are indicated by a range.

Table 3-31: Concentrations of Metals of Interest at Seep 5

Seep 5												
Sampling Date	Dissolved Hardness	Dissolved Aluminum	Dissolved Antimony	Dissolved Arsenic	Dissolved Cadmium	Dissolved Chromium	Dissolved Copper	Dissolved Iron	Dissolved Lead	Dissolved Selenium	Dissolved Uranium	Dissolved Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
CCME Guideline [a]	-	0.1		0.005		0.001					0.015	
BCMoE Guideline [a]	-	0.05 at pH ≥6.5; 0.045 - 0.049 for pH<6.5 samples	0.02		0.00012 - 0.00044		**0.002 - 0.011**	**0.35**	**0.0045 - 0.014**	0.002		0.0075 - 0.14
24-Jun-15	267	0.00257	<0.000020	0.000264	0.0000141	<0.00010	0.000151	0.0333	<0.0000050	0.000043	0.000068	0.00856
16-Oct-15	196	0.00099	<0.000020	0.000239	0.000035	<0.00010	0.000157	0.0273	<0.0000050	0.000101	0.000114	0.0121
16-Jun-16	255	0.00102	0.000022	0.000277	0.000038	<0.00010	0.000432	0.0373	<0.0000050	0.000099	0.000287	0.0105
27-Jul-16	72.6	0.0147	0.000073	0.000676	**0.000185**	0.00017	0.00239	**0.681**	0.0000250	0.000183	0.000069	0.0233
27-Aug-16	110	0.0126	0.000064	0.000308	**0.000345**	0.00014	0.00235	**1.11**	0.0000350	0.000237	0.000218	**0.0681**
7-Sep-16	47.8	0.0228	0.000069	0.000274	**0.000518**	0.00019	**0.00358**	**0.513**	0.0000340	0.000207	0.000089	**0.1**
4-Oct-16	220	0.00097	0.000039	0.000292	0.00003	<0.00010	0.000204	0.24	0.0000050	0.000363	0.000666	0.0139

[a] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines are indicated by a range.

3.4 FINLAYSON CREEK

3.4.1 SETTING

Finlayson Creek in its entirety is approximately 38 km in length, with 28 km of its reach located downstream of the potential zone of influence of the Project (Figure 1-2). Finlayson Creek originates west of the Project area and flows northeast until eventually draining into the Finlayson River. Four water quality stations are located on Finlayson Creek: KZ-16, KZ-15, KZ-22, and KZ-26. KZ-16 is located immediately upstream of the confluence with Geona Creek, KZ-15 is located 100 m downstream of the confluence with Geona Creek, KZ-22 is located 100 m downstream of the confluence with East Creek and KZ-26 is located at the convergence of Finlayson Creek and the Robert Campbell Highway. Photos of Finlayson Creek can be found in APPENDIX B (pages B-10 to B-13).

3.4.2 PHYSICAL PARAMETERS AND NUTRIENTS

Finlayson Creek waters (KZ-16, KZ-15, KZ-22, and KZ-26) were circumneutral to mildly alkaline (pH range 6.9 to 8.5; Table 3-32 to Table 3-35) and well oxygenated (median 91 to 95% saturation). Temperature varied seasonally between -0.6 and 11.5°C. The median pH at KZ-26 (pH 8.04), the most downstream station, was higher than that of the three upstream sites (median pH 7.64 to 7.81), suggesting downstream input(s) of alkalinity, likely from tributaries to Finlayson Creek (i.e., Geona Creek, East Creek, and others) that enter upstream of KZ-26, as concentrations of both hardness and alkalinity increased progressively at each monitoring site along the reach of Finlayson Creek (Figure 1-2, Table 3-40 to Table 3-43, and APPENDIX A).

Table 3-32: Summary Statistics for In Situ Parameters at Site KZ-16, Finlayson Creek

	KZ-16					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
Guideline	6.5 – 9.0	-	-	6.5	-	-
CCME/BCMoE	CCME	-	-	CCME	-	-
Average	7.58	325	3.60	10.7	90.6	194
Count	46	44	46	44	44	41
Minimum	6.90	111	-0.6	8.76	60.5	33.4
Maximum	8.14	631	11.3	13.1	107	407
Geometric Mean	7.57	296	4.91	10.7	90.0	171
Standard Deviation	0.33	140	4.26	1.13	9.81	97.0
1st Quartile	7.37	216	-0.1	10	84.0	124
Median	7.64	295	1.20	10.7	92.1	161
3rd Quartile	7.82	428	7.20	11.7	97.9	269
Count Over Guideline	0	-	-	0	-	-
% Over Guideline	0%	-	-	0%	-	-

Table 3-33: Summary Statistics for In Situ Parameters at Site KZ-15, Finlayson Creek

	KZ-15					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
Guideline	6.5 – 9.0	-	-	6.5	-	-
CCME/BCMoE	CCME	-	-	CCME	-	-
Average	7.71	339	3.3	10.8	89.9	191
Count	49	47	49	47	47	44
Minimum	7.13	109	-0.3	8.3	64.6	72.2
Maximum	8.30	617	10.1	12.8	108	394
Geometric Mean	7.71	317	2.8	10.8	89.3	172
Standard Deviation	0.29	119	3.7	1.17	10.0	87.5
1st Quartile	7.56	249	0.0	10.0	84.5	120
Median	7.77	337	1.0	10.9	91	164
3rd Quartile	7.91	425	6.4	11.6	98.3	254
Count Over Guideline	0	-	-	0	-	-
% Over Guideline	0%	-	-	0%	-	-

Table 3-34: Summary Statistics for In Situ Parameters at Site KZ-22, Finlayson Creek

	KZ-22					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
Guideline	6.5 – 9.0	-	-	6.5	-	-
CCME/BCMoE	CCME	-	-	CCME	-	-
Average	7.75	414	3.1	11.0	91.6	151
Count	40	39	40	40	40	40
Minimum	7.01	146	-0.3	8.83	68.8	9.4
Maximum	8.32	756	11.5	13	108	364
Geometric Mean	7.74	388	4.1	11.0	91.0	122
Standard Deviation	0.31	144	3.8	0.99	10.3	94.3
1st Quartile	7.59	313	-0.1	10.4	84.4	98.5
Median	7.81	390	1.2	10.9	92.5	124
3rd Quartile	7.98	517	6.1	11.7	101	164
Count Over Guideline	0	-	-	0	-	-
% Over Guideline	0%	-	-	0%	-	-

Table 3-35: Summary Statistics for In Situ Parameters at Site KZ-26, Finlayson Creek

	KZ-26					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
Guideline	6.5 – 9.0	-	-	6.5	-	-
CCME/BCMoE	CCME	-	-	CCME	-	-
Average	7.99	411	3.3	11.3	91.8	173
Count	46	45	46	44	44	41
Minimum	7.44	160	-0.5	8.08	55.1	71.6
Maximum	8.50	715	10.2	13.6	111	347
Geometric Mean	7.99	394	3.7	11.2	90.9	154
Standard Deviation	0.28	118	3.8	1.24	12.5	85.3
1st Quartile	7.81	319	-0.1	10.6	87.1	107
Median	8.04	423	1.6	11.3	95.7	142
3rd Quartile	8.2	484	7	12.1	101	242
Count Over Guideline	0	-	-	0	-	-
% Over Guideline	0%	-	-	0%	-	-

No CCME or BCMoE exceedances were recorded for any of the anions or nutrients monitored on Finlayson Creek with the exception of total phosphorus and fluoride. Total phosphorus CCME eutrophic (greater than 0.035 mg/L) exceedances were observed for the two farthest downstream sites (KZ-22 and KZ-26) and coincided with elevated TSS levels. Three sampling events returned elevated total phosphorus concentrations in May 2015 (0.051 mg/L), August 2016 (0.068 mg/L), and May 2017 (0.043 mg/L) at site KZ-22. These events were associated with elevated TSS (6.8 to 34 mg/L vs median of 1.6 mg/L) due to high flow conditions associated with freshet (May 2015, 2017) and following heavy rain (August 2016). Five sampling events at site KZ-26 returned total phosphorus concentrations that were marginally above the CCME eutrophic threshold in May 1995 (0.042 mg/L), July 2016 (0.036 mg/L), August 2016 (0.037 mg/L), June 2017 (0.061 mg/L), and July 2017 (0.095 mg/L). All five sampling events were associated with high TSS and high flow periods. The dissolved phosphorus concentrations for all these events were below the CCME threshold, indicating the total phosphorus exceedances were largely particulate in nature.

No fluoride CCME exceedances were observed at KZ-16. Five samples (11%; ranging from 0.13 to 0.14 mg/L) exceeded the fluoride CCME guideline at KZ-15, all of which were collected during the intensive five samples in 30 days event in February to March 2018. Ten samples at KZ-26 (24%; ranging from 0.13 to 0.14 mg/L) marginally exceeded the CCME guideline (0.12 mg/L). Site KZ-22 returned 21 (53%) CCME exceedances (0.13 to 0.20 mg/L; Table 3-38), due to the impact of higher fluoride water from East Creek (0.07 to 0.29 mg/L; median 0.17 mg/L; Table 3-45) which flows into Finlayson Creek approximately 100 m upstream of site KZ-22.

Nitrogen species were typically below the detection limit (nitrite-N, cyanide), or present at levels that were well below their respective CCME guidelines (ammonia-N, nitrate-N). Nitrate-N levels were lowest in summer and highest over winter, likely linked to when primary productivity, which consumes nitrate, was highest and lowest, respectively. DOC ranged from less than 0.5 to 14.9 mg/L at all four sites on Finlayson Creek, and increased progressively moving downstream from KZ-16 (median 1.5 mg/L) to the mouth at KZ-26 (median 3.3 mg/L), reflecting inputs from the higher DOC waters of Geona Creek, East Creek and likely the other tributaries to Finlayson Creek located over its northernmost reach. As observed at other sites, DOC concentrations peaked markedly during periods of high flow (freshet and following high rainfall events), which was also reflected in the peak colour measurements observed at all sites at these times.

Table 3-36: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-16, Finlayson Creek

	KZ-16							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
Guideline [b]	120	0.12	218 - 429	0.005	0.616 - 22.7	0.02	3	0.035
CCME/BCMoE	CCME	CCME	BCMoE	CCME	CCME	BCMoE	CCME	CCME
Average	0.59	0.066	26.0	0.00049	0.016	0.0015	0.12	0.0040
Count	41	41	57	50	57	56	57	50
Minimum	<0.50	0.039	1.21	<0.00050	<0.0050	<0.0020	0.0087	<0.0020
Maximum	2.3	0.099	58.5	0.0012	0.1	0.0032	0.31	0.022
Geometric Mean	0.51	0.064	22.9	0.00044	0.0095	0.0014	0.065	0.0027
Count <DL	13	0	0	27	17	54	7	18
Standard Deviation	0.37	0.017	11.6	0.00023	0.018	0.00073	0.11	0.0049
1st Quartile	<0.50	0.053	18.5	<0.00050	<0.005	<0.0020	0.025	0.0011
Median	0.56	0.068	21.9	<0.001	0.011	<0.0020	0.06	0.0026
3rd Quartile	0.75	0.078	35.0	0.00062	0.021	<0.005	0.22	0.0043
Count Over Guideline	0	0	0	0	0	0	0	0
% Over Guideline	0%	0%	0%	0%	0%	0%	0%	0%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.
[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines are indicated by a range.

Table 3-37: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-15, Finlayson Creek

	KZ-15							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
Guideline [b]	120	0.12	218 - 429	0.005	0.451 - 14.1	0.02	3	0.035
CCME/BCMoE	CCME	CCME	BCMoE	CCME	CCME	BCMoE	CCME	CCME
Average	0.57	0.087	27.4	0.00051	0.018	0.0015	0.10	0.0055
Count	44	44	61	53	61	59	61	53
Minimum	<0.50	0.042	<0.50	<0.00050	<0.0050	<0.0020	0.0093	<0.0020
Maximum	1.7	**0.14**	43	0.0015	0.11	0.0025	0.26	0.035
Geometric Mean	0.49	0.083	24.1	0.00045	0.010	0.0013	0.063	0.0041
Count <DL	15	0	1	27	18	57	6	8
Standard Deviation	0.30	0.027	9.61	0.00025	0.023	0.00069	0.087	0.0059
1st Quartile	<0.50	0.065	22	<0.00050	<0.005	<0.0020	0.027	0.0028
Median	0.57	0.086	25.8	<0.001	0.0097	<0.0020	0.067	0.0040
3rd Quartile	0.73	0.10	35.9	0.00062	<0.05	<0.005	0.19	0.0060
Count Over Guideline	0	5	0	0	0	0	0	0
% Over Guideline	0%	11%	0%	0%	0%	0%	0%	0%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.
[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines are indicated by a range.

Table 3-38: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-22, Finlayson Creek

	KZ-22							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
Guideline [b]	120	0.12	128 - 429	0.005	0.583 - 18.6	0.02	3	0.035
CCME/BCMoE	CCME	CCME	BCMoE	CCME	CCME	BCMoE	CCME	CCME
Average	0.67	0.13	34.2	0.00057	0.043	0.0012	0.095	0.013
Count	40	40	44	44	44	43	44	44
Minimum	<0.50	0.059	7.1	<0.00050	<0.0050	<0.0020	<0.0020	<0.003
Maximum	1.2	**0.20**	63.1	0.0012	0.20	0.0025	0.28	**0.068**
Geometric Mean	0.60	0.12	30.7	0.00051	0.025	0.0012	0.045	0.0088
Count <DL	9	0	0	16	4	40	5	2
Standard Deviation	0.26	0.035	13.6	0.00025	0.042	0.00053	0.094	0.013
1st Quartile	0.58	0.098	27.5	<0.00050	0.010	<0.0020	0.014	0.0058
Median	0.74	**0.13**	35.0	0.00057	0.032	<0.0020	0.049	0.0080
3rd Quartile	0.85	**0.15**	43.4	0.00072	0.058	<0.0020	0.19	0.014
Count Over Guideline	0	21	0	0	0	0	0	3
% Over Guideline	0%	53%	0%	0%	0%	0%	0%	7%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.

[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines are indicated by a range.

Table 3-39: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-26, Finlayson Creek

	KZ-26							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
Guideline [b]	120	0.12	128 - 429	0.005	0.293 - 6.91	0.02	3	0.035
CCME/BCMoE	CCME	CCME	BCMoE	CCME	CCME	BCMoE	CCME	CCME
Average	0.74	0.11	35.5	0.00057	0.021	0.0018	0.089	0.013
Count	41	41	57	50	57	55	57	50
Minimum	<0.50	0.057	13.3	<0.00050	<0.0050	<0.0020	0.0057	<0.0020
Maximum	1.8	**0.14**	61	0.0016	0.17	0.012	0.31	**0.095**
Geometric Mean	0.66	0.11	33.7	0.00051	0.011	0.0015	0.044	0.0077
Count <DL	7	0	0	21	14	49	10	3
Standard Deviation	0.34	0.020	11.1	0.00027	0.028	0.0016	0.099	0.017
1st Quartile	0.55	0.099	29.0	0.00031	0.0054	<0.0020	0.012	0.0036
Median	0.73	0.12	32.4	0.00053	0.011	<0.0020	0.031	0.0066
3rd Quartile	0.96	0.12	42.8	0.00070	0.026	<0.005	0.16	0.017
Count Over Guideline	0	10	0	0	0	0	0	5
% Over Guideline	0%	24%	0%	0%	0%	0%	0%	10%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.
[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines are indicated by a range.

3.4.3 METALS

KZ-16, located the farthest upstream on Finlayson Creek, exhibited one water quality guideline exceedance each for total aluminum, iron and total zinc (Table 3-40). The aluminum and zinc exceedances occurred during the May 1995 sampling event, when freshet was likely responsible for flushing aluminum-bearing particulates into the watercourse, as evidenced by the much lower dissolved aluminum concentration (0.12 mg/L total vs 0.053 mg/L dissolved aluminum; APPENDIX A). The total and dissolved zinc concentrations were comparable, perhaps suggesting that flushing of a soluble zinc-bearing source occurred upgradient of KZ-15; however, the total zinc concentration observed on May 15, 1995 (0.063 mg/L) was significantly higher than the rest of the data set as a result of spring freshet conditions. The iron exceedance occurred in May 2017 and was likely related to particulate mobilized by high freshet flows.

The only other parameter that displayed a CCME exceedance at KZ-16 was total chromium, which was present at levels greater than 0.001 mg/L in four samples (7%), all of which were collected in the 1994-1995 sampling program. Total chromium has been below the detection limit in all but four samples collected since 2004, perhaps suggesting a contamination or analytical issues associated with this analyte in the 1994-1995 dataset.

More elements displayed at least one water quality guideline exceedance at site KZ-15 (Table 3-41), likely due to the contribution of Geona Creek water which flows into Finlayson Creek approximately 100 m upstream of this site. Two and one exceedances were observed for total aluminum and copper at KZ-15, respectively. These exceedances occurred in one or both of the May 2015 and May 2017 sampling events and were related to the high particulate load present due to freshet; dissolved levels of these constituents were significantly lower, pointing towards the particulates mobilized by freshet as the cause for these exceedances at site KZ-15. Total cadmium, iron, zinc, and chromium concentrations presented between two and four exceedances (Table 3-41). All of the total chromium exceedances were marginal (0.0010 to 0.0014 mg/L) compared to the CCME guideline (0.001 mg/L), and the corresponding dissolved chromium concentrations were either below the detection limit (greater than 0.0001 mg/L) or less than half of the total chromium level, suggesting that such chromium is largely particulate. Similarly, the total iron and zinc exceedances occurred during the freshet conditions of May 1995, 2015, and 2017 and had companion dissolved iron and zinc levels that were below the water quality guideline. The May 2015 cadmium exceedance was also particulate related as the dissolved cadmium concentration was over an order of magnitude lower (APPENDIX A); the second total cadmium exceedance was observed for the August 2008 monitoring event. The presence of only two cadmium CCME exceedances from a pool of 53 samples which span 13 years of monitoring including four years (1995 and 2015 to 2017) of detailed monthly sampling suggests these exceedances are not frequent.

Site KZ-22, located approximately 100 m downstream of the confluence with East Creek, showed between one and three water quality guideline exceedances for total concentrations of aluminum, arsenic, and cadmium, and 23 exceedances for total iron (Table 3-42). The May 2015 and August 2016 sampling events accounted for two of the exceedances of aluminum, arsenic and iron, when all three constituents were primarily associated with particulates during these high TSS events. The third total aluminum exceedance (July 2017, 0.164 mg/L) also occurred during a relatively high flow and TSS event. Similarly, the total cadmium exceedance observed for the August 1995 sampling event had a significant particulate component, as did the other total iron exceedances such

that the median dissolved iron proportion of the total iron concentration was 18%. The higher total iron concentrations at KZ-22 were likely due to contribution from East Creek (KZ-21) where total iron concentrations were commonly in excess of the CCME guideline.

Finally, KZ-26, located at the mouth of Finlayson Creek, exhibited water quality guideline exceedance for total concentrations of zinc (one sample), chromium (four samples), iron (16 samples) and aluminum (12 samples; Table 3-43). Two of the chromium exceedances occurred in two of the three August 1995 sampling events and the more recent two occurred in June and July 2017, along with two iron exceedances and two aluminum exceedances. The fact that the companion dissolved chromium concentrations were much lower (less than 22% of the total concentration) and were below the CCME guideline suggests that the particulate chromium is responsible for this exceedance, which is likely less bioavailable than its dissolved counterpart (Prothro, 1993). The majority of total aluminum and iron exceedances occurred during high flow conditions around freshet or following periods of elevated precipitation as evidenced by elevated levels of flow and TSS. The two highest iron concentrations in June and July 2017 (1.2 and 1.0 mg/L) occurred with relatively high TSS (54.7 to 73.8 mg/L vs median 2.2 mg/L TSS); the counterpart dissolved iron concentrations were one to two orders of magnitude lower. Like at KZ-22, the higher total iron concentrations observed at KZ-26 are likely due to contributions from East Creek where iron was often elevated relative to the CCME guideline. The solitary total zinc exceedance occurred in the May 1995 freshet sample whereas its companion dissolved concentration was below detection and over an order of magnitude lower.

Speciation analysis of the March 15, 2018 surface water samples indicated that dissolved selenium was exclusively present in its oxidized form, selenate, at all sites. Arsenic speciation conducted on the KZ-15 sample also indicated that arsenate, the most oxidized form of arsenic, was the only species that was detected.

The concentration of the majority of constituents of interest peaked during high flow periods such as freshet and following heavy summer rain events, largely associated with the high levels of particulate material that were present in the watercourse due to the enhanced run-off and streamflow present at such times. Fluoride, selenium, uranium, and hardness concentrations were the exception; their concentrations were lowest at all Finlayson Creek sites between freshet and fall, and increased over winter.

Table 3-40: Summary Statistics for Metals of Interest at Site KZ-16, Finlayson Creek

	KZ-16										
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.00004	0.000002	0.0001
Guideline [b]	-	0.1	0.009	0.005	0.00011 - 0.00037	0.001	**0.0026 - 0.015**	**0.3**	0.002	0.015	0.0075 - 0.218
CCME/BCMoE	-	CCME	BCMoE	CCME	CCME	CCME	BCMoE	CCME	BCMoE	CCME	BCMoE
Average	174	0.011	0.000020	0.00027	0.000027	0.00032	0.00055	0.035	0.00083	0.0017	0.0026
Count	57	57	43	56	56	56	56	57	56	47	57
Minimum	64.8	0.00091	<0.000020	<0.00005	<0.00001	<0.00010	0.00015	<0.005	<0.00005	0.00028	0.00026
Maximum	370	**0.12**	0.00011	0.0010	0.00012	**0.0030**	0.0022	**0.43**	0.0018	0.0039	**0.063**
Geometric Mean	157	0.0052	0.000017	0.00023	0.000021	0.00011	0.00044	0.019	0.00060	0.0014	0.0012
Count <DL	0	1	23	4	5	41	0	1	3	0	8
Standard Deviation	78.9	0.022	0.000016	0.00016	0.000021	0.00067	0.00044	0.070	0.00056	0.0010	0.0083
1st Quartile	114	0.0024	<0.000020	0.00020	0.000015	<0.00010	0.00028	0.0093	0.00037	0.00076	0.00060
Median	147	0.0040	0.00002	0.00025	0.000021	<0.00010	0.00042	0.018	0.0006	0.0015	0.0010
3rd Quartile	249	0.0096	0.000023	0.00030	0.000030	0.00023	0.00056	0.025	0.0013	0.0027	<0.005
Count Over Guideline	-	1	0	0	0	4	0	1	0	0	1
% Over Guideline	-	2%	0%	0%	0%	7%	0%	2%	0%	0%	2%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.

[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines are indicated by a range.

Table 3-41: Summary Statistics for Metals of Interest at Site KZ-15, Finlayson Creek

	KZ-15										
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.00004	0.000002	0.0001
Guideline [b]	-	0.1	0.009	0.005	0.00012 - 0.00037	0.001	**0.0028 - 0.013**	**0.3**	0.002	0.015	0.0075 - 0.181
CCME/BCMoE	-	CCME	BCMoE	CCME	CCME	CCME	BCMoE	CCME	BCMoE	CCME	BCMoE
Average	183	0.023	0.000032	0.00052	0.000058	0.00024	0.00066	0.14	0.00086	0.0029	0.0063
Count	60	59	45	58	58	58	58	59	58	49	59
Minimum	70.1	0.0020	0.000021	<0.00005	<0.00001	<0.00010	0.00020	0.012	<0.00005	0.00066	0.0017
Maximum	321	**0.36**	0.000051	0.0032	**0.00081**	**0.0014**	**0.0034**	**2.1**	0.0018	0.0068	**0.055**
Geometric Mean	171	0.011	0.000031	0.00044	0.000038	0.00012	0.00051	0.086	0.00064	0.0023	0.0048
Count <DL	0	2	6	3	1	40	0	0	3	0	4
Standard Deviation	66.2	0.051	0.0000065	0.00040	0.00011	0.00030	0.00059	0.27	0.00052	0.0018	0.0074
1st Quartile	139	0.0053	0.000027	0.00040	0.000026	<0.00010	0.00030	0.054	0.00047	0.0013	0.0032
Median	166	0.010	0.000031	0.00048	0.000038	<0.00010	0.00043	0.084	0.00067	0.0023	0.0045
3rd Quartile	246	0.017	0.000036	0.00055	0.000054	0.00038	0.00077	0.11	0.0013	0.0046	0.0063
Count Over Guideline	-	2	0	0	2	3	1	4	0	0	3
% Over Guideline	-	3%	0%	0%	3%	5%	2%	7%	0%	0%	%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.

[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines are indicated by a range.

Table 3-42: Summary Statistics for Metals of Interest at Site KZ-22, Finlayson Creek

	KZ-22										
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.00004	0.000002	0.0001
Guideline [b]	-	0.1	0.009	0.005	0.00006 - 0.00037	0.001	**0.002 - 0.015**	**0.3**	0.002	0.015	0.0075 - 0.225
CCME/BCMoE	-	CCME	BCMoE	CCME	CCME	CCME	BCMoE	CCME	BCMoE	CCME	BCMoE
Average	220	0.023	0.000061	0.0019	0.000028	0.00017	0.00064	**0.50**	0.00071	0.0028	0.0028
Count	44	44	40	44	44	44	44	44	44	40	44
Minimum	30.1	0.00074	0.000028	<0.00005	<0.00001	<0.00010	0.00018	<0.005	<0.00005	0.00088	0.00043
Maximum	380	**0.20**	0.00014	**0.0091**	0.00014	0.00090	0.0018	**3.1**	0.0012	0.0045	0.015
Geometric Mean	195	0.010	0.000056	0.0013	0.000022	0.00011	0.00050	**0.31**	0.00055	0.0025	0.0022
Count <DL	0	1	0	1	3	30	0	1	3	0	1
Standard Deviation	92.7	0.044	0.000027	0.0016	0.000025	0.00020	0.00048	0.56	0.00035	0.0011	0.0026
1st Quartile	159	0.0051	0.000038	0.0012	0.000019	<0.00010	0.00028	0.23	0.00047	0.0019	0.0016
Median	203	0.0085	0.000058	0.0014	0.000021	<0.00010	0.00041	**0.32**	0.00070	0.0031	0.0021
3rd Quartile	302	0.017	0.000080	0.0021	0.000026	<0.00050	0.00086	**0.57**	0.0010	0.0036	0.0026
Count Over Guideline	-	3	0	2	1	0	0	23	0	0	0
% Over Guideline	-	7%	0%	5%	2%	0%	0%	52%	0%	0%	0%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.

[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines are indicated by a range.

Table 3-43: Summary Statistics for Metals of Interest at Site KZ-26, Finlayson Creek

	KZ-26										
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.00004	0.000002	0.0001
Guideline [b]	-	0.1	0.009	0.005	0.00017 - 0.00037	0.001	**0.0043 - 0.015**	**0.3**	0.002	0.015	0.02 - 0.222
CCME/BCMoE	-	CCME	BCMoE	CCME	CCME	CCME	BCMoE	CCME	BCMoE	CCME	BCMoE
Average	221	230	0.058	0.000090	0.00098	0.000028	0.00047	0.0010	0.25	0.00065	0.0026
Count	53	57	56	43	56	56	56	56	56	56	47
Minimum	107	107	0.00066	0.000049	<0.00005	<0.00001	<0.00010	0.00029	0.0083	<0.00005	0.00094
Maximum	376	376	**0.48**	0.00019	0.0028	0.00015	**0.0072**	0.0040	**1.2**	0.0013	0.0044
Geometric Mean	213	220	0.021	0.000085	0.00078	0.000019	0.00021	0.00082	0.13	0.00053	0.0024
Count <DL	0	0	0	0	3	6	27	0	0	3	0
Standard Deviation	60	66	0.092	0.000035	0.00065	0.000028	0.0010	0.00077	0.29	0.00032	0.00089
1st Quartile	186	189	0.0075	0.000067	0.00051	0.000011	<0.00010	0.00052	0.058	0.00043	0.0019
Median	217	220	0.019	0.000074	0.00077	0.000019	<0.00050	0.00070	0.16	0.00058	0.0025
3rd Quartile	253	286	0.086	0.00010	0.0013	0.000035	0.00047	0.0014	**0.31**	0.00091	0.0034
Count Over Guideline	-	12	0	0	0	4	0	16	0	0	1
% Over Guideline	-	21%	0%	0%	0%	8%	0%	31%	0%	0%	2%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.

[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines are indicated by a range.

3.5 EAST CREEK

3.5.1 SETTING

East Creek is approximately 18 km in length and flows northwest into Finlayson Creek (Figure 1-2). East Creek originates at the southeast end of the property and contains a small pond midway through its reach. One water quality station is located on East Creek at KZ-21, which is immediately upstream with the confluence with Finlayson Creek. Photos of KZ-21 can be found in APPENDIX B (page B-14).

3.5.2 PHYSICAL PARAMETERS AND NUTRIENTS

East Creek waters, as monitored at KZ-21, were also circumneutral (pH 6.81 to 8.21) and well oxygenated (median 94% saturation; Table 3-44). East Creek waters were of higher ionic strength than those of Finlayson Creek, reflected in its higher conductivity (median 421 µS/cm at KZ-21 compared to median 295 to 423 µS/cm at sites on Finlayson Creek) and higher total hardness (median 247 mg/L compared to median 147 to 217 mg/L in Finlayson Creek).

Fluoride concentrations exceeded the CCME guideline (0.12 mg/L) for 32 of 40 samples collected (median 0.17 mg/L; Table 3-45), suggesting that East Creek drains an area of fluoride-bearing rocks. CCME eutrophic exceedances for total phosphorus were also noted on five occasions in May 1995, August 2016, and April, May and July 2017 during high flow and relatively high TSS events. In all instances, the dissolved phosphorus concentrations were below the CCME guideline (APPENDIX A), and total iron concentrations were also generally elevated, suggesting that phosphorus was largely transported in particulate form. Nitrogen species (cyanide, ammonia-N, nitrite-N, nitrate-N) were largely either below the detection limit, or present at concentrations within an order of magnitude of the detection limit. Where detected, all such parameters were well below their respective CCME guideline. As observed elsewhere, nitrate concentrations tended to be highest during winter due to the depressed primary productivity at this time and the associated lower demand for nitrate. DOC concentrations ranged between 1.4 and 14.5 mg/L (median 4.8 mg/L), with the maximum concentration observed for the May 2017 freshet event. The highest May 2015 DOC concentration (11.2 mg/L) was coincident with the highest colour measurement observed to date (182 TCU; median 58 TCU) likely related to the organic material washed into the watercourse during freshet.

Table 3-44: Summary Statistics for In Situ Parameters at Site KZ-21, East Creek

	KZ-21					
	Field pH	Field Conductivity	Temperature	Dissolved Oxygen		ORP
		µS/cm	°C	mg/L	%	mV
Guideline	6.5 – 9.0	-	-	6.5	-	-
CCME/BCMoE	CCME	-	-	CCME	-	-
Average	7.57	442	4.1	10.8	91.2	169
Count	45	44	45	43	43	40
Minimum	6.81	141	-0.4	8.04	61.7	51.4
Maximum	8.21	876	12	13.2	111	391
Geometric Mean	7.56	418	5.2	10.7	90.3	145
Standard Deviation	0.37	146	4.5	1.26	12.3	95.7
1st Quartile	7.35	355	-0.1	9.92	83.0	103
Median	7.69	421	2.1	10.7	94.0	133
3rd Quartile	7.86	539	8.3	11.6	101	226
Count Over Guideline	0	-	-	0	-	-
% Over Guideline	0%	-	-	0%	-	-

Table 3-45: Summary Statistics for CCME/BCMoE Guideline Anions and Nutrients at Site KZ-21, East Creek

	KZ-21							
	Chloride	Fluoride	Dissolved Sulphate	Total Cyanide	Ammonia-N	Nitrite-N	Nitrate-N	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.01	0.5	0.0005	0.005	0.002	0.002	0.002
Guideline [b]	120	0.12	309 - 429	0.005	0.673 - 29.4	**0.02**	3	0.035
CCME/BCMoE	CCME	CCME	BCMoE	CCME	CCME	BCMoE	CCME	CCME
Average	1.17	**0.17**	37.8	0.00062	0.047	0.00187	0.060	0.023
Count	40	40	56	49	56	55	56	49
Minimum	<0.50	0.065	9.95	<0.00050	<0.0050	<0.0020	<0.0020	0.0050
Maximum	13	**0.29**	69.7	0.0012	0.22	0.0055	0.27	**0.19**
Geometric Mean	0.85	**0.16**	36.0	0.00056	0.021	0.00167	0.016	0.017
Count <DL	3	0	0	18	11	41	26	0
Standard Deviation	1.95	0.047	10.5	0.00026	0.053	0.00091	0.081	0.030
1st Quartile	0.66	**0.14**	34.5	<0.001	0.0060	<0.0020	0.0066	0.011
Median	0.79	**0.17**	38.8	0.00059	0.023	0.0021	<0.02	0.015
3rd Quartile	1.1	**0.20**	43.0	0.00076	0.075	<0.005	0.11	0.025
Count Over Guideline	0	32	0	0	0	0	0	5
% Over Guideline	0%	80%	0%	0%	0%	0%	0%	10%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.
[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines are indicated by a range.

3.5.3 METALS

Solitary water quality guideline exceedances were observed for total concentrations of cadmium and zinc at site KZ-21 (Table 3-46). None of these exceedances were observed in the dissolved fraction, suggesting that they were largely particulate-related, which is of lower bioavailability (Prothro, 1993).

CCME exceedances were observed for total aluminum (five samples), total arsenic (six samples) and total chromium (four samples). Total iron also exceeded the CCME guideline (0.3 mg/L) in the majority of samples (51 of 56). The majority of aluminum, arsenic and chromium excursions occurred during the high flow May 1995, 2015 and 2017 (freshet), and August 2016 and July 2017 (rainfall) events, and are related to the high TSS and particulate material present at these times. For the other sampling occasions, the total concentrations of arsenic and iron in samples that exceeded their respective CCME guidelines typically exceeded their companion dissolved concentrations by an order of magnitude. In all cases, none of the dissolved concentrations of aluminum, arsenic and chromium exceeded their water quality guidelines and dissolved iron exceeded in only 3 of 56 samples, indicating these constituents were largely transported as particulates. Speciation analysis of the March 15, 2018 sample indicated that dissolved selenium was exclusively present in its oxidized form, selenate.

Most constituents exhibited a peak in May during freshet as increased run-off and associated higher creek flow flushed particulate metals into the watercourse. Only fluoride, selenium, uranium, and hardness deviated from this trend; their concentrations were lowest between spring freshet and summer before gradually rising through the late fall and winter (APPENDIX C, Figures C-1, C-19, C-25, and C-23), perhaps suggestive of a groundwater contribution to these constituents.

Table 3-46: Summary Statistics for Metals of Interest at Site KZ-21, East Creek

	KZ-21										
	Total Hardness	Total Aluminum	Total Antimony	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Uranium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Detection Limit [a]	0.5	0.0005	0.00002	0.00002	0.000005	0.0001	0.00005	0.001	0.00004	0.000002	0.0001
Guideline [b]	-	0.1	0.009	0.005	0.00015 - 0.00037	0.001	**0.0037 - 0.017**	**0.3**	0.002	0.015	0.01 - 0.262
CCME/BCMoE [b]	-	CCME	BCMoE	CCME	CCME	CCME	BCMoE	CCME	BCMoE	CCME	BCMoE
Average	253	0.039	0.00010	0.0035	0.000032	0.00033	0.00077	**0.93**	0.00046	0.0026	0.0044
Count	56	56	42	55	55	55	55	56	55	46	56
Minimum	92.9	0.00082	<0.000050	0.00072	<0.00001	<0.00010	0.00018	0.097	<0.00005	0.00076	0.00041
Maximum	430	**0.54**	0.00026	**0.033**	**0.00036**	**0.002**	0.0034	**10.0**	0.00085	0.0040	**0.046**
Geometric Mean	240	0.015	0.000082	0.0026	0.000018	0.00020	0.000585	**0.62**	0.00038	0.0025	0.0026
Count <DL	0	1	1	0	6	23	0	0	4	0	5
Standard Deviation	78.2	0.087	0.000062	0.0045	0.000058	0.00041	0.000658	1.42	0.00022	0.00067	0.0074
1st Quartile	208	0.0075	0.000045	0.0019	0.000010	0.00012	0.0003	**0.42**	0.00032	0.0024	0.0016
Median	247	0.012	0.000090	0.0026	0.000016	0.00018	0.0006	**0.52**	<0.001	0.0028	0.0022
3rd Quartile	304	0.027	0.00014	0.0032	0.000024	0.00041	0.000850	**0.84**	0.00064	0.0031	0.0034
Count Over Guideline	-	5	0	6	1	4	0	51	0	0	1
% Over Guideline	-	9%	0%	11%	2%	7%	0%	91%	0%	0%	2%

[a] Indicates lowest detection limit available for BMC fieldwork (i.e., April 2015 to March 2018). Occasional samples had higher detection limits due to dilution required for some analyses.
[b] Blue bold highlighted entries indicate a CCME or BCMoE guideline exceedance; hardness-dependent guidelines are indicated by a range.

3.6 COMPARISON OF HISTORICAL AND RECENT WATER QUALITY DATA

Sample collection has regularly occurred in August with three sampling events in 1995, biannual August sampling between 2002 and 2016, and the August 2015, 2016, and 2017 sampling events making it the best month over which to compare the water quality data collected to date. APPENDIX D presents graphical comparisons of the August sampling events for a range of constituents of interest.

The majority of elements displayed a comparable concentration range across the different water quality sampling campaigns. Only total selenium and chromium appeared anomalous. The total selenium and chromium detection limits reported for the 1994-1995 data (0.00005 mg/L and 0.0002 mg/L, respectively) are comparable to those employed in the post-2010 dataset (0.00004 mg/L and 0.0001 mg/L, respectively). Higher detection limits for both elements were reported for the 2004 – 2010 data (0.001 mg/L for both total selenium and chromium) and are not considered in this comparison; however, they are instructive. Sample pre-concentration was used to achieve a ten-fold improvement in the detection limit of a number of trace elements in the 1994-95, including selenium and chromium. Without this ten-fold improvement, the detection limits would be similar to those used in the 2004 – 2010 data. Furthermore, higher analytical error can be expected to be associated with the historical data given the use of 10 times pre-concentration.

Total selenium concentrations appeared to be higher in the samples collected since 2010 compared to those collected in 1994-1995. Three sampling events took place at a number of sites in August 1995, which exhibited a large span in the concentration of a number of analytes including total selenium concentration in both the upper (South, Fault, and Geona Creeks) and lower watersheds (Finlayson and East Creeks; Figure D-6, in APPENDIX D). These three sampling events also displayed a range of TSS values at some sites, although a more detailed understanding of TSS trends in the historical Cominco data is hindered by the relatively high TSS detection limit (4 mg/L). Sites KZ-13 and KZ-7 returned TSS measurements of less than 4, 7, and less than 4 mg/L for August 15, 22, and 30 in 1995, respectively (median 1.6 and 1.7 mg/L for KZ-13 and KZ-7, respectively). The elevated TSS observed on August 22, 1995 is consistent with the rain event recorded on August 22, 1995 of 7 mm (Cominco, 1996), and implies that higher flow was present at these two sites for the August 22, 1995 sample. Similarly, site KZ-26 returned TSS of less than 4, 5, and 14 mg/L moving through August 1995 (median 2 mg/L), suggesting that this site experienced varying flow conditions through the month likely related to precipitation events. This site is the farthest downstream, perhaps explaining the delayed response in the TSS levels following the August 22, 1995 rain event, although the 1995 climate record also reports 17 mm of rain falling between August 23 and September 1, 1995 (Cominco, 1996) which likely contributed to the TSS high observed at KZ-26 on August 30, 1995. For the three August 1995 sampling events, the highest TSS concentration (and by implication, the highest flow) at two of the sites (KZ-13 and KZ-26) corresponded to the lowest of the three selenium concentrations measured. Since selenium concentrations appear to be susceptible to dilution following high run-off events such as freshet, this may explain the range in selenium concentrations observed over August 1995. The highest selenium concentration observed in August 1995 at those sites where three samples were collected is largely in line with the selenium concentration in samples collected since 2004. As such, the apparent disparity between some of the historical selenium concentrations and those measured in more recent samples may be related to a combination of different flow conditions at the time of sampling and larger analytical error associated with the ten-fold sample pre-concentration employed for the historical selenium analyses.

Conversely, total chromium concentrations measured in samples collected since 2012 at sites located in both the upper watershed (South Creek, Fault Creek, and Geona Creek) and lower watershed (Finlayson Creek and East Creek) were typically lower than those collected in 1994-1995. The number of total chromium CCME exceedances were three times higher than that for dissolved chromium, suggesting that the discrepancy may be related to flow conditions since elevated chromium concentrations were largely present in the particulate fraction which may be expected to be higher under higher flow conditions that follow extended precipitation events.

With the exception of selenium and chromium, overall, the three water quality datasets (Cominco 1994-1995, biannual water licence sampling 2002-2016, and 2015-present) are in broad agreement, suggesting that the site water quality has not changed substantively in the past two decades of monitoring.

3.7 FIVE SAMPLES IN 30 DAYS EVENT MAY – JUNE 2017

In May and June 2017, five sampling events were carried out in a span of 30 days at KZ-2, KZ-6, KZ-9, KZ-18, KZ-37, KZ-17, KZ-16, KZ-15, KZ-22, KZ-26 and KZ-21 to assess variability in water quality data over the period when snowmelt and freshet commonly results in higher stream flow rates. Temperature in the monitoring locations increased approximately 2 to 6°C over the 30 day period. Summary statistics for select parameters of interest (those that were found to be in excess of their respective CCME or BCMoE guideline in more than 10% of collected samples at any monitoring location) in the five sampling events are shown for each monitoring location in Table 3-47 through Table 3-57. Concentrations of these select parameters in the five May-June 2017 sampling events are plotted and provided in APPENDIX E.

In Geona Creek at KZ-9 and KZ-37 and the KZ-18 tributary, concentrations of constituents of interest typically were highest in the first sampling event (May 16-18) and showed good correlation with TSS concentrations. These high concentrations were due to mobilization of particulate by high flows during freshet which were highest in the first event. Concentrations in KZ-9 and KZ-37 were lower and relatively stable through the rest of the 30 days. Exceptions to this pattern included fluoride and selenium which are likely derived from groundwater and were thus likely diluted by meltwater resulting in fairly stable or increasing concentrations through the sampling period as flow rates and dilution by freshet decreased. Water quality in Fault Creek (KZ-2) differed from Geona Creek sites in that concentrations of cadmium and zinc broadly increased over the 30-day period. Flow rate was higher in the June 7 sampling event than in the May 18 sampling event indicating freshet occurred later in Fault Creek than in the Upper Geona Creek and high flow-associated transport was relatively delayed. This relatively delayed freshet at the higher altitude Fault Creek is evident in past years when higher flows were observed in June rather than May in 2015 and 2016.

In the Finlayson Creek watershed at KZ-15, KZ-16 and KZ-22, similar to KZ-9 and KZ-37 in Geona Creek, concentrations for the majority of constituents of interest were typically highest in the first sample (May 16), lower in the next sample and remained fairly stable through the rest of the 30-day period. Further downstream in Finlayson Creek at KZ-26, concentrations of several parameters were high in the first sample, lower in the second and third samples and increased in the fourth and fifth sampling events with total aluminum, cadmium, chromium, copper, iron reaching their highest concentrations of the 30-day period in the fifth sample (June 14). The high initial concentrations were likely freshet-related whereas the high concentrations in the June 14 sample reflect a major precipitation event recorded on June 10, 11, and 12. The precipitation event likely caused a spike in TSS and total metals concentrations that was most evident at KZ-26 and less so upstream. Similar to the Geona Creek watershed monitoring stations, fluoride and selenium concentrations were relatively stable throughout the 30-day monitoring period at Finlayson and East Creek monitoring stations.

Correlations between TSS and several total metals concentrations (e.g. aluminum, iron, etc.) have been identified throughout all monitoring locations, with annual maxima in TSS and metals concentrations typically occurring in May or June during freshet. Despite the increased frequency of sampling in May-June 2017, concentrations of constituents of interest were generally within the range of concentrations observed in 2015 and 2016, as shown in the 2015-2017 water quality plots in APPENDIX C. The maximum concentration of constituents that commonly peak during high flow events during the May-June 2017 sampling were typically similar to peak freshet

concentrations observed in 2015 and 2017. For several metals, peak concentrations in May 2017 were lower than concentrations observed in the May 2015 sampling event (see APPENDIX C). Concentrations of high flow and TSS correlated metals were often higher in the May-June 2017 sampling than in May-June 2016 sampling. This could indicate that 2016 sampling did not capture the peak flows of freshet or that snowmelt in 2016 occurred more gradually over a longer period of time and thus freshet-related peaks were more muted or delayed. Annual maxima of several constituents in 2016 were observed in August and were attributed to a high precipitation event that preceded the sampling; many of the concentrations recorded during this event were of comparable magnitude to the maxima observed in May-June 2017. The collection of five samples in a 30 day period during spring allows for both the measurement of the short term freshet event to aid in the development of site specific water quality objectives and to determine long term monthly average for use in the water quality model. Previous monthly samples collected in May show that freshet can be captured if site conditions are closely monitored, which at remote sites can be logistically challenging.

Table 3-47: Summary Statistics for Constituents of Interest at Site KZ-6, Geona Creek in May-June 2017

	TSS	Fluoride	Total Phosphorus	Total Aluminum	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Average	2.7	0.038	0.014	0.079	0.00012	0.000044	0.00025	0.00089	0.14	0.00039	0.0020
Standard Deviation	1.4	0.0061	0.0087	0.068	0.000024	0.000051	0.000085	0.00037	0.10	0.000074	0.0018
Minimum	1.3	0.029	0.0052	0.017	0.00010	0.000016	0.00019	0.00053	0.052	0.00030	0.00082
Maximum	4.0	0.045	0.025	0.18	0.00016	0.00014	0.00031	0.0015	0.30	0.00048	0.0051
Median	2.7	0.037	0.0099	0.053	0.00011	0.000023	0.00025	0.00082	0.11	0.00039	0.0012

Table 3-48: Summary Statistics for Constituents of Interest at Site KZ-9, Geona Creek in May-June 2017

	TSS	Fluoride	Total Phosphorus	Total Aluminum	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Average	16	0.045	0.018	0.21	0.00064	0.00014	0.00045	0.0023	0.79	0.00058	0.029
Standard Deviation	9.1	0.0045	0.010	0.15	0.00031	0.000095	0.00023	0.00092	0.52	0.00011	0.016
Minimum	5.9	0.038	0.0083	0.094	0.00035	0.000060	0.00025	0.0012	0.37	0.00043	0.015
Maximum	27	0.050	0.035	0.46	0.0012	0.00031	0.00082	0.0037	1.7	0.00069	0.057
Median	14	0.048	0.017	0.18	0.00052	0.00012	0.00042	0.0023	0.56	0.00056	0.023

Table 3-49: Summary Statistics for Constituents of Interest at Site KZ-18, Geona Creek in May-June 2017

	TSS	Fluoride	Total Phosphorus	Total Aluminum	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Average	1.9	0.047	0.034	0.094	0.00049	0.000039	0.00021	0.00092	0.060	0.00062	0.0022
Standard Deviation	0.51	0.012	0.0085	0.12	0.00017	0.000011	0.00012	0.00056	0.043	0.00031	0.0013
Minimum	1.3	0.027	0.024	0.021	0.00031	0.000033	0.00011	0.00039	0.032	0.00022	0.0016
Maximum	2.3	0.061	0.043	0.30	0.00072	0.000059	0.00040	0.0017	0.14	0.00098	0.0045
Median	2.0	0.052	0.036	0.062	0.00046	0.000035	0.00017	0.00080	0.044	0.00054	0.0017

Table 3-50: Summary Statistics for Constituents of Interest at Site KZ-37, Geona Creek in May-June 2017

	TSS	Fluoride	Total Phosphorus	Total Aluminum	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Average	14	0.045	0.020	0.203	0.0006	0.000139	0.00042	0.0022	0.76	0.00059	0.026
Standard Deviation	9.2	0.0072	0.016	0.179	0.00027	0.00011	0.00032	0.00086	0.59	0.00014	0.015
Minimum	5.2	0.034	0.0069	0.071	0.00036	0.000062	0.00016	0.0011	0.316	0.00040	0.014
Maximum	26	0.053	0.045	0.50	0.0011	0.00032	0.00088	0.0035	1.74	0.00076	0.053
Median	11	0.047	0.016	0.114	0.00053	0.000090	0.00027	0.0021	0.45	0.00057	0.019

Table 3-51: Summary Statistics for Constituents of Interest at Site KZ-17, Geona Creek in May-June 2017

	TSS	Fluoride	Total Phosphorus	Total Aluminum	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Average	2.1	0.074	0.0045	0.019	0.00027	0.000027	0.00014	0.0014	0.042	0.00058	0.0019
Standard Deviation	2.4	0.015	0.0037	0.034	0.00019	0.000021	0	0.00049	0.085	0.00013	0.0016
Minimum	<1	0.049	0.0021	0.0022	0.00017	0.000015	0.00014	0.00063	0.0020	0.00045	0.00081
Maximum	6.3	0.085	0.011	0.080	0.00062	0.000064	0.00014	0.0019	0.19	0.00077	0.0047
Median	1.0	0.081	0.0031	0.0043	0.00018	0.000017	0.00014	0.0014	0.0035	0.00060	0.0011

Table 3-52: Summary Statistics for Constituents of Interest at Site KZ-2, Fault Creek in May-June 2017

	TSS	Fluoride	Total Phosphorus	Total Aluminum	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Average	1.7	0.031	0.0063	0.053	0.00013	0.00023	0.00020	0.0035	0.052	0.00074	0.037
Standard Deviation	0.26	0.0077	0.0020	0.032	0.000025	0.000043	0.000021	0.0016	0.038	0.00044	0.011
Minimum	1.4	0.023	0.0029	0.021	0.00010	0.00018	0.00018	0.0019	0.017	0.00032	0.023
Maximum	1.9	0.043	0.0082	0.089	0.00016	0.00030	0.00021	0.0059	0.11	0.0015	0.053
Median	1.8	0.028	0.0069	0.037	0.00013	0.00022	0.00020	0.0031	0.033	0.00066	0.039

Table 3-53: Summary Statistics for Constituents of Interest at Site KZ-16, Finlayson Creek in May-June 2017

	TSS	Fluoride	Total Phosphorus	Total Aluminum	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Average	3.0	0.044	0.0081	0.025	0.00040	0.000029	0.00011	0.0013	0.11	0.00034	0.0014
Standard Deviation	2.8	0.0028	0.0079	0.027	0.00036	0.000026	0	0.00031	0.18	0.000066	0.0010
Minimum	1.0	0.039	0.0036	0.0078	0.00023	0.000014	0.00011	0.00094	0.020	0.00027	0.00060
Maximum	4.9	0.046	0.022	0.073	0.0010	0.000076	0.00011	0.0018	0.43	0.00044	0.0029
Median	3.0	0.045	0.0049	0.014	0.00024	0.000018	0.00011	0.0013	0.025	0.00034	0.0011

Table 3-54: Summary Statistics for Constituents of Interest at Site KZ-15, Finlayson Creek in May-June 2017

	TSS	Fluoride	Total Phosphorus	Total Aluminum	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Average	4.9	0.051	0.013	0.057	0.00061	0.000055	0.00016	0.0015	0.23	0.00046	0.0068
Standard Deviation	4.1	0.0029	0.013	0.063	0.00032	0.000043	0.000093	0.00055	0.22	0.000048	0.0048
Minimum	2.3	0.047	0.0054	0.017	0.00043	0.000027	0.00011	0.00088	0.095	0.00040	0.0036
Maximum	12	0.054	0.035	0.17	0.0012	0.00013	0.00030	0.0024	0.61	0.00052	0.015
Median	3.5	0.051	0.0072	0.032	0.00048	0.000040	0.00012	0.0014	0.16	0.00046	0.0050

Table 3-55: Summary Statistics for Constituents of Interest at Site KZ-22, Finlayson Creek in May-June 2017

	TSS	Fluoride	Total Phosphorus	Total Aluminum	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Average	3.3	0.084	0.019	0.041	0.0018	0.000034	0.00016	0.0013	0.38	0.00043	0.0037
Standard Deviation	2.4	0.0033	0.013	0.031	0.00080	0.000021	0.000062	0.00034	0.24	0.000040	0.0020
Minimum	1.1	0.081	0.0097	0.015	0.0012	0.000017	0.00012	0.00086	0.20	0.00038	0.0024
Maximum	6.8	0.088	0.043	0.093	0.0032	0.000070	0.00025	0.0018	0.81	0.00049	0.0073
Median	2.1	0.083	0.014	0.031	0.0014	0.000029	0.00014	0.0013	0.31	0.00043	0.0031

Table 3-56: Summary Statistics for Constituents of Interest at Site KZ-26, Finlayson Creek in May-June 2017

	TSS	Fluoride	Total Phosphorus	Total Aluminum	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Average	18	0.082	0.030	0.16	0.0017	0.000048	0.00048	0.0019	0.61	0.00042	0.0043
Standard Deviation	21	0.0068	0.019	0.18	0.00074	0.000034	0.00051	0.0012	0.41	0.000030	0.0030
Minimum	4.4	0.071	0.014	0.032	0.0010	0.000019	0.00013	0.0012	0.22	0.00039	0.0018
Maximum	55	0.089	0.061	0.48	0.0027	0.00010	0.0014	0.0040	1.2	0.00046	0.0094
Median	9.0	0.082	0.022	0.098	0.0013	0.000043	0.00032	0.0015	0.53	0.00043	0.0036

Table 3-57: Summary Statistics for Constituents of Interest at Site KZ-21, East Creek in May-June 2017

	TSS	Fluoride	Total Phosphorus	Total Aluminum	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Average	4.9	0.11	0.029	0.054	0.0031	0.000027	0.00023	0.0011	0.64	0.00040	0.0029
Standard Deviation	3.8	0.0055	0.015	0.048	0.0013	0.000018	0.00011	0.00029	0.36	0.000022	0.0018
Minimum	1.6	0.11	0.017	0.017	0.0022	0.000013	0.00013	0.00070	0.39	0.00036	0.0012
Maximum	11	0.12	0.055	0.13	0.0054	0.000057	0.00041	0.0014	1.3	0.00042	0.0055
Median	3.5	0.11	0.027	0.033	0.0026	0.000021	0.00018	0.0010	0.55	0.00040	0.0019

3.8 FIVE SAMPLES IN 30 DAYS EVENT FEBRUARY – MARCH 2018

A second "five samples in 30 days" campaign occurred between February 13 and March 15, 2018 at KZ-2, KZ-13, KZ-9, KZ-18, KZ-37, KZ-15, and KZ-26. This period was selected to assess variability in water quality parameters under winter low flow conditions. Summary statistics for select parameters of interest (those that were found to be in excess of their respective CCME or BCMoE guideline in more than 10% of collected samples at any monitoring location) in the five sampling events are shown for each monitoring location in Table 3-58 through Table 3-64. Concentrations of these select parameters in the five May-June 2017 sampling events are plotted and provided in APPENDIX F.

In general, most constituents of interest displayed relatively limited variation (Figure F-1 to F-10; APPENDIX F) over the sampling period, reflecting the low flow, quiescent conditions at this time of year. Only the following parameters displayed an order of magnitude difference between their minimum and maximum concentrations:

- Total iron at KZ-2 and KZ-9;
- TSS at KZ-9;
- Total copper at KZ-9; and
- Total aluminum at KZ-26.

The total iron concentrations measured at KZ-2 (Fault Creek) were relatively low (0.0011 to 0.011 mg/L; Table 3-58) and are consistent with historical total iron concentrations measured in February and March of 2016 and 2017 (0.0016 to 0.052 mg/L). The wide range in total iron concentrations observed at KZ-9 (Geona Creek; 0.017 to 0.84 mg/L; Table 3-59) is related to two low concentrations observed for the March 1 sample (0.017 mg/L and 0.026 mg/L, respectively) compared to the higher concentrations returned for the February 14, 21, and March 15 samples (0.84, 0.51, and 0.53 mg/L, respectively). These three higher total iron concentrations are compatible with the total iron concentrations typically observed at KZ-9 (0.24 to 2.8 mg/L; Figure C-15); however, it is interesting to note that the lowest total iron concentration recorded at KZ-9 (0.0028 mg/L) occurred in March 2016. This is considerably lower than the total iron concentrations returned in February 2016, February 2017, and March 2017 (2.8, 0.74, and 0.92 mg/L, respectively). The three samples that contained low total iron concentrations also returned low concentrations of other constituents of interest (e.g., aluminum, arsenic, cadmium copper, zinc), but had the highest selenium, uranium, and hardness concentrations. Given that these constituents are inferred to have a large groundwater component, the variation in total iron concentrations (and other constituents of interest) at KZ-9 may be related to changes in the groundwater contribution to the flowing surface water at KZ-9.

The TSS concentrations over the 30 days sampling period at KZ-9 were relatively consistent except for one high measurement on March 7 (11 mg/L) compared to the other four sampling events (1.0 to 3.4 mg/L). High TSS is typically restricted to higher flow times of year (i.e., spring freshet or following high rainfall events in summer and fall); historical February and March TSS levels have ranged between less than 1.0 and 4.5 mg/L. The high TSS

concentration observed on March 7 may be erroneous or related to the overflow conditions noted at site where water flows up over the ice and in doing so may pick up particulate material deposited on the ice.

Similar to TSS, the total copper concentrations recorded at KZ-9 were relatively consistent except for one high measurement for total copper on February 21 (0.0025 mg/L) compared to the other four sampling events (0.00017 to 0.00056 mg/L). Dissolved copper was also elevated for this sample (0.0031 mg/L) and consistent with the total copper concentration, suggesting sample or laboratory error is unlikely. Historical total copper concentrations recorded in February and March (0.00007 to 0.00038 mg/L) are consistent with the majority of samples collected in the 30-day February to March 2018 monitoring period and much lower than the single high copper value. The February 21 high total copper concentration is comparable to those observed during higher flow events (spring freshet and late summer rain events; Figure C-13), and may reflect sporadic natural variation at this site.

Finally, total aluminum at KZ-26 on Finlayson Creek ranged between 0.00066 and 0.0099 mg/L (Table 3-64). Although this spans an order of magnitude, they are in line with the historical February and March data (0.0016 to 0.042 mg/L) and reflect natural variability.

Overall, with the few exceptions described above, there was limited variability in parameter concentrations measured in the five samples collected over 30 days in February and March 2018. The variability observed was largely captured by the previous historical monthly monitoring in February and March 2016 and 2017. As such, it appears that monthly water quality sampling over this time of year has adequately captured constituent variability and further intensive sampling during this low flow winter period may be of limited utility.

Table 3-58: Summary Statistics for Constituents of Interest at Site KZ-2, Fault Creek in February-March 2018

	TSS	Fluoride	Total Phosphorus	Total Aluminum	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Average	0.51	0.051	0.0025	0.0035	0.000076	0.00024	0.000050	0.00050	0.0053	0.0026	0.030
Standard Deviation	0.020	0.0020	0.0025	0.0016	0.0000090	0.000015	0	0.000044	0.0041	0.00032	0.0019
Minimum	<1.0	0.049	<0.0020	0.0016	0.000066	0.00023	<0.00010	0.00043	0.0011	0.0024	0.028
Maximum	<1.1	0.053	0.0067	0.0053	0.000090	0.00027	<0.00010	0.00055	0.011	0.0032	0.033
Median	<1.0	0.052	<0.0020	0.0035	0.000074	0.00024	<0.00010	0.00050	0.0054	0.0025	0.029

Table 3-59: Summary Statistics for Constituents of Interest at Site KZ-9, Geona Creek in February-March 2018

	TSS	Fluoride	Total Phosphorus	Total Aluminum	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Average	4.2	0.095	0.0084	0.0067	0.00024	0.00010	0.00027	0.00077	0.39	0.0024	0.014
Standard Deviation	4.1	0.016	0.0042	0.0038	0.00011	0.000069	0.00022	0.00098	0.36	0.0017	0.0080
Minimum	1.0	0.073	0.0041	0.0026	0.00012	0.000039	<0.00010	0.00017	0.017	0.0011	0.0044
Maximum	11	0.11	0.013	0.011	0.00034	0.00021	0.00061	0.0025	0.84	0.0050	0.022
Median	2.8	0.097	0.0065	0.0055	0.00028	0.000091	0.00029	0.00041	0.51	0.0016	0.017

Table 3-60: Summary Statistics for Constituents of Interest at Site KZ-18, Geona Creek in February-March 2018

	TSS	Fluoride	Total Phosphorus	Total Aluminum	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Average	3.1	0.087	0.070	0.0150	0.0011	0.000059	0.00018	0.00013	0.10	0.0015	0.0021
Standard Deviation	3.7	0.0030	0.010	0.0068	0.000050	0.000022	0.000040	0.000049	0.047	0.00013	0.00043
Minimum	<1.0	0.084	0.065	0.0074	0.0011	0.000047	0.00015	0.000072	0.059	0.0014	0.0017
Maximum	9.5	0.091	0.089	0.023	0.0012	0.000097	0.00023	0.00019	0.18	0.0017	0.0026
Median	1.8	0.087	0.067	0.016	0.0011	0.000049	0.00018	0.00012	0.086	0.0015	0.0018

Table 3-61: Summary Statistics for Constituents of Interest at Site KZ-37, Geona Creek in February-March 2018

	TSS	Fluoride	Total Phosphorus	Total Aluminum	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Average	1.1	0.11	0.0090	0.012	0.00042	0.000075	0.000070	0.00029	0.46	0.0012	0.012
Standard Deviation	0.40	0.0040	0.0021	0.011	0.000090	0.000013	0.000045	0.00022	0.082	0.00014	0.0010
Minimum	<1.0	0.10	0.0078	0.0054	0.00034	0.000057	<0.00010	0.00016	0.38	0.0011	0.011
Maximum	1.5	0.11	0.013	0.032	0.00057	0.000089	0.00015	0.00068	0.58	0.0014	0.014
Median	1.2	0.11	0.0080	0.0072	0.00039	0.000077	<0.00010	0.00020	0.45	0.0011	0.013

Table 3-62: Summary Statistics for Constituents of Interest at Site KZ-13, South Creek in February-March 2018

	TSS	Fluoride	Total Phosphorus	Total Aluminum	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Average	1.1	0.060	0.0066	0.021	0.00025	0.000070	0.00011	0.00052	0.18	0.00030	0.0036
Standard Deviation	0.74	0.0030	0.0031	0.022	0.000064	0.000042	0.000081	0.00013	0.08	0.000028	0.0012
Minimum	<1.0	0.055	0.0031	0.0065	0.00018	0.000031	<0.00010	0.00037	0.11	0.00027	0.0022
Maximum	<4.6	0.062	0.011	0.058	0.00035	0.00014	0.00022	0.00072	0.29	0.00032	0.0053
Median	1.0	0.061	0.0053	0.0084	0.00022	0.000060	<0.00010	0.00050	0.15	0.00032	0.0037

Table 3-63: Summary Statistics for Constituents of Interest at Site KZ-15, Finlayson Creek in February-March 2018

	TSS	Fluoride	Total Phosphorus	Total Aluminum	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Average	0.80	0.13	0.0050	0.0054	0.00050	0.000072	0.000050	0.00023	0.072	0.0016	0.0096
Standard Deviation	0.45	0.0040	0.0021	0.0023	0.000048	0.0000096	0	0.000013	0.017	0.00018	0.0012
Minimum	<1.0	0.13	0.0029	0.0037	0.00042	0.000057	<0.00010	0.00022	0.054	0.0014	0.0080
Maximum	1.5	0.14	0.0085	0.0089	0.00054	0.000082	<0.00010	0.00024	0.091	0.0018	0.011
Median	<1.0	0.13	0.0045	0.0041	0.00050	0.000074	<0.00010	0.00024	0.069	0.0016	0.0099

Table 3-64: Summary Statistics for Constituents of Interest at Site KZ-26, Finlayson Creek in February-March 2018

	TSS	Fluoride	Total Phosphorus	Total Aluminum	Total Arsenic	Total Cadmium	Total Chromium	Total Copper	Total Iron	Total Selenium	Total Zinc
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Average	1.3	0.14	0.012	0.0045	0.00057	0.000040	0.000088	0.00047	0.018	0.0011	0.0033
Standard Deviation	1.0	0.010	0.010	0.0044	0.00019	0.000028	0.000075	0.00012	0.011	0.00011	0.0022
Minimum	<1.0	0.12	0.0039	0.00066	0.00037	0.000015	<0.00010	0.00030	0.0083	0.00094	0.0014
Maximum	2.7	0.14	0.027	0.0099	0.00079	0.000075	0.00020	0.00057	0.035	0.0012	0.0062
Median	1.0	0.14	0.0091	0.0038	0.00056	0.000035	<0.00010	0.00051	0.015	0.0011	0.0027

4. SUMMARY

Creeks that drain the KZK property were circumneutral to alkaline (pH 6.8 to 8.7; median 7.7) and had hardness ranging from moderately hard (Fault Creek and South Creek) to hard (Geona Creek) in the upper watershed and very hard in the lower watershed (Finlayson Creek and East Creek). Water quality guideline exceedances were observed sporadically for a number of constituents including fluoride, and total concentrations of phosphorus, aluminum, arsenic, cadmium, chromium, copper, iron, selenium, and zinc. Of these, only fluoride and total cadmium, iron and zinc exceedances occurred in 10% or more of the samples collected in the sample locations.

Total concentrations of cadmium and zinc were highest in the headwaters of Geona Creek at site KZ-7, and in Fault Creek (KZ-2) which flows into Geona Creek, likely related to the mineralized nature of this location. Indeed, concentrations of these elements linked to the local mineralization were elevated in the upper watershed (primarily Geona Creek) relative to the lower watershed waters (Finlayson Creek).

The fluoride CCME exceedances were primarily localized to East Creek (KZ-21), where 79% of samples were in exceedance, and site KZ-22 on Finlayson Creek, which is immediately downstream of the confluence with East Creek (50% of samples exceeded the CCME fluoride guideline).

Total chromium exceedances were observed at sites located throughout the property but were largely confined to the historical 1994-1995 sampling events.

Total selenium concentrations were also notable in that although only 3% of samples exceeded the BCMoE water quality guideline (0.002 mg/L), a further 29% of samples were within a factor of two of this guideline. In general, more water quality guideline exceedances were noted for total metal concentrations than their dissolved counterparts, suggesting that a significant portion of the metals were particulate-bound, especially during freshet and/or other periods characterized by elevated TSS levels. That dissolved metal concentrations exhibited much less frequent water quality guideline exceedances is important since it is the dissolved fraction that is the most bioavailable (Prothro, 1993).

The majority of constituent concentrations peaked during spring as the high run-off and associated stream flow during freshet increased the particulate content of the streams, leading to higher total metal concentrations. Conversely, concentrations of fluoride, total selenium, uranium, and hardness were lowest between freshet and summer. The levels of these parameters subsequently increased through the late fall and winter months, suggesting that groundwater may be an important contributor to surface water concentrations of these four constituents. This is supported by groundwater monitoring data from wells installed on the Project site in which fluoride (0.01 to 1.1 mg/L), selenium (less than 0.00004 to 0.0032 mg/L), uranium (0.0006 to 0.014 mg/L), and hardness (96 to 750 mg/L) concentrations in shallow groundwater either overlap or markedly exceed the range of concentrations observed in both Geona Creek and Fault Creek.

Monitoring of seeps in the upper watershed indicated they may play a small role in slightly lowering the pH and raising the total iron content of waters in Geona Creek at KZ-9 due to inputs from the mildly acidic, ferruginous waters of Seep 5 and the KZ-9 East Seep.

A comparison of the Cominco 1994-1995 water quality dataset with that collected during the more recent baseline water quality monitoring conducted since 2015 indicated that the majority of constituents shared a similar concentration span, suggesting there were no obvious differences between the two datasets. Two exceptions were total selenium and total chromium. Total chromium concentrations were typically lower in the 2015-2018 dataset compared to the historical sampling, perhaps due to a preponderance of higher flow sampling events in the historical samples which may have resulted in higher particulate chromium concentrations. However, the CCME exceedances for total chromium were relatively marginal, with dissolved chromium concentrations exhibiting three-fold lower incidence of CCME exceedance. Conversely, total selenium concentrations were generally higher in the more recently collected samples than in the 1994-1995 survey. Selenium concentrations appear to be sensitive to flow conditions, exhibiting minima during periods of high flow (i.e., dilution during freshet and following extended precipitation events) and elevated levels during baseflow winter conditions. The paucity of winter sampling in the 1994-1995 dataset allied with likely high precipitation events in the August 1995 samples, may have low-biased the historical dataset.

A higher frequency, five samples over 30 days sampling program was carried out at the majority of monitoring stations in May-June 2017 and February-March 2018 to assess variance in during freshet and low flow winter conditions, respectively. Geona Creek (KZ-9, KZ-37, KZ-17) and upper Finlayson Creek (KZ-15, KZ-16, KZ-22) monitoring stations typically returned higher concentrations of constituents that typically are higher with high TSS and flow (i.e. particulate transported; aluminum, iron, etc.) earlier in May and lower concentrations in June. The peak concentrations in May 2017 for many stations were similar to peak concentrations observed in May 2015 at the majority of stations. Concentrations for several parameters peaked in the final June 2017 sample at stations further downstream in Finlayson Creek (KZ-26) and East Creek (KZ-21), likely due to a high precipitation event that preceded the sampling. In Fault Creek (KZ-2), freshet appeared to arrive later on in June 2017, likely due to its more isolated and high-altitude locale. Relatively limited variation was observed for the majority of parameters measured during February-March 2018, suggesting the previous monthly monitoring had adequately captured natural variation at the sampling sites during this time of year.

Overall, the constituent annual concentration ranges and any observed seasonality appeared consistent over the recent sampling period of record (i.e., April 2015 to March 2018). Only KZ-17 (Geona Creek at mouth) exhibited any observable difference, with total concentrations of arsenic, aluminum, cadmium, iron, and zinc observable lower since September 2016. This is likely related to beaver activity and a change in the water flow through the beaver dam located upstream of this site.

5. REFERENCES

Alexco Environmental Group Inc. (AEG) (2016). 2015-2016 Surface Water Quality Baseline Report Kudz Ze Kayah Project.

BMC Minerals (No.1) Ltd. (BMC) (2017). Kudz Ze Kayah Project Proposal for YESAB Executive Level Screening.

British Columbia Ministry of Environment (BCMoE) (2017). British Columbia Approved Water Quality Guidelines: Aquatic Life, Wildlife and Agriculture Summary Report.

British Columbia Ministry of Environment (BCMoE) (2013). British Columbia Environmental Laboratory Manual October 2013.

Canadian Council of Ministers of the Environment (CCME) (2018). Canadian Environmental Quality Guidelines, Water quality Guidelines for the Protection of Aquatic Life.

Cominco Ltd. (1996). Initial Environmental Evaluation Kudz Ze Kayah Yukon Territory. Volume 1: Report. Submitted to Yukon Energy, Mines and Resources, February 1996.

Laberge Environmental Services and Can-Nic-A-Nick Environmental (2003). Environmental Monitoring at Kudz Ze Kayah, 2002. Prepared for Teck Cominco Metals Ltd.

Laberge Environmental Services and Can-Nic-A-Nick Environmental (2005). Environmental Monitoring at Kudz Ze Kayah, 2004. Prepared for Teck Cominco Metals Ltd.

Laberge Environmental Services and Can-Nic-A-Nick Environmental (2007). Environmental Monitoring at Kudz Ze Kayah, 2006. Prepared for Teck Cominco Metals Ltd.

Laberge Environmental Services and Can-Nic-A-Nick Environmental (2009). Environmental Monitoring at Kudz Ze Kayah, 2008. Prepared for Teck Cominco Metals Ltd.

Laberge Environmental Services and Can-Nic-A-Nick Environmental (2011). Environmental Monitoring at Kudz Ze Kayah, 2010. Prepared for Teck Cominco Metals Ltd.

Laberge Environmental Services and Can-Nic-A-Nick Environmental (2013). Environmental Monitoring at Kudz Ze Kayah, 2012. Prepared for Teck Cominco Metals Ltd.

Laberge Environmental Services and Can-Nic-A-Nick Environmental (2015). Environmental Monitoring at Kudz Ze Kayah, 2014. Prepared for Teck Cominco Metals Ltd.

Laberge Environmental Services and Can-Nic-A-Nick Environmental (2017). Environmental Monitoring at Kudz Ze Kayah, 2016. Prepared for BMC Minerals (No.1) Ltd.

Prothro, M. (1993) Technical Memorandum Regarding Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria. U.S. Environmental Protection Agency. October 1, 1993. 40CFRS131.36(b)(1). Available at: http://www.epa.gov/waterscience/library/wqcriteria/metalsinterpret.pdf

Rice, E.W., Baird, R.B., Eaton, A.D. and Clesceri (2012). Standard methods for the examination of water and wastewater. Washington, DC, American Public Health Association, 22nd edition.

United States Environmental Protection Agency (USEPA) (2007). SW-846 Method 6020A, Inductively coupled plasma-mass spectrometry. Revision 1.

APPENDIX A.

Historic and April 2015 to March 2018 Surface Water Monitoring Data

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2
			18-Jul-1994	31-Aug-1994	03-Dec-1994	05-Apr-1995	11-Jun-1995	22-Aug-1995	13-Sep-1995	30-Apr-2015	12-May-2015	22-Jun-2015	29-Jul-2015	23-Aug-2015	11-Sep-2015	15-Oct-2015	20-Nov-2015	03-Dec-2015	20-Jan-2016	09-Feb-2016	20-Mar-2016
Discharge (Flow)	L/s									4.9	16.4	79	39.7	67.1	69.1	27.8	10.7	8.1	6.2	4.7	3.2
Total Suspended Solids	mg/L				<4	<4	<4	<4	<4	2.7	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
pH (field)	pH units	**6.5 - 9**								7.89	7.9	7.79	7.93	7.72	7.8	7.6	7.92	7.33	7.78	7.83	7.63
pH (lab)	pH units	**6.5 - 9**	7.7	7.8	7.2	8	7.3	7.5	7.2	8.1	7.7	7.75	7.75	7.77	7.86	7.87	7.73	8	7.72	8	7.96
Specific Conductance (field)	µS/cm									245	131.8	145.1	187.9	174.9	180.8	221.5	238.4	246.6	220.5	257.2	257.2
Specific Conductance (lab)	µS/cm		128	173	198	252	126	204	190	279	160	143	184	183	188	220	239	249	264	275	280
Temperature (field)	C									-0.3	1.6	5.5	7.9	5.6	4.7	0	0.1	0.2	0	0	0.4
Dissolved Oxygen (field)	mg/L	**6.5**								11.1	11.2	11.18	10.28	10.9	9.5	12.5	12.4	10.9	**4.8**	10.4	10.01
Dissolved Oxygen (field)	%									91	95	88.8	86.6	103	88	101	103	91	39	84	82.8
ORP (field)	mV									371.1	279.2	79.8	80.1	233.3	123.1	229.3	155.8	285.3	299	253.5	104.6
Turbidity (internal)	NTU											0.04	0.15	0.47	0.72	0.45	1.75	0.3	0.114	0.902	0.306
Hardness (from total)	mg/L		54.0	90.7	109	126	53.6	101	108	135	79.6	67.8	92.5	90.3	101	101	112	124	129	127	133
Hardness (from dissolved)	mg/L			94.7	109	126	50.7	98.1	106	140	82.7	67.3	90.7	89.8	93.3	100	114	116	131	130	136
Colour	TCU									<5.0	66.1	6.2	5.3	6.4	7	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Total Acidity	mg/L									<0.50	<0.50	1.3	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.92	<0.50	<0.50
Acidity (pH 4.5)	mg/L									<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		33.9	46.3	65.2	58.9	27.9	49	45.3	87.9	49.6	38.7	53.3	48.3	48.9	56.6	63.1	69.9	79.1	84.6	87.7
Alkalinity, bicarbonate HCO3	mg/L		33.9	46.3				59.7	55.2	107	60.5	47.2	65	59	59.7	69.1	76.9	85.3	96.5	103	107
Alkalinity, hydroxide OH	mg/L							<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L							<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.5	<0.5				<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**								<0.50	0.66	<0.50	<0.50	<0.50	<0.50	<0.50	5.4	<0.50	<0.50	<0.50	0.68
Fluoride	mg/L	**0.12**								0.05	0.044	0.038	0.037	0.035	0.034	0.035	0.058	0.037	0.051	0.042	0.041
Sulphate, dissolved	mg/L	*	26.3	46.3	45.2	48.7	21.9	31	49.8	47.2	24.6	28	36.5	38.3	40.2	43.7	48.2	48.4	52.7	52.8	51.3
Cyanide, total	mg/L	**0.005**				<0.001	<0.001	0.001	<0.001	<0.00050	0.00084	0.00058	<0.00050	<0.00050	0.00066	<0.00050	<0.00050	<0.00050	0.00053	<0.00050	<0.00050
Cyanide, Weak Acid Dissociable	mg/L	**0.005**				<0.001	<0.001	<0.001	<0.001	<0.00050	0.00093	0.00054	<0.00050	0.00088	0.0006	<0.00050	<0.00050	<0.00050	0.00062	<0.00050	<0.00050
Ammonia (N)	mg/L	*			0.005	0.016	<0.005	<0.005	<0.005	0.0169	0.0087	<0.0050	0.0122	<0.0050	0.0051	0.0054	<0.0050	<0.0050	0.0158	0.0064	0.0079
Nitrite (N)	mg/L	**0.02**				<0.005	<0.005	<0.005	<0.005	0.0033	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3.0**			0.18	0.18	0.08	0.12	0.18	0.119	0.0536	0.0559	0.0636	0.105	0.0796	0.125	0.134	0.138	0.163	0.165	0.163
Nitrite & Nitrate, as N	mg/L				0.18	0.18	0.08	0.12	0.18	0.122	0.0536	0.0559	0.0636	0.105	0.0796	0.125	0.136	0.138	0.163	0.165	0.163
Phosphorus,total-colourimetric	mg/L	**0.035**			<0.003	<0.003	<0.003	<0.003	<0.003	<0.0020	0.0063	<0.0020	0.0036	0.0041	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus, Total Dissolved	mg/L									<0.0020	0.0082	<0.0020	0.0022	0.0037	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	0.0025
Dissolved Organic Carbon	mg/L									0.71	5.77	1.61	<0.50	0.68	0.81	1.15	0.54	0.76	0.8	<0.50	1
Aluminum (Al), total	mg/L	*	<0.06	<0.06	<0.006	0.023	0.05	0.02	0.019	0.0688	0.0858	0.00962	0.00841	0.00793	0.0112	0.0176	0.00724	0.00959	0.00318	0.0194	0.003
Antimony (Sb), total	mg/L	**0.009**								0.000033	0.000032	0.000024	0.000025	0.000037	0.000023	0.000022	0.000026	0.000028	0.00002	0.000033	0.000025
Arsenic (As), total	mg/L	**0.005**			<0.00005	<0.00005	0.0001	0.0002	0.00006	0.000147	0.000128	0.000096	0.000101	0.000124	0.000112	0.000102	0.000077	0.000088	0.000069	0.000105	0.000076
Barium (Ba), total	mg/L		0.03	0.048	0.05	0.057	0.029	0.052	0.054	0.0766	0.0487	0.0386	0.0547	0.0545	0.0619	0.059	0.0685	0.0695	0.0725	0.0752	0.0774
Beryllium (Be), total	mg/L		<0.001			<0.0001	<0.0001	<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L					<0.002	<0.002	<0.002	<0.002	0.0000078	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	**1.5**	<0.04	<0.04	<0.04	0.028	0.021	0.038	0.013	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*			**0.00023**	0.00009	**0.00013**	0.00008	0.00011	**0.000246**	**0.000194**	**0.000229**	**0.000205**	**0.000346**	**0.000311**	**0.000199**	**0.000209**	**0.000237**	**0.00022**	**0.00024**	0.000198
Calcium (Ca), total	mg/L		19.2	32.2	36.5	41	19	35	38	42.4	25.8	23.7	31.7	31.5	35	34.4	36.9	40.7	41.5	41	42.4
Chromium (Cr), total	mg/L	**0.001**			0.0008	**0.0057**	0.0005	0.0007	0.0007	0.00016	0.00016	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), total	mg/L					<0.0004	<0.0004	<0.0004	<0.0004	0.0000688	0.0000442	0.0000113	0.0000092	0.000013	0.000014	0.000026	0.000009	0.000007	0.000009	0.000031	0.000008
Copper (Cu), total	mg/L	*	<0.002	<0.002	0.0005	0.0007	0.0013	0.0011	0.0008	0.00128	**0.00567**	0.000698	0.000637	0.000785	0.000726	0.000609	0.000501	0.000541	0.000531	0.000869	0.000427
Iron (Fe), total	mg/L	**0.3**	<0.05	<0.05	0.01	0.061	0.084	0.019	0.025	0.134	0.0711	0.0105	0.0081	0.0067	0.016	0.0354	0.0094	0.0017	0.0051	0.0518	0.0018
Lead (Pb), total	mg/L	*			0.0007	0.0005	0.0005	0.0002	0.0002	0.000743	0.000371	0.0000875	0.0000518	0.000043	0.000042	0.000148	0.000033	0.000019	0.000028	0.000552	0.000021
Lithium (Li), total	mg/L									0.00179	0.00125	0.00066	0.00096	0.00083	0.00088	0.00093	0.00145	0.0009	0.00091	0.00148	0.00191
Magnesium (Mg), total	mg/L		1.46	2.49	4.37	5.7	1.5	3.3	3.3	6.95	3.7	2.1	3.26	2.82	3.3	3.76	4.76	5.38	6.23	6.04	6.6
Manganese (Mn), total	mg/L	*	<0.002	<0.002	<0.002	0.001	0.0021	0.0006	0.0005	0.00472	0.0021	0.000479	0.000203	0.000264	0.000503	0.00139	0.000183	<0.000050	0.000103	0.00207	<0.000050
Mercury (Hg), total	mg/L	**0.000026**			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0000020	0.0000045	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**				<0.0004	0.0007	<0.0004	0.0005	0.000717	0.000587	0.000598	0.000651	0.000677	0.000611	0.000604	0.00067	0.0007	0.00073	0.00076	0.00076
Nickel (Ni), total	mg/L	*			0.0007		<0.001	<0.001	<0.001	0.00049	0.000778	0.000337	0.000302	0.000462	0.000427	0.000327	0.000267	0.000292	0.000263	0.000307	0.000254

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2
			18-Jul-1994	31-Aug-1994	03-Dec-1994	05-Apr-1995	11-Jun-1995	22-Aug-1995	13-Sep-1995	30-Apr-2015	12-May-2015	22-Jun-2015	29-Jul-2015	23-Aug-2015	11-Sep-2015	15-Oct-2015	20-Nov-2015	03-Dec-2015	20-Jan-2016	09-Feb-2016	20-Mar-2016
Phosphorus (P), total	mg/L					<0.004	0.006	0.005	0.008	0.0187	0.0087	<0.0020	0.0023	0.0022	<0.0020	0.003	<0.0020	<0.0020	0.0026	0.0063	0.0021
Potassium (K), total	mg/L		1	1.5	1.6	2.0	1.1	1.7	1.8	2.33	2.14	1.24	1.76	1.5	1.74	1.75	2.05	2.07	2.36	2.23	2.33
Selenium (Se), total	mg/L	**0.002**	<0.0005	0.0005	0.00135	0.0016	<0.00005	0.00024	0.00007	**0.0028**	0.00125	0.000442	0.000621	0.000543	0.000667	0.0011	0.00147	0.00178	**0.0021**	**0.00206**	**0.00219**
Silicon (Si), total	mg/L		1.5	1.9	1.9	2.1	1.6	2.3	2.2	2.69	2.03	2.04	2.27	2.53	2.26	2.31	2.47	2.62	2.55	2.43	2.28
Silver (Ag), total	mg/L	**0.00025**			<0.00001	<0.00001	<0.00001		<0.00001	<0.0000050	0.0000059	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L		<0.4	0.5	0.6	0.76	0.45	0.73	0.74	0.907	0.873	0.502	0.659	0.605	0.738	0.732	0.821	0.89	0.946	0.881	0.929
Strontium (Sr), total	mg/L		0.057	0.097	0.098	0.11	0.051	0.1	0.1	0.153	0.0882	0.0749	0.0997	0.102	0.108	0.114	0.127	0.13	0.152	0.138	0.148
Sulphur (S), total	mg/L		8	14.4	13.8	15	7.5	16	17	17.4	8.8	8.8	13.1	14.1	12.9	15.6	16.3	18	18.5	18.1	17
Thallium (Tl), total	mg/L	**0.0008**								0.0000026	0.0000035	<0.0000020	0.0000041	0.000004	0.000004	0.000002	0.000002	0.000002	0.000002	0.000002	0.000003
Tin (Sn), total	mg/L					<0.002	<0.002	<0.002	<0.002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		<0.003	<0.003	<0.003	0.0031	0.0039	0.0016	0.0019	0.00438	0.00257	<0.00050	<0.00050	<0.00050	0.00062	0.00123	<0.00050	<0.00050	<0.00050	0.00078	<0.00050
Uranium (U), total	mg/L	**0.015**								0.00506	0.00193	0.00109	0.00171	0.00165	0.00202	0.00258	0.00311	0.00348	0.00441	0.00452	0.00493
Vanadium (V), total	mg/L					<0.0003	0.0003	<0.0003	<0.0003	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00033	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	*	**0.04**	**0.03**	**0.047**	0.021	**0.044**	**0.017**	**0.025**	0.0309	**0.0239**	**0.0326**	**0.0244**	**0.0542**	**0.0472**	**0.0265**	**0.0253**	0.0286	0.0285	0.0288	0.0232
Zirconium (Zr), total	mg/L					<0.0003	0.0004	0.0004	0.0006	<0.00010	0.00016	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*		<0.02	<0.002	0.008	0.02	0.014	0.008	0.00161	0.023	0.00502	0.00416	0.00479	0.00484	0.00276	0.00662	0.00193	0.00113	0.00199	0.00596
Antimony (Sb), dissolved	mg/L									0.000032	0.000036	0.000023	0.000028	0.000026	0.000022	<0.000020	0.000021	0.000021	<0.000020	0.00003	0.000029
Arsenic (As), dissolved	mg/L				0.00002	<0.00005	<0.00005	0.00023	<0.00005	0.000091	0.000122	0.000101	0.000104	0.000096	0.000103	0.000076	0.000078	0.000061	0.000066	0.00008	0.000079
Barium (Ba), dissolved	mg/L			0.045	0.053	0.057	0.027	0.051	0.054	0.0801	0.0513	0.0415	0.0566	0.0491	0.053	0.0594	0.0671	0.0654	0.0733	0.0736	0.0769
Beryllium (Be), dissolved	mg/L					<0.0001	<0.0001	<0.0001	<0.0001	<0.000010	0.000042	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L					<0.002	<0.002	<0.002	<0.002	<0.0000050	0.00001	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L			<0.008	<0.008	0.008	0.012	0.013	0.009	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*			0.00009	0.0001	0.00013	0.00007	0.00011	0.000229	**0.000182**	**0.000242**	**0.000204**	**0.000306**	**0.000275**	0.000185	0.000198	0.000171	0.000218	0.000235	0.000204
Calcium (Ca), dissolved	mg/L			33.9	36.3	41	18	34	37	44.3	26.8	23.2	31	31.4	32.3	33.9	37.3	38	42.3	41.8	43.5
Chromium (Cr), dissolved	mg/L				0.0003	0.003	0.0004	0.0004	0.0007	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L					<0.0004	<0.0004	<0.0004	<0.0004	0.0000106	0.0000257	0.0000081	0.0000082	0.00001	0.00001	0.000007	0.000008	0.000007	0.000007	0.000005	0.000007
Copper (Cu), dissolved	mg/L			<0.001	0.002	0.0005	0.0011	0.001	0.0008	0.000606	0.00528	0.00069	0.000623	0.000774	0.000652	0.000478	0.000568	0.00042	0.000414	0.000949	0.000388
Iron (Fe), dissolved	mg/L	**0.35**		<0.003	0.004	0.022	0.017	<0.005	0.01	0.0017	0.0283	0.0022	0.0019	0.0012	0.0011	<0.0010	0.0012	<0.0010	<0.0010	<0.0010	<0.0010
Lead (Pb), dissolved	mg/L				0.0006	0.0003	0.0003	<0.0001	<0.0001	0.0000242	0.00021	0.0000241	0.0000929	0.00001	0.00001	0.000006	0.000015	0.000005	0.000016	0.000059	0.000016
Lithium (Li), dissolved	mg/L									0.00162	0.00124	0.00076	0.00101	0.00058	0.00111	0.00081	0.00123	0.00111	0.00105	0.00174	0.00172
Magnesium (Mg), dissolved	mg/L			2.45	4.34	5.7	1.4	3.2	3.2	7.18	3.84	2.27	3.22	2.74	3.07	3.73	4.94	5.16	6.12	6.1	6.69
Manganese (Mn), dissolved	mg/L			<0.002	0.002	0.0005	0.0007	0.0004	0.0003	0.000491	0.00125	0.000101	0.000123	0.000116	0.000119	0.000052	<0.000050	<0.000050	<0.000050	0.000086	<0.000050
Mercury (Hg), dissolved	mg/L					<0.00001	<0.00001	<0.00001	<0.00001	<0.0000020	0.0000033	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L					<0.0004	0.0005	<0.0004	0.0004	0.00085	0.000561	0.000633	0.000617	0.000682	0.000589	0.000605	0.000652	0.000665	0.000748	0.000749	0.000751
Nickel (Ni), dissolved	mg/L				0.0006		<0.001	<0.001	<0.001	0.00028	0.000763	0.000404	0.000332	0.00045	0.000408	0.000273	0.000333	0.000275	0.00025	0.000267	0.000254
Phosphorus (P), dissolved	mg/L						0.008	0.004	0.008	<0.0020	0.0044	<0.0020	0.0082	0.0022	0.0038	0.0031	0.0032	<0.0020	<0.0020	<0.0020	0.0021
Potassium (K), dissolved	mg/L			1.6	1.7	2	1	1.7	1.7	2.5	2.14	1.37	1.81	1.41	1.67	1.76	2.19	1.97	2.37	2.31	2.34
Selenium (Se), dissolved	mg/L			<0.0005	0.0014	0.00015	<0.00005	<0.00005	0.00007	0.00306	0.00112	0.000486	0.0006	0.000552	0.000635	0.000945	0.00143	0.0018	0.00186	0.00189	0.00218
Silicon (Si), dissolved	mg/L			1.98	2.09	2	1.5	2.2	2.2	2.71	1.91	2.04	2.25	2.12	2.28	2.18	2.33	2.51	2.47	2.4	2.39
Silver (Ag), dissolved	mg/L				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0000050	0.0000075	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L			0.56	0.67	0.74	0.41	0.68	0.72	1.58	0.551	0.573	0.686	0.608	0.677	0.715	0.884	0.867	0.924	0.915	0.907
Strontium (Sr), dissolved	mg/L			0.093	0.105	0.11	0.048	0.099	0.1	0.162	0.0899	0.0822	0.0998	0.0882	0.105	0.109	0.128	0.127	0.148	0.142	0.154
Sulphur (S), dissolved	mg/L			14.19	14.7	14	7.1	15	17	17.1	8.1	9.2	12.7	13.1	14	14.6	16.1	17.1	16.9	17.5	16.9
Thallium (Tl), dissolved	mg/L									<0.0000020	0.0000094	<0.0000020	0.0000035	0.000004	0.000003	0.000003	0.000002	<0.0000020	0.000002	0.000002	0.000002
Tin (Sn), dissolved	mg/L						<0.002	<0.002	<0.002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L			<0.003	<0.003	0.0021	0.0009	0.0011	0.0015	<0.00050	0.00052	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L									0.00498	0.00196	0.00111	0.00173	0.00157	0.00182	0.00243	0.00315	0.00326	0.00438	0.00442	0.00494
Vanadium (V), dissolved	mg/L					<0.0003	<0.0003	<0.0003	<0.0003	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00022	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L			0.017	0.049	0.022	0.041	0.014	0.025	0.0266	0.0206	0.0355	0.0242	0.0468	0.0405	0.0232	0.027	0.0207	0.0263	0.0257	0.0241
Zirconium (Zr), dissolved	mg/L					<0.0003	<0.0003	<0.0003	<0.0003	<0.00010	0.00015	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2
			21-Apr-2016	05-May-2016	19-May-2016	14-Jun-2016	26-Jul-2016	28-Jul-2016	27-Aug-2016	08-Sep-2016	04-Oct-2016	16-Nov-2016	20-Dec-2016	16-Jan-2017	23-Feb-2017	21-Mar-2017	29-Apr-2017	18-May-2017	26-May-2017	01-Jun-2017	07-Jun-2017
Discharge (Flow)	L/s		3.4	5.1		69.7		30.2	145.1	89.1	37	11.3	7.1	4.4	4.1	3.8	6.7	12.9			76.7
Total Suspended Solids	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0		9.9	<1.0	<1.0	<1.0	<1.0	1.1	<1.0	<1.0	<1.0	1.8	<1.0	1.9	<1.0
pH (field)	pH units	**6.5 - 9**	7.42	7.75	7.27	7.93	7.58	7.46	7.97	7.77	7.22	7.68	7.96	7.7	7.76	7.97	7.62	8.16	7.82	7.53	8.15
pH (lab)	pH units	**6.5 - 9**	8.06	7.96	7.82	7.85	7.92		7.76	7.93	7.59	7.91	7.83	8	7.91	7.82	8.1	7.83	7.67	7.4	7.78
Specific Conductance (field)	µS/cm		238.2	245.9	129.6	149.3	179.7	188.6	207.8	195.1	209.9	224.6	264.9	274.2	309.2	278.6	279	162.6	131.7	82.7	127.7
Specific Conductance (lab)	µS/cm		282	244	131	153	178		179	209	236	260	270	287	294	301	280	175	130	81.1	133
Temperature (field)	C		0.6	1.1	1.8	6.2	5.2	5.7	6	4.3	0.4	0.2	0.1	-0.2	-0.2	-0.1	0	1	1.6	2.7	5.2
Dissolved Oxygen (field)	mg/L	**6.5**	10.43	12.01	12.4	10.33	10.69	11.55	10.37	10.35	10.94	11	11.06	11.27	10.81	10.15	12.11	10.1	11.35	8.59	10.8
Dissolved Oxygen (field)	%		85.7	100.4	105	99.5	99.9	108.5	97.8	94.6	89.8	89.9	92.9	95	87.1	83.2	98.6	85	81.7	63.3	101
ORP (field)	mV		98.9	117.6	135.7	78.7	115.1	112.1	269.9	111.4	81.2	137.7	121.6	119.6	154.1	165.3	226	399.7	279.6	298.4	379.15
Turbidity (internal)	NTU		1.57	0.08		0.202	0.35		5.806	0.34	0.918	-0.41	0.728	0.178	8.962	2.328	1.194	1.764	1.25	2.39	0.49
Hardness (from total)	mg/L		145	117	64.9	72.3	85.8		78.6	92	112	124	134	138	140	149	125	68.5	58.4	36.7	58.6
Hardness (from dissolved)	mg/L		142	114	65.3	67.1	84.4		80.9	101	108	120	132	138	148	155	128	73.9	58.8	35.3	59.6
Colour	TCU		<5.0	7.7	18.3				<5.0												
Total Acidity	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	0.53	<0.50	<0.50	0.97	0.87	<0.50	<0.50	<0.50	<0.50
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		90.4	78.4	43.2	43.3	48		38.9	52.9	56.5	70.8	76.5	83.5	86.1	90.6	89	57.2	40.7	22.8	37.1
Alkalinity, bicarbonate HCO3	mg/L		110	95.6	52.7	52.9	58.5		47.4	64.6	68.9	86.4	93.3	102	105	110	109	69.8	49.7	27.8	45.2
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**	0.83	0.99	<0.50	0.68	<0.50		0.6	0.78	0.56	<0.50	<0.50	0.56	<0.50	<0.50	0.61	0.76	<0.50	0.5	0.59
Fluoride	mg/L	**0.12**	0.044	0.049	0.039	0.035	0.035		0.033	0.043	0.039	0.048	0.047	0.05	0.047	0.05	0.051	0.043	0.028	0.023	0.027
Sulphate, dissolved	mg/L	*	47.8	41.3	19.8	31.6	37.3		42.2	53.2	53.7	56.4	63	64.7	60.5	63.6	50.9	31.8	21.3	14.7	26.5
Cyanide, total	mg/L	**0.005**	<0.00050	0.0005	0.00063	0.00099	<0.00050		<0.00050	0.00073	<0.00050	0.00051	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00074	0.00065	0.00054	0.00069
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	<0.00050	<0.00050	<0.00050	<0.00050	0.00064		<0.00050	0.00081	<0.00050	0.0006	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00072	<0.00050	0.00079
Ammonia (N)	mg/L	*	0.0161	0.0164	0.018	0.0099	0.02		0.015	0.014	0.0079	0.0077	0.014	0.029	0.037	0.023	0.024	0.021	0.0062	0.017	0.012
Nitrite (N)	mg/L	**0.02**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3.0**	0.129	0.0973	0.11	0.0829	0.0743		0.105	0.129	0.147	0.16	0.165	0.164	0.18	0.18	0.111	0.0449	0.048	0.0481	0.0832
Nitrite & Nitrate, as N	mg/L		0.129	0.0973	0.11	0.0829	0.0743		0.105	0.129	0.147	0.16	0.165	0.164	0.18	0.18	0.111	0.0449	0.048	0.0481	0.0832
Phosphorus,total-colourimetric	mg/L	**0.035**	<0.0020	0.0021	0.0036	<0.0020	0.0022		0.0069	<0.0020	0.0027	<0.0020	<0.0020	<0.0020	0.0021	0.003	0.0025	0.0067	0.0069	0.007	0.0029
Phosphorus, Total Dissolved	mg/L		<0.0020	0.0026	0.0039	<0.0020	<0.0020		0.0081	<0.0020	0.0023	<0.0020	0.0023	<0.0020	<0.0020	0.0022	0.0024	0.0056	0.0064	0.0056	0.0032
Dissolved Organic Carbon	mg/L		1.37	2.26	2.49	<0.50	1.87		2.07	<0.50	1.13	1.06	1.26	<0.50	<0.50	<0.50	2.06	6.73	4.47	1.72	1.88
Aluminum (Al), total	mg/L	*	0.00299	0.00611	0.0475	0.0135	0.0222		**0.168**	0.00947	0.00637	0.00676	0.00361	0.00587	0.00361	0.00211	0.0174	0.0851	0.0373	0.0894	0.0211
Antimony (Sb), total	mg/L	**0.009**	0.000027	0.000024	0.000031	0.000035	0.000026		0.000039	0.000021	0.00002	0.000023	0.000036	0.000038	0.000021	0.000036	0.000053	0.00003	0.000032	0.000028	0.000037
Arsenic (As), total	mg/L	**0.005**	0.000094	0.00008	0.000122	0.000093	0.000074		0.000322	0.000073	0.000067	0.000068	0.000079	0.000078	0.000074	0.000091	0.000092	0.000155	0.000127	0.000149	0.000098
Barium (Ba), total	mg/L		0.0785	0.0639	0.0405	0.0403	0.047		0.0493	0.0517	0.0623	0.0725	0.0784	0.075	0.0784	0.0958	0.0765	0.047	0.0386	0.0271	0.0365
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		0.000015	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.000010	<0.0000050	<0.0000050
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.010	<0.010		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*	0.000199	**0.000194**	**0.000172**	**0.000214**	**0.00028**		**0.000597**	**0.000382**	**0.000272**	**0.000277**	**0.000274**	**0.000254**	**0.00025**	**0.000291**	**0.000276**	**0.000222**	**0.000177**	**0.000221**	**0.00024**
Calcium (Ca), total	mg/L		46.1	37.4	22.9	25.4	30.2		27.6	31.7	38.4	40.7	43.4	44.3	44.7	48.2	39.7	21.5	19.4	12.7	20.1
Chromium (Cr), total	mg/L	**0.001**	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		0.00026	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00021	<0.00010	0.00018	<0.00010
Cobalt (Co), total	mg/L		0.000008	0.000011	0.000049	0.000014	0.000024		0.000193	0.000017	0.000011	0.00001	0.000006	0.000013	0.000006	0.000007	0.000026	0.000067	0.000034	0.000051	0.00002
Copper (Cu), total	mg/L	*	0.000983	0.00157	**0.00289**	0.000825	0.000813		0.00225	0.000724	0.000592	0.00154	0.00363	0.000507	0.000436	0.000488	0.002	**0.00586**	**0.00434**	**0.00312**	0.00189
Iron (Fe), total	mg/L	**0.3**	0.0031	0.0109	0.082	0.0207	0.0325		0.228	0.0096	0.007	0.0104	0.0043	0.0097	0.004	0.0016	0.0235	0.112	0.0332	0.0653	0.0174
Lead (Pb), total	mg/L	*	0.00004	0.000069	0.000375	0.000109	0.000115		0.000983	0.000072	0.000065	0.000024	0.000261	0.000175	0.000034	0.000066	0.000175	0.000496	0.000184	0.000416	0.000094
Lithium (Li), total	mg/L		0.00153	0.0014	0.00052	0.00072	0.00076		<0.00050	0.0007	0.00113	0.00137	0.0014	0.00147	0.00161	0.00173	0.0016	0.00115	0.00077	<0.00050	0.00072
Magnesium (Mg), total	mg/L		7.29	5.83	1.9	2.14	2.49		2.34	3.11	3.87	5.41	6.13	6.53	6.89	7.04	6.38	3.59	2.43	1.24	2.02
Manganese (Mn), total	mg/L	*	0.000081	0.000324	0.00235	0.000934	0.00092		0.0125	0.000537	0.000312	0.000235	0.00038	0.000353	0.000174	0.00013	0.000837	0.00218	0.00112	0.00328	0.000909
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	0.0000024	<0.0000020	<0.0000020		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000052	0.0000055	0.0000037	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	0.000791	0.0007	0.000498	0.000581	0.000604		0.000559	0.000568	0.000595	0.000637	0.000693	0.000665	0.000679	0.000769	0.000659	0.000416	0.000425	0.000387	0.000515
Nickel (Ni), total	mg/L	*	0.000283	0.000309	0.000581	0.000351	0.000398		0.00107	0.000515	0.000407	0.00182	0.00035	0.000352	0.000328	0.000329	0.000496	0.00077	0.00074	0.000686	0.00055

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2
			21-Apr-2016	05-May-2016	19-May-2016	14-Jun-2016	26-Jul-2016	28-Jul-2016	27-Aug-2016	08-Sep-2016	04-Oct-2016	16-Nov-2016	20-Dec-2016	16-Jan-2017	23-Feb-2017	21-Mar-2017	29-Apr-2017	18-May-2017	26-May-2017	01-Jun-2017	07-Jun-2017
Phosphorus (P), total	mg/L		0.0024	0.0068	0.0089	0.0022	0.0029		0.0084	<0.0020	0.0041	0.003	0.0026	0.0034	0.0021	0.0024	0.0045	0.0089	0.0098	0.0071	0.0034
Potassium (K), total	mg/L		2.51	2.24	1.28	1.28	1.35		1.14	1.39	1.64	2.01	1.96	2.06	2.27	2.41	2.35	2	1.58	1.03	1.14
Selenium (Se), total	mg/L	**0.002**	**0.00308**	**0.00244**	0.000448	0.000435	0.000496		0.000443	0.000795	0.00116	0.00187	**0.00217**	**0.00243**	**0.00249**	**0.00278**	**0.00269**	0.00148	0.000657	0.000321	0.00052
Silicon (Si), total	mg/L		2.44	2.31	1.53	1.91	2.11		2.06	2.07	2.17	2.4	2.43	2.45	2.48	2.63	2.43	2.02	1.5	1.21	1.62
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	0.000014	0.000013	<0.0000050
Sodium (Na), total	mg/L		0.925	0.717	0.321	0.469	0.515		0.48	0.654	0.724	0.829	0.886	0.867	0.905	0.911	0.773	0.48	0.35	0.244	0.406
Strontium (Sr), total	mg/L		0.155	0.129	0.0694	0.0789	0.0864		0.0779	0.0878	0.12	0.135	0.143	0.144	0.153	0.176	0.141	0.0853	0.0626	0.037	0.0573
Sulphur (S), total	mg/L		16.5	14.2	6.1	9.8	11.9		14.5	14.9	17.3	19.2	20.2	19.1	20	21.5	16.8	9.8	7.4	5	8.5
Thallium (Tl), total	mg/L	**0.0008**	0.000003	0.000004	0.000005	0.000003	0.000004		0.000009	0.000003	0.000003	<0.0000020	0.000003	0.000004	0.000003	0.000004	0.000005	0.0000104	0.00001	0.000011	0.000007
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		<0.00050	<0.00050	0.00259	0.00081	0.00115		0.0063	<0.00050	<0.00050	<0.00050	<0.00050	0.00051	<0.00050	<0.00050	<0.00050	0.0041	<0.0020	0.0021	0.00077
Uranium (U), total	mg/L	**0.015**	0.00545	0.00399	0.00114	0.00112	0.00133		0.00139	0.00193	0.00261	0.00323	0.00411	0.00478	0.0047	0.00558	0.00441	0.00175	0.00115	0.000683	0.00106
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		0.0003	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	*	0.0241	0.0227	**0.0279**	**0.0341**	**0.0422**		**0.118**	**0.0591**	**0.0391**	**0.0396**	0.0361	0.0333	0.0346	0.0379	**0.0373**	**0.0283**	**0.0233**	**0.0391**	**0.0402**
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00019	0.00012	0.00019	<0.00010
Aluminum (Al), dissolved	mg/L	*	0.00225	0.00295	0.0103	0.00349	0.00429		0.0221	0.00476	0.00281	0.00173	0.00152	0.0022	0.00164	0.00156	0.00527	0.0314	0.0261	0.0275	0.0115
Antimony (Sb), dissolved	mg/L		0.000031	0.000025	0.000027	0.000023	0.000026		0.000032	0.000026	0.000023	0.000022	0.000025	0.000037	0.000026	0.000043	0.00007	0.000044	0.000046	0.000029	0.000036
Arsenic (As), dissolved	mg/L		0.000082	0.000074	0.000087	0.000064	0.000071		0.000109	0.000072	0.000076	0.000058	0.000048	0.000073	0.000059	0.000046	0.000135	0.000118	0.000103	0.000105	0.000096
Barium (Ba), dissolved	mg/L		0.0776	0.0647	0.0386	0.0387	0.0454		0.0455	0.0548	0.0612	0.0716	0.0744	0.0729	0.0813	0.0822	0.073	0.0484	0.0387	0.025	0.0359
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.000201	0.00019	0.000144	**0.000205**	**0.000274**		**0.000542**	**0.000385**	**0.000261**	**0.000259**	**0.000266**	0.000255	0.00026	0.00027	**0.000252**	**0.000195**	**0.000172**	**0.000202**	**0.000232**
Calcium (Ca), dissolved	mg/L		44.6	36	22.3	23.3	29.7		28.4	35.3	36.8	39.4	43.2	44.3	48.2	50.5	40.6	22.6	19.6	12.2	20.5
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00011	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		0.000007	0.000007	0.000015	0.000007	0.000008		0.000106	0.000011	0.000008	0.000008	<0.0000050	0.00001	0.000006	0.000006	0.000015	0.0000313	0.000024	0.000025	0.000015
Copper (Cu), dissolved	mg/L		0.000929	0.00143	0.00241	0.000632	0.000748		0.0015	0.000648	0.000501	0.000498	0.00043	0.000467	0.000427	0.000487	0.00199	0.00618	0.00437	0.00298	0.002
Iron (Fe), dissolved	mg/L	**0.35**	0.0015	0.002	0.0068	0.0012	0.0012		0.0042	0.0011	<0.0010	<0.0010	<0.0010	0.0017	<0.0010	<0.0010	0.0074	0.0309	0.0212	0.0171	0.0062
Lead (Pb), dissolved	mg/L		0.000032	0.000023	0.000048	0.00001	0.000009		0.000058	0.000014	0.000018	0.00002	0.00001	0.000042	0.000018	0.00002	0.00004	0.000176	0.000114	0.000138	0.000049
Lithium (Li), dissolved	mg/L		0.00182	0.0016	0.00089	<0.00050	0.00076		0.0008	0.00094	0.00053	0.00135	0.00131	0.00133	0.00149	0.00161	0.00143	0.00117	0.00078	<0.00050	0.00063
Magnesium (Mg), dissolved	mg/L		7.38	5.76	2.31	2.13	2.49		2.45	3	3.83	5.18	5.97	6.55	6.79	7	6.44	4.21	2.41	1.15	2.07
Manganese (Mn), dissolved	mg/L		0.000091	0.000118	0.0003	0.000085	0.000133		0.00594	0.00017	<0.000050	<0.000050	<0.000050	0.000293	0.00007	0.000051	0.000256	0.000953	0.00079	0.00167	0.00064
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	0.000003	<0.0000020	<0.0000020		<0.0000020	<0.0000020	0.0000023	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000058	0.0000053	0.0000048	<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.000775	0.000674	0.000457	0.000581	0.000583		0.000555	0.000597	0.000581	0.000609	0.000647	0.000638	0.000687	0.000708	0.000628	0.000475	0.000434	0.000368	0.000495
Nickel (Ni), dissolved	mg/L		0.000275	0.000318	0.000459	0.000318	0.000363		0.000848	0.000498	0.000401	0.000363	0.000323	0.000384	0.000332	0.000304	0.000474	0.000771	0.000751	0.000634	0.000555
Phosphorus (P), dissolved	mg/L		<0.0020	0.003	<0.0020	<0.0020	<0.0020		0.0032	0.003	0.0027	0.0026	<0.0020	0.0036	0.0035	<0.0020	0.0032	0.0067	0.0069	0.0045	0.0054
Potassium (K), dissolved	mg/L		2.49	2.22	1.5	1.19	1.18		1.09	1.48	1.62	1.94	1.9	2.11	2.22	2.3	2.38	2.22	1.6	0.995	1.19
Selenium (Se), dissolved	mg/L		0.003	0.0024	0.000425	0.000442	0.000522		0.000427	0.000837	0.0011	0.00174	0.00213	0.00229	0.00269	0.00262	0.00258	0.00166	0.000608	0.000282	0.000539
Silicon (Si), dissolved	mg/L		2.43	2.22	1.73	1.76	2.27		1.73	2.35	2.16	2.31	2.36	2.3	2.38	2.27	2.23	1.89	1.43	1.07	1.57
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.0000050	<0.0000050	0.000014	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000099	0.000011	0.000009	<0.0000050
Sodium (Na), dissolved	mg/L		0.944	0.718	0.376	0.469	0.539		0.508	0.633	0.744	0.807	0.822	0.866	0.923	0.909	0.818	0.572	0.344	0.237	0.408
Strontium (Sr), dissolved	mg/L		0.151	0.128	0.064	0.0713	0.0812		0.0767	0.0998	0.113	0.125	0.14	0.144	0.147	0.155	0.131	0.0856	0.0629	0.0364	0.0618
Sulphur (S), dissolved	mg/L		17	14	6.9	10	12.5		14.1	16.3	17.1	17.7	19	19	19.4	19.9	16.3	10.2	7.1	4.6	8.4
Thallium (Tl), dissolved	mg/L		0.000003	0.000004	0.000005	0.000005	0.000004		0.000006	0.000002	0.000007	0.000004	0.000003	0.000003	0.000003	0.000004	0.000005	0.0000098	0.000009	0.000008	0.000006
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00069	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.00535	0.00388	0.00112	0.00112	0.0013		0.00132	0.00181	0.00251	0.00302	0.00388	0.00457	0.00478	0.00521	0.00437	0.00189	0.00112	0.000639	0.000997
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.0238	0.0226	0.0235	0.0306	0.0385		0.0974	0.0589	0.0381	0.0372	0.0333	0.0325	0.0346	0.0349	0.0345	0.0276	0.0241	0.0355	0.039
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0002	0.00014	0.00012	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6
			13-Jun-2017	20-Jul-2017	10-Aug-2017	14-Sep-2017	05-Oct-2017	02-Nov-2017	06-Dec-2017	09-Jan-2018	15-Feb-2018	21-Feb-2018	01-Mar-2018	07-Mar-2018	15-Mar-2018	18-Jul-1994	31-Aug-1994	03-Dec-1994	06-Apr-1995	08-May-1995	11-Jun-1995
Discharge (Flow)	L/s				52.3	22.6	16.2	11.8	5.2	4.4	5			8.6	4.8						
Total Suspended Solids	mg/L		1.4	4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.1	<1.0	<1.0	<1.0			<4	<4	16	<4
pH (field)	pH units	**6.5 - 9**	7.67	7.82	7.71	7.99	8	8.01	8.08	7.84	7.83	7.39	7.79	7.99	7.5						
pH (lab)	pH units	**6.5 - 9**	7.78	7.82	7.96	7.95	7.97	7.98	7.91	8.03	8.11	8.09	8.13	8	8.04	8.1	8.2	8	8.3	6.9	7.9
Specific Conductance (field)	µS/cm		134.5	158.6	183.9	292.8	265.9	244.1	423.1	344.1			225.1	244.3	280.3						
Specific Conductance (lab)	µS/cm		134	159	210	245	256	270	274	293	309	307	316	308	305	237	269	311	302	112	215
Temperature (field)	C		2.6	6.6	8.2	4.7	1.7	-0.3	-0.2	-0.1	-0.2	-0.1	-0.1	-0.2	-0.5						
Dissolved Oxygen (field)	mg/L	**6.5**	10.90	10.91	10.32	11.55	10.6	11.4	10.03	9.93	9.46	10.74	10.4	10.29	10.11						
Dissolved Oxygen (field)	%		80.0	89	103.8	106.3	91.2	91.1	81.2	81.2	77.1	73.2	71	70.1	68.2						
ORP (field)	mV		280.8	347.5	149.3	91.5	113.3	107	157.5	132.7	104.8	274.5	272.3	257	282.2						
Turbidity (internal)	NTU		0.67	0.96	0.26	0.26	0.06	0.31	1.71		1.312				1.16						
Hardness (from total)	mg/L		61.5	71.5	96.1	110	117	120	141	133	143	139	146	144	158	132	158	170	167	59.4	117
Hardness (from dissolved)	mg/L		56.3	73.4	96.6	107	113	125	141	134	145	145	149	157	147		167	171	167	35.7	114
Colour	TCU																				
Total Acidity	mg/L		<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0						
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0						
Alkalinity, total	mg/L		32.4	38.7	54.3	62.4	66.5	67.8	73.9	80.2	85.6	86.7	88.4	89.2	89	120	137	140	152	50.2	94.7
Alkalinity, bicarbonate HCO3	mg/L		39.5	47.2	66.3	76.1	81.1	82.7	90.2	97.8	104	106	108	109	109	120	137				
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50						
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50						
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5	<0.5				
Chloride	mg/L	**120**	0.55	<0.50	<0.50	<0.50	<0.50	0.66	0.9	<0.50	<0.50	<0.50	1.1	0.7	1.3						
Fluoride	mg/L	**0.12**	0.033	0.033	0.039	0.047	0.041	0.051	0.045	0.046	0.052	0.05	0.052	0.053	0.049						
Sulphate, dissolved	mg/L	*	30.3	35.3	47.6	57.4	59.1	66.3	67	63.9	76.8	67.2	65	65.3	66.6	18.9	18.3	20.7	19.8	11.5	15.3
Cyanide, total	mg/L	**0.005**	<0.00050	0.00062	0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00075	0.00062				<0.001	<0.001	<0.001
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	<0.00050	0.00075	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00082	<0.00050				<0.001	<0.001	<0.001
Ammonia (N)	mg/L	*	0.047	0.016	0.007	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.005	0.005	0.016			0.005	<0.005	<0.005	<0.005
Nitrite (N)	mg/L	**0.02**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020				<0.005	<0.005	<0.005
Nitrate (N)	mg/L	**3.0**	0.0776	0.0668	0.0605	0.104	0.116	0.146	0.162	0.181	0.186	0.186	0.185	0.179	0.177			0.15	0.2	<0.02	<0.02
Nitrite & Nitrate, as N	mg/L		0.0776	0.0668	0.0605	0.104	0.116	0.146	0.162	0.181	0.186	0.186	0.185	0.179	0.177			0.15	0.2	<0.02	0.02
Phosphorus,total-colourimetric	mg/L	**0.035**	0.0082	0.0023	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0067	<0.0020	0.0026	<0.0020	<0.0020			<0.003	<0.003	0.023	<0.003
Phosphorus, Total Dissolved	mg/L		0.003	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0029	0.0029	0.0093	0.0026	<0.0020	<0.0020	0.0027						
Dissolved Organic Carbon	mg/L		2.62	1.4	0.95	0.77	0.91	0.84	0.69	1.08	<0.50	0.79	0.84	<0.50	<0.50						
Aluminum (Al), total	mg/L	*	0.0312	0.0237	0.00849	0.00425	0.00342	0.00285	0.0243	0.00182	0.00165	0.00481	0.00527	0.00236	0.00351	<0.06	<0.06		<0.006	**0.24**	0.014
Antimony (Sb), total	mg/L	**0.009**	0.000027	0.000027	0.000038	0.000024	0.000027	0.000023	0.000031	0.000028	0.000023	0.000021	0.000027	0.000027	0.000032						
Arsenic (As), total	mg/L	**0.005**	0.000109	0.000094	0.000094	0.00008	0.000067	0.000065	0.000083	0.000073	0.000066	0.00009	0.000073	0.000074	0.000075				<0.00005	0.0007	<0.00005
Barium (Ba), total	mg/L		0.037	0.0411	0.0552	0.0672	0.0695	0.0715	0.0766	0.0629	0.0761	0.0768	0.0806	0.0735	0.0737	0.033	0.041	0.038	0.041	0.04	0.027
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010				<0.0001	<0.0001	<0.0001
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050				<0.002	<0.002	<0.002
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.05	<0.04	<0.04	0.019	0.026	<0.004
Cadmium (Cd), total	mg/L	*	**0.000296**	**0.000478**	**0.000279**	**0.000234**	**0.000217**	**0.000216**	**0.000249**	0.000192	**0.000229**	**0.000235**	**0.000243**	**0.000252**	**0.000268**				0.00003	0.00004	0.00003
Calcium (Ca), total	mg/L		21.3	24.9	32.7	37	39.1	39.3	45.9	42.8	46.1	44	46	45.6	49.9	45.1	53.5	58.5	57	20	40
Chromium (Cr), total	mg/L	**0.001**	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		**0.018**		0.0006	0.0008	0.0005
Cobalt (Co), total	mg/L		0.000031	0.0000302	0.0000104	0.000007	0.000008	0.000006	0.0000167	0.0000067	0.0000055	0.0000093	0.0000118	0.000009	0.0000072				<0.0004	<0.0004	<0.0004
Copper (Cu), total	mg/L	*	**0.00252**	0.0017	0.000828	0.000602	0.00062	0.000524	0.000545	0.000526	0.00043	0.000503	0.000546	0.000491	0.000526	<0.002	<0.002		0.0005	0.0023	0.0005
Iron (Fe), total	mg/L	**0.3**	0.0311	0.0145	0.0066	0.0017	0.0017	0.0017	0.0327	0.0013	0.0011	0.007	0.0112	0.0018	0.0054	0.1	0.13		0.022	**1.0**	0.027
Lead (Pb), total	mg/L	*	0.000161	0.000199	0.0000443	0.000021	0.000021	0.000104	0.0000264	0.0000155	0.0000162	0.0000278	0.000417	0.0000221	0.0000351				0.0004	<0.0001	0.0011
Lithium (Li), total	mg/L		0.00057	0.00071	0.00097	0.00116	0.001	0.00126	0.00151	0.00134	0.0014	0.00132	0.0016	0.00154	0.00138						
Magnesium (Mg), total	mg/L		2.02	2.24	3.51	4.41	4.8	5.21	6.37	6.41	6.75	7.05	7.49	7.31	8.13	4.64	5.95	5.8	6.1	2.3	4.1
Manganese (Mn), total	mg/L	*	0.0011	0.00137	0.000282	0.000067	0.000139	<0.000050	0.000427	0.000105	0.000066	0.000208	0.000367	0.000076	0.000173	0.008	0.007	0.003	0.0024	0.16	0.0011
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020				<0.00001	<0.00001	<0.00001
Molybdenum (Mo), total	mg/L	**0.073**	0.000533	0.000535	0.000595	0.000623	0.000638	0.000622	0.000754	0.000638	0.000699	0.000715	0.000799	0.000728	0.000663				<0.0004	<0.0004	<0.0004
Nickel (Ni), total	mg/L	*	0.000689	0.000701	0.000413	0.000332	0.000319	0.000311	0.00035	0.000248	0.000328	0.00033	0.0003	0.000296	0.000291				<0.001	0.001	<0.001

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-2	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6
			13-Jun-2017	20-Jul-2017	10-Aug-2017	14-Sep-2017	05-Oct-2017	02-Nov-2017	06-Dec-2017	09-Jan-2018	15-Feb-2018	21-Feb-2018	01-Mar-2018	07-Mar-2018	15-Mar-2018	18-Jul-1994	31-Aug-1994	03-Dec-1994	06-Apr-1995	08-May-1995	11-Jun-1995
Phosphorus (P), total	mg/L		0.0038	0.0035	0.0057	<0.0020	<0.0020	0.0025	0.0186	<0.0020	0.0023	0.0024	0.0024	<0.0020	0.0037				0.030	0.025	0.006
Potassium (K), total	mg/L		1.21	1.14	1.69	1.86	1.88	1.88	2.15	2.08	2.21	2.42	2.37	2.3	2.6	<0.6	0.8	0.6	1.0	1.8	0.62
Selenium (Se), total	mg/L	**0.002**	0.000745	0.000669	0.0012	0.0013	0.00146	0.00178	**0.00213**	**0.00225**	**0.00254**	**0.00236**	**0.00247**	**0.00263**	**0.00319**	<0.0005	<0.0005		0.0016	0.0002	<0.00005
Silicon (Si), total	mg/L		1.97	2.14	2.42	2.26	2.14	2.27	2.33	2.18	2.28	2.22	2.35	2.3	2.59	2	2.4	2.5	2.7	2	2.1
Silver (Ag), total	mg/L	**0.00025**	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050				<0.00001	0.00001	<0.00001
Sodium (Na), total	mg/L		0.484	0.494	0.715	0.771	0.792	0.803	0.986	0.946	0.902	1.02	1.13	1	1.1	0.7	0.7	0.6	0.74	0.65	0.54
Strontium (Sr), total	mg/L		0.0653	0.0742	0.104	0.129	0.131	0.131	0.154	0.137	0.161	0.147	0.164	0.157	0.146	0.12	0.149	0.138	0.14	0.056	0.1
Sulphur (S), total	mg/L		10.1	12.9	17.1	19.2	20	20.1	22.4	20.5	20.8	21	22.5	23	24.1	4.7	5.6	6.4	6.3	2.8	5
Thallium (Tl), total	mg/L	**0.0008**	0.000007	0.0000068	0.0000055	0.000004	0.000004	0.000003	0.0000036	0.0000028	0.0000026	0.0000031	0.0000031	0.0000029	0.0000033						
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020					<0.002	<0.002
Titanium (Ti), total	mg/L		0.00113	0.00109	<0.00050	<0.00050	<0.00050	<0.00050	0.00218	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.003	<0.003	<0.003	0.008	0.0085	0.0017
Uranium (U), total	mg/L	**0.015**	0.00103	0.00114	0.00177	0.00269	0.00305	0.00331	0.00409	0.00452	0.0053	0.00513	0.00517	0.00573	0.00481						
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020				<0.0003	0.0004	<0.0003
Zinc (Zn), total	mg/L	*	**0.0528**	**0.0796**	**0.0326**	**0.0241**	0.0241	0.0249	0.0282	0.0223	0.0289	0.0285	0.0287	0.0288	0.0329	<0.01	<0.01		0.007	**0.073**	0.01
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010				<0.0003	0.0003	<0.0003
Aluminum (Al), dissolved	mg/L	*	0.0151	0.0226	0.00774	0.00375	0.00362	0.00223	0.00216	0.003	0.00167	0.00498	0.00189	0.00161	0.00223		<0.02		0.009	0.021	0.013
Antimony (Sb), dissolved	mg/L		0.000022	0.00006	0.000076	<0.000020	0.000021	0.000023	0.000031	0.000037	0.00003	<0.000020	0.000026	0.000029	0.000038						
Arsenic (As), dissolved	mg/L		0.00009	0.000091	0.000081	0.00008	0.000065	0.000066	0.000079	0.000083	0.000075	0.00008	0.000088	0.000082	0.000078				<0.00005	0.0001	<0.00005
Barium (Ba), dissolved	mg/L		0.033	0.0419	0.0553	0.0673	0.0663	0.0698	0.0764	0.0709	0.0736	0.0758	0.0825	0.0804	0.0769		0.04	0.039	0.041	0.014	0.026
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010				<0.0001	<0.0001	<0.0001
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050				<0.002	<0.002	<0.002
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.008	<0.008		0.02	0.005
Cadmium (Cd), dissolved	mg/L	*	**0.000274**	**0.000459**	**0.000269**	**0.000237**	0.000211	0.000225	0.000258	0.000225	0.000252	0.000235	0.000238	0.000265	0.000294				0.00001	0.00004	0.00002
Calcium (Ca), dissolved	mg/L		19.5	25.5	33.1	36.3	37.2	41.3	45.7	42.9	46.5	46.2	47.6	49.7	46.7		57	58.3	57	11	39
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010				0.0004	0.0002	0.0005
Cobalt (Co), dissolved	mg/L		0.000018	0.000028	0.0000084	<0.0000050	0.000008	0.000005	0.0000089	0.0000075	0.0000058	0.000006	<0.0000050	0.000007	0.0000063				<0.0004	<0.0004	<0.0004
Copper (Cu), dissolved	mg/L		0.00246	0.00157	0.000818	0.000547	0.00057	0.000535	0.000633	0.00075	0.000573	0.000499	0.000257	0.000486	0.000629		<0.001		0.0005	0.0017	0.0005
Iron (Fe), dissolved	mg/L	**0.35**	0.0102	0.0053	0.0014	<0.0010	0.001	<0.0010	0.0011	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0012		0.022		0.008	0.008	0.015
Lead (Pb), dissolved	mg/L		0.00007	0.000131	0.0000223	0.000016	0.000018	0.000013	0.0000402	0.00004	0.0000322	0.0000243	0.0000546	0.0000219	0.0000286				0.0004	<0.0001	0.0007
Lithium (Li), dissolved	mg/L		0.00053	0.00069	0.00093	0.00123	0.00102	0.00124	0.00144	0.00141	0.0015	0.00134	0.00166	0.00169	0.0015						
Magnesium (Mg), dissolved	mg/L		1.84	2.36	3.41	3.95	4.88	5.28	6.45	6.45	6.99	7.2	7.44	7.9	7.42		6.03	6.2	6	2	4
Manganese (Mn), dissolved	mg/L		0.000366	0.00109	0.000096	<0.000050	0.000065	<0.000050	0.000217	0.000101	0.000061	<0.000050	0.000113	<0.000050	0.000121		0.004	<0.002	0.0006	0.0073	0.0005
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020				<0.00001	<0.00001	<0.00001
Molybdenum (Mo), dissolved	mg/L		0.000505	0.000575	0.000587	0.00062	0.000604	0.000648	0.000733	0.00072	0.000682	0.000728	0.000716	0.000786	0.000754				<0.0004	0.0004	<0.0004
Nickel (Ni), dissolved	mg/L		0.000604	0.000681	0.000416	0.000278	0.000302	0.00032	0.000331	0.000278	0.000329	0.000326	0.000328	0.000286	0.00033				<0.001	<0.001	<0.001
Phosphorus (P), dissolved	mg/L		0.0031	0.0024	0.0035	<0.0020	<0.0020	<0.0020	0.0048	0.0043	0.0023	0.0042	0.0028	0.0029	0.0087				0.031	0.008	0.011
Potassium (K), dissolved	mg/L		1.13	1.17	1.71	1.69	1.84	1.92	2.26	2.17	2.36	2.36	2.45	2.58	2.43		0.9	0.7	0.97	1.7	0.59
Selenium (Se), dissolved	mg/L		0.000661	0.000652	0.00115	0.00135	0.00136	0.00196	0.00213	0.00237	0.00247	0.0024	0.00255	0.00271	0.00302		<0.0005		0.00065	0.0002	<0.00005
Silicon (Si), dissolved	mg/L		1.64	2.1	2.35	2.42	2.05	2.44	2.37	2.09	2.19	2.16	2.37	2.42	2.4		2.56	2.74	2.5	2.2	2.1
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050				<0.00001	<0.00001	<0.00001
Sodium (Na), dissolved	mg/L		0.439	0.528	0.705	0.702	0.813	0.842	1.02	1.09	1.03	1.02	1.19	1.02	1.29		0.72	0.67	0.78	0.64	0.56
Strontium (Sr), dissolved	mg/L		0.0601	0.0794	0.104	0.118	0.128	0.132	0.155	0.133	0.162	0.147	0.16	0.161	0.17		0.149	0.146	0.14	0.04	0.099
Sulphur (S), dissolved	mg/L		9	12.6	16	17.6	20	20.3	22.6	22.3	24.5	21.7	22.6	23.1	21.3		5.98	6.65	6.3	2.8	4.9
Thallium (Tl), dissolved	mg/L		0.000006	0.000006	0.0000059	0.000004	0.000004	0.000004	0.0000042	0.0000031	0.0000023	0.000003	0.0000045	0.0000034	0.0000038						
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020				<0.002	<0.002	<0.002
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		<0.003	<0.003	0.0023	0.0005	0.0015
Uranium (U), dissolved	mg/L		0.000956	0.00109	0.00176	0.00264	0.00298	0.00354	0.00411	0.00494	0.00502	0.00512	0.00583	0.00528	0.00481						
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020				<0.0003	<0.0003	<0.0003
Zinc (Zn), dissolved	mg/L		0.0503	0.0766	0.0317	0.0219	0.0236	0.0265	0.029	0.023	0.0292	0.0279	0.0304	0.0279	0.033		<0.002		0.007	0.001	0.006
Zirconium (Zr), dissolved	mg/L		<0.00010	0.00014	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010				<0.0003	0.0006	0.0003

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6
			22-Aug-1995	13-Sep-1995	02-Dec-2015	20-Jan-2016	20-Apr-2016	05-May-2016	14-May-2016	14-Jun-2016	27-Jul-2016	27-Aug-2016	08-Sep-2016	03-Oct-2016	16-Nov-2016	20-Dec-2016	16-Jan-2017	23-Feb-2017	21-Mar-2017	30-Apr-2017	18-May-2017
Discharge (Flow)	L/s				10.3	5.1	3.5	7.8		46.2	18.3	57.7	62.8	51.7	14.9	7.2	5.7	3.3		1.7	97.9
Total Suspended Solids	mg/L		<4	<4	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	1.5	3.9	<1.0	<1.0	1.1	1.8	4.4	<1.1	1	2.7
pH (field)	pH units	**6.5 - 9**			7.98	7.73	8.07	7.69	8.09	8.35	8.16	8.03	8.08	8.04	7.84	7.84	7.8	7.7	7.8	8.13	8.38
pH (lab)	pH units	**6.5 - 9**	8.1	8	8.25	8.16	8.31	8.15	8.31	8.25	8.27	8.17	8.26	7.99	8.26	8.12	8.2	8.19	8.02	8.26	7.64
Specific Conductance (field)	µS/cm				323.7	331.7	256.8	226.3	227.3	241.7	291.2	267.7	261.1	265.9	286.5	314.3	318.6	338.4	308.7	323	95.7
Specific Conductance (lab)	µS/cm		293	208	327	340	308	227	256	252	294	229	281	298	329	330	322	338	334	323	102
Temperature (field)	C				0.1	0	0.2	0.3	2.7	7.2	8.9	7.7	5	0.7	-0.1	0	0	-0.2	-0.1	-0.1	0.1
Dissolved Oxygen (field)	mg/L	**6.5**			10.6	11.1	12.03	12.82	10.17	10.13	9.78	9.56	10.05	10.85	12.16	11.28	11.48	10.48	11.25	11.39	10.7
Dissolved Oxygen (field)	%				88	90	97	104.1	98.9	99.7	99.2	95.3	92.8	89.7	98.2	94.7	96.5	84.1	91.7	92.1	86
ORP (field)	mV				125.2	292.9	83.3	118.8	123.7	97.8	89.9	261.5	105.4	119	117	107.5	163.4	125.9	147.2	254	376
Turbidity (internal)	NTU				0.75	0.27	0.244	0.10		0.226	0.4	0.936	0.26	0.158	-0.114	0.338	0.756	7.388	0.356	0.724	1.042
Hardness (from total)	mg/L		156	173	166	183	167	118	131	132	155	123	138	154	179	177	182	177	181	145	52.8
Hardness (from dissolved)	mg/L		156	167	165	183	168	111	136	126	159	118	147	155	162	178	174	179	179	165	47.6
Colour	TCU				5.1	<5.0	11.7	23.2	11.1			19.7									
Total Acidity	mg/L				<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.79	<0.50	<0.50
Acidity (pH 4.5)	mg/L				<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		132	137	147	160	142	103	119	117	139	120	124	132	150	155	150	156	154	154	42.3
Alkalinity, bicarbonate HCO3	mg/L		161	167	180	195	172	125	143	143	170	147	151	161	183	189	182	190	188	188	51.6
Alkalinity, hydroxide OH	mg/L		<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.5	<0.5	<0.50	<0.50	0.76	<0.50	1.15	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.5	<0.5	<0.50	<0.50	0.63	<0.50	0.96	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**			<0.50	<0.50	1	0.95	0.63	0.74	0.51	0.98	0.67	0.71	0.57	<0.50	<0.50	0.61	0.5	0.99	1.2
Fluoride	mg/L	**0.12**			0.055	0.066	0.06	0.051	0.064	0.054	0.06	0.051	0.06	0.06	0.07	0.068	0.065	0.074	0.074	0.077	0.029
Sulphate, dissolved	mg/L	*	15.3	16.9	23.6	23.9	20.6	15.2	20	17.6	20	13.8	25	23.5	25.1	27.9	23.9	25.1	24.8	24.4	<0.50
Cyanide, total	mg/L	**0.005**	0.001	<0.001	<0.00050	<0.00050	<0.00050	0.00064	0.00051	0.00108	<0.00050	<0.00050	0.00077	<0.00050	0.00051	<0.00050	<0.00050	<0.00050	<0.00050	0.00063	0.0013
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	<0.001	<0.001	<0.00050	<0.00050	<0.00050	0.00052	<0.00050	0.00059	<0.00050	<0.00050	0.00087	<0.00050	0.00062	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00094
Ammonia (N)	mg/L	*	<0.005	0.005	0.0116	0.0117	0.0069	<0.0050	<0.0050	0.0077	0.022	0.015	0.011	0.011	0.025	0.058	0.026	0.032	0.026	0.024	0.029
Nitrite (N)	mg/L	**0.02**	<0.005	<0.005	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0023
Nitrate (N)	mg/L	**3.0**	<0.02	0.04	0.138	0.173	0.129	0.0604	0.0605	0.012	0.0119	0.0046	0.0248	0.0813	0.161	0.182	0.178	0.211	0.214	0.204	0.0209
Nitrite & Nitrate, as N	mg/L		<0.02	0.04	0.138	0.173	0.129	0.0604	0.0605	0.012	0.0119	0.0046	0.0248	0.0813	0.161	0.182	0.178	0.211	0.214	0.204	0.0232
Phosphorus,total-colourimetric	mg/L	**0.035**	<0.003	<0.003	0.0022	0.0028	0.0025	0.0058	0.004	0.0039	0.0029	0.0065	0.0039	0.0045	<0.0020	0.0036	0.0043	0.0029	0.0026	0.0047	0.0246
Phosphorus, Total Dissolved	mg/L				0.0026	0.0027	0.0024	0.006	0.0034	0.0035	0.0027	0.0071	0.0024	0.0023	<0.0020	0.0051	0.0043	0.0034	0.0034	0.0048	0.0178
Dissolved Organic Carbon	mg/L				1.35	1.27	2.57	4.97	2.48	1.12	2.2	3.67	2.13	1.55	1.04	1.09	0.84	<0.50	0.73	1.82	13.4
Aluminum (Al), total	mg/L	*	0.013	0.008	0.00117	0.00758	0.00809	0.0095	0.008	0.0271	<0.015	0.00837	0.0051	0.00504	0.00129	0.00511	0.00869	0.00351	0.00267	0.0123	**0.179**
Antimony (Sb), total	mg/L	**0.009**			<0.000020	<0.000020	<0.000020	<0.000050	<0.000050	<0.000020	<0.00010	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000046	<0.000020	<0.000020	0.000054	<0.000020
Arsenic (As), total	mg/L	**0.005**	<0.00005	<0.00005	0.000069	0.000086	0.000147	0.000109	0.000105	0.000133	<0.00010	0.000101	0.000077	0.000077	0.000062	0.000077	0.000078	0.00007	0.000083	0.000114	0.000142
Barium (Ba), total	mg/L		0.04	0.042	0.0446	0.054	0.0494	0.0363	0.0422	0.0372	0.0475	0.035	0.0365	0.0388	0.0495	0.0493	0.0492	0.0486	0.0519	0.052	0.0248
Beryllium (Be), total	mg/L		<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000050	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000015
Bismuth (Bi), total	mg/L		<0.002	<0.002	<0.0000050	<0.0000050	<0.0000050	<0.000020	<0.000020	<0.0000050	<0.000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.000010
Boron (B), total	mg/L	**1.5**	0.008	0.016	<0.010	<0.010	<0.010	<0.050	<0.050	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*	<0.00001	0.00002	0.000009	0.000036	0.00003	0.00002	0.000021	0.000033	0.000029	0.00002	0.000015	0.000013	0.000009	0.000021	0.000039	0.000023	0.000028	0.000026	**0.000135**
Calcium (Ca), total	mg/L		53	59	55.1	60.6	55.7	39.1	42.8	44.9	51.4	41.2	45.5	51.1	59.6	59	60.2	58.6	60.9	47.2	17.1
Chromium (Cr), total	mg/L	**0.001**	0.0006	0.0006	<0.00010	<0.00010	<0.00010	<0.00050	<0.00050	<0.00010	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00014	0.00019
Cobalt (Co), total	mg/L		<0.0004	<0.0004	0.000008	0.000018	0.000027	0.000019	0.000017	0.000053	<0.000050	0.00002	0.000015	0.000014	0.000006	0.00001	0.000014	0.00001	0.000007	0.000022	0.000153
Copper (Cu), total	mg/L	*	0.0003	0.0008	0.000103	0.000174	0.000525	0.0008	0.00061	0.000353	0.00062	0.000392	0.000214	0.000147	0.00011	0.000107	0.000359	0.000114	0.000112	0.0003	0.00151
Iron (Fe), total	mg/L	**0.3**	0.037	0.021	0.0087	0.0932	0.0516	0.0378	0.0274	0.281	0.06	0.0805	0.0414	0.0578	0.0125	0.0544	0.0611	0.0213	0.0159	0.0339	**0.304**
Lead (Pb), total	mg/L	*	<0.0001	0.0002	<0.0000050	0.000027	0.000045	<0.000050	<0.000050	0.000128	<0.00010	0.000015	0.000008	0.000011	<0.0000050	0.000014	0.000698	0.00001	0.000158	<0.000020	0.000086
Lithium (Li), total	mg/L				0.00072	0.00081	0.00105	0.00081	0.00058	0.00066	<0.0025	0.0006	0.0009	0.00065	0.00079	0.0008	0.0008	0.00078	0.00078	0.00065	<0.00050
Magnesium (Mg), total	mg/L		5.8	6.2	7.04	7.74	6.91	4.95	5.94	4.94	6.4	4.99	5.98	6.35	7.31	7.21	7.69	7.34	7.03	6.52	2.45
Manganese (Mn), total	mg/L	*	0.0025	0.0013	0.000105	0.0148	0.0081	0.00175	0.00307	0.0442	0.00447	0.00957	0.00556	0.0107	0.000372	0.00642	0.00921	0.00285	0.0025	0.0059	0.0564
Mercury (Hg), total	mg/L	**0.000026**	<0.00001	<0.00001	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000067
Molybdenum (Mo), total	mg/L	**0.073**	<0.0004	<0.0004	0.00057	0.000629	0.000652	0.000506	0.000519	0.000367	0.00044	0.000304	0.000362	0.000431	0.00056	0.000583	0.000606	0.000632	0.000703	0.000685	0.000171
Nickel (Ni), total	mg/L	*	<0.001	<0.001	0.00012	0.000176	0.000339	0.00043	0.00032	0.000281	<0.00050	0.000315	0.000195	0.000171	0.000122	0.000157	0.000199	0.000146	0.000126	0.00026	0.00094

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6
			22-Aug-1995	13-Sep-1995	02-Dec-2015	20-Jan-2016	20-Apr-2016	05-May-2016	14-May-2016	14-Jun-2016	27-Jul-2016	27-Aug-2016	08-Sep-2016	03-Oct-2016	16-Nov-2016	20-Dec-2016	16-Jan-2017	23-Feb-2017	21-Mar-2017	30-Apr-2017	18-May-2017
Phosphorus (P), total	mg/L		0.005	<0.004	0.0034	0.0061	0.003	<0.010	<0.010	0.0089	<0.025	0.0033	0.0026	0.0021	<0.0020	0.0036	0.0068	0.0066	0.0038	0.006	0.0359
Potassium (K), total	mg/L		0.79	0.98	0.936	1.08	1.52	1.41	1.17	0.57	<1.3	0.754	0.691	0.728	0.869	0.869	0.927	0.97	1.03	1.11	2.08
Selenium (Se), total	mg/L	**0.002**	<0.00005	0.0001	0.00108	0.00124	0.00122	0.000797	0.000822	0.00043	0.00051	0.000333	0.000619	0.000699	0.0011	0.00108	0.00121	0.0013	0.00138	0.00106	0.000446
Silicon (Si), total	mg/L		2.7	2.7	3.36	3.19	3.31	2.53	2.54	2.42	2.75	2.54	2.55	2.57	3.33	3.1	3.17	2.95	2.82	2.92	1.88
Silver (Ag), total	mg/L	**0.00025**	<0.00001	<0.00001	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.000010
Sodium (Na), total	mg/L		0.74	0.81	0.76	0.819	0.732	0.49	0.6	0.54	<1.3	0.606	0.665	0.676	0.739	0.72	0.74	0.749	0.729	0.7	0.28
Strontium (Sr), total	mg/L		0.14	0.15	0.166	0.19	0.17	0.117	0.135	0.133	0.158	0.124	0.127	0.152	0.179	0.176	0.173	0.175	0.198	0.162	0.0585
Sulphur (S), total	mg/L		6.1	6.8	8.4	8.5	6.9	<15	<15	6.2	<15	4.8	7.8	8.3	8.3	8.3	8.5	8.5	8.6	6.9	3.4
Thallium (Tl), total	mg/L	**0.0008**			<0.0000020	<0.0000020	<0.0000020	0.000002	0.000002	<0.0000020	<0.000010	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000033
Tin (Sn), total	mg/L		<0.002	<0.002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		0.0017	0.0018	<0.00050	<0.00050	<0.00050	<0.0050	<0.0050	0.00109	<0.010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0020	<0.0020
Uranium (U), total	mg/L	**0.015**			0.00111	0.00135	0.00127	0.000691	0.000915	0.00067	0.000785	0.000439	0.000676	0.000891	0.00116	0.00115	0.00131	0.00127	0.00125	0.00137	0.0002
Vanadium (V), total	mg/L		<0.0003	<0.0003	<0.00020	<0.00020	<0.00020	<0.00050	<0.00050	<0.00020	<0.0010	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	*	0.001	0.002	0.00018	0.00131	0.00101	<0.0010	<0.0010	0.0014	<0.0050	0.00089	0.00058	0.00067	0.00017	0.00063	0.00288	0.00084	0.00113	<0.0010	0.0051
Zirconium (Zr), total	mg/L		0.0011	0.0004	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00012
Aluminum (Al), dissolved	mg/L	*	0.01	0.008	0.00108	0.00209	0.00428	0.00654	0.00441	0.00367	0.00288	0.00465	0.00347	0.00244	0.00177	0.0014	0.00335	0.00185	0.00152	0.00702	**0.138**
Antimony (Sb), dissolved	mg/L				<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000035	<0.000020	0.000047	<0.000020	<0.000020
Arsenic (As), dissolved	mg/L		0.00008	<0.00005	0.000066	0.000094	0.000086	0.000081	0.000096	0.000079	0.000075	0.000093	0.000087	0.000059	0.000074	0.000061	0.000096	0.000073	0.000067	0.000049	0.000102
Barium (Ba), dissolved	mg/L		0.039	0.041	0.0445	0.051	0.0503	0.0359	0.0406	0.0366	0.0436	0.034	0.0403	0.0387	0.0483	0.0481	0.0483	0.0502	0.0503	0.0529	0.0213
Beryllium (Be), dissolved	mg/L		<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000012
Bismuth (Bi), dissolved	mg/L		<0.002	<0.002	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		0.009	0.008	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	<0.00001	0.00002	0.00001	0.000016	0.000013	0.000011	0.00001	0.00001	0.00001	0.000012	0.000008	0.000009	0.000014	0.000015	0.000023	0.000016	0.000021	0.000019	0.0000731
Calcium (Ca), dissolved	mg/L		53	57	54.8	60.9	55.7	36.6	44.7	42.2	53.3	39.2	49.5	51.4	53.3	59.1	57.2	59.1	60	55	15
Chromium (Cr), dissolved	mg/L		0.0006	0.0007	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00013
Cobalt (Co), dissolved	mg/L		<0.0004	<0.0004	0.000006	0.000006	0.000018	0.000018	0.000013	0.000009	0.000006	0.000015	0.000011	0.000009	0.000009	<0.0000050	0.000007	0.000006	0.000005	0.000016	0.000097
Copper (Cu), dissolved	mg/L		0.0004	0.0005	0.000105	0.000155	0.000503	0.000579	0.000437	0.000195	0.000205	0.000345	0.000199	0.000115	0.000146	0.000099	0.000205	0.000104	0.000128	0.000245	0.00108
Iron (Fe), dissolved	mg/L	**0.35**	0.016	0.015	0.0083	0.0024	0.0098	0.0234	0.0093	0.0073	0.008	0.0193	0.011	0.0084	0.0084	0.007	0.0099	0.002	0.0025	0.0089	0.137
Lead (Pb), dissolved	mg/L		<0.0001	0.0002	<0.0000050	0.000016	<0.0000050	<0.0000050	<0.0000050	0.000009	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000013	<0.0000050	0.00043	<0.0000050	0.000005	<0.0000050	0.0000187
Lithium (Li), dissolved	mg/L				0.00082	0.00056	0.00092	<0.00050	0.00054	<0.00050	0.0007	<0.00050	0.00104	<0.00050	0.00093	0.0008	0.00079	0.00073	0.00077	0.00082	<0.00050
Magnesium (Mg), dissolved	mg/L		5.7	5.9	6.92	7.46	6.93	4.77	5.88	5	6.16	4.76	5.69	6.4	6.99	7.38	7.67	7.67	7.19	6.75	2.45
Manganese (Mn), dissolved	mg/L		0.0011	0.0011	0.000077	0.000104	0.000178	0.000225	0.000225	0.000281	<0.000050	0.000677	0.00162	0.000729	0.000436	0.000411	0.00111	0.000266	0.000465	0.00181	0.0236
Mercury (Hg), dissolved	mg/L		<0.00001	<0.00001	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000069
Molybdenum (Mo), dissolved	mg/L		<0.0004	<0.0004	0.000585	0.000636	0.000675	0.00049	0.000533	0.000388	0.000419	0.0003	0.000372	0.000442	0.000516	0.000559	0.000628	0.000642	0.000672	0.000713	0.000156
Nickel (Ni), dissolved	mg/L		<0.001	<0.001	0.000126	0.000122	0.000298	0.00041	0.000308	0.000196	0.000193	0.00027	0.000189	0.000144	0.000159	0.000134	0.000198	0.000126	0.00013	0.000228	0.000772
Phosphorus (P), dissolved	mg/L		<0.004	<0.004	<0.0020	<0.0020	0.0051	0.0068	<0.0020	0.0055	<0.0020	<0.0020	<0.0020	0.0031	0.0034	0.0051	0.0054	0.0081	0.003	0.0043	0.0213
Potassium (K), dissolved	mg/L		0.78	0.93	0.916	1.04	1.51	1.43	1.22	0.575	0.587	0.738	0.749	0.705	0.855	0.881	0.93	0.995	1.01	1.15	1.99
Selenium (Se), dissolved	mg/L		<0.00005	0.00008	0.00114	0.00119	0.00121	0.000811	0.000686	0.000395	0.000511	0.000301	0.000551	0.000651	0.000934	0.00106	0.00116	0.00137	0.00136	0.00133	0.000403
Silicon (Si), dissolved	mg/L		2.6	2.6	3.4	3.16	3.13	2.37	2.43	2.2	2.9	2.47	2.73	2.57	2.81	3	2.96	2.93	2.69	3.12	1.75
Silver (Ag), dissolved	mg/L		<0.00001	<0.00001	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000067
Sodium (Na), dissolved	mg/L		0.73	0.78	0.741	0.793	0.737	0.488	0.604	0.577	0.686	0.607	2.45	1.26	0.727	0.724	0.741	0.807	0.746	0.727	0.287
Strontium (Sr), dissolved	mg/L		0.14	0.15	0.166	0.185	0.166	0.114	0.133	0.13	0.146	0.12	0.15	0.141	0.166	0.174	0.161	0.18	0.166	0.172	0.0497
Sulphur (S), dissolved	mg/L		6	6.5	8	8.4	6.9	5.4	6.1	6	6.4	4.6	7.8	8	7.8	8.3	7.6	8.6	7.5	7.8	3
Thallium (Tl), dissolved	mg/L				<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000005	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000002	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L			<0.002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		0.0016	0.0017	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00131
Uranium (U), dissolved	mg/L				0.00116	0.00132	0.00129	0.000666	0.00087	0.000642	0.000774	0.000424	0.000675	0.000873	0.00103	0.00117	0.00124	0.00132	0.00128	0.00137	0.000167
Vanadium (V), dissolved	mg/L		<0.0003	<0.0003	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.002	0.002	0.00016	0.00052	0.00061	0.00056	0.0004	0.0003	<0.00010	0.00036	0.00031	0.0003	0.00082	0.00047	0.0027	0.00117	0.00074	0.00059	0.00302
Zirconium (Zr), dissolved	mg/L		<0.0003	<0.0003	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00015

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7
			26-May-2017	01-Jun-2017	07-Jun-2017	13-Jun-2017	19-Jul-2017	10-Aug-2017	14-Sep-2017	05-Oct-2017	02-Nov-2017	05-Dec-2017	09-Jan-2018	15-Feb-2018	15-Mar-2018	18-Jul-1994	31-Aug-1994	02-Dec-1994	06-Apr-1995	11-Jun-1995	15-Aug-1995
Discharge (Flow)	L/s				48.5			77.7	20.5	15.5	9.9		4.4									
Total Suspended Solids	mg/L		1.3	<1.0	<1.0	4	1.8	<1.0	<1.0	1.1	<1.0	1.2	5.1	1	<1.0			<4	5	<4	<4
pH (field)	pH units	**6.5 - 9**	8.03	7.94	8.03	8.10	8.29	7.96	7.88	7.93	7.82	7.75	7.79	7.69	7.3						
pH (lab)	pH units	**6.5 - 9**	7.78	7.76	8.14	8.14	8.21	8.27	8.27	8.26	8.3	8.24	8.23	8.34	8.34	7.9	8.1	7.8	8	7.5	7.5
Specific Conductance (field)	µS/cm		119.7	114.6	188.4	165.5	223.3	237.8	351	301.9	288.2	303.6	385.6		293.8						
Specific Conductance (lab)	µS/cm		120	113	198	166	224	273	294	295	314	323	329	337	328	188	231	332	337	168	266
Temperature (field)	C		3.1	4.9	5.3	5.2	8.4	8.4	3.9	1.9	-0.3	-0.4	-0.1	0	-0.5						
Dissolved Oxygen (field)	mg/L	**6.5**	10.95	7.96	10.7	10.10	11	10.3	11.2	10.67	11.72	9.79	10.1	9.21	9.32						
Dissolved Oxygen (field)	%		81.6	62.2	100	79.7	93.8	103.2	99.8	91.7	92.8	77.6	82.2	75.1	62.9						
ORP (field)	mV		297.2	302.8	362.6	307.5	327.2	157.7	96.4	113.2	69	118.2	99.9	101.3	258.6						
Turbidity (internal)	NTU		1.25	0.74	0.53		1.51	0.52	0.39	0.06	0.25	1.74		1.414	1.028						
Hardness (from total)	mg/L		58.6	56.5	96.7	82.6	114	141	150	146	161	180	168	166	144	102	131	182	185	84.8	134
Hardness (from dissolved)	mg/L		58.9	56.3	96.1	79.4	114	139	153	130	159	176	164	168	164		135	180	179	81.4	139
Colour	TCU																				
Total Acidity	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1						
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0						
Alkalinity, total	mg/L		50.7	49.4	86.6	71.4	99.4	127	139	139	146	151	154	150	153	85.3	106	146	160	62.5	123
Alkalinity, bicarbonate HCO3	mg/L		61.8	60.2	106	87.1	121	154	170	170	178	184	188	178	184	85.3	106				150
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50						<0.5
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.17	1.19						<0.5
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.81	0.99	<0.5	<0.5				<0.5
Chloride	mg/L	**120**	0.74	0.6	0.56	0.56	<0.50	<0.50	0.6	0.91	0.5	0.96	<0.50	0.79	0.51						
Fluoride	mg/L	**0.12**	0.035	0.037	0.045	0.045	0.052	0.059	0.068	0.063	0.07	0.069	0.074	0.075	0.073						
Sulphate, dissolved	mg/L	*	4.86	3.56	14.7	12.7	17.6	21.5	21.3	21.4	23.1	23.6	23.8	26.7	23.7	21.5	22.9	31.7	29.5	19.8	28.9
Cyanide, total	mg/L	**0.005**	0.00094	0.00076	0.00073	0.00054	<0.00050	0.00057	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00062	0.00057				<0.001	<0.001	<0.001
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	0.00084	0.00059	<0.00050	0.00062	0.00073	0.00054	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00085	<0.00050				<0.001	<0.001	<0.001
Ammonia (N)	mg/L	*	0.011	0.024	0.01	0.065	0.015	0.01	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.007	0.013			0.005	0.074	<0.005	0.006
Nitrite (N)	mg/L	**0.02**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020				<0.005	<0.005	<0.005
Nitrate (N)	mg/L	**3.0**	0.0205	0.0107	0.0237	0.0056	0.0069	0.0246	0.0567	0.0711	0.13	0.164	0.184	0.141	0.162			0.14	0.14	<0.02	0.05
Nitrite & Nitrate, as N	mg/L		0.0205	0.0107	0.0237	0.0056	0.0069	0.0246	0.0567	0.0711	0.13	0.164	0.184	0.141	0.162			0.14	0.14	<0.02	0.05
Phosphorus,total-colourimetric	mg/L	**0.035**	0.0212	0.0099	0.0052	0.0075	0.0036	0.0028	<0.0020	0.0021	0.0154	0.0039	0.0037	0.0252	0.0025			<0.003	<0.003	<0.003	0.005
Phosphorus, Total Dissolved	mg/L		0.0187	0.0099	0.0062	0.0031	0.0029	0.0033	<0.0020	0.0031	0.0034	0.0049	0.0032	0.0064	0.0028						
Dissolved Organic Carbon	mg/L		8.4	5.28	2.59	3.55	3.1	2.2	1.77	1.42	0.96	1.29	1.43	1.19	0.52						
Aluminum (Al), total	mg/L	*	0.0525	0.0297	0.0173	**0.116**	0.0159	0.0104	0.00338	0.00295	0.00378	0.0285	0.0129	0.01	0.00322	<0.06	<0.06		0.018	0.036	0.016
Antimony (Sb), total	mg/L	**0.009**	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000029	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000024	0.000027						
Arsenic (As), total	mg/L	**0.005**	0.000108	0.000102	0.000105	0.000155	0.000085	0.00012	0.000067	0.000074	0.00007	0.000105	0.000101	0.000084	0.000101				0.0003	0.0003	<0.00005
Barium (Ba), total	mg/L		0.0202	0.0189	0.0283	0.0253	0.0321	0.0407	0.0448	0.0385	0.043	0.0505	0.048	0.0531	0.0474	0.058	0.075	0.07	0.11	0.045	0.061
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010				<0.0001	<0.0001	<0.0001
Bismuth (Bi), total	mg/L		<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050				<0.002	<0.002	<0.002
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.04	<0.04	<0.04	0.012	0.019	0.019
Cadmium (Cd), total	mg/L	*	0.000023	0.000016	0.000016	0.000029	0.0000161	0.0000174	0.000018	0.000016	0.000016	0.0000512	0.0000394	0.000196	0.000149				0.00008	0.00006	0.00002
Calcium (Ca), total	mg/L		19.3	18.7	31.8	27.5	38.1	47.3	49.7	48.2	53.3	60	55.3	54.3	45.6	35	44.2	62.6	62	29	46
Chromium (Cr), total	mg/L	**0.001**	<0.00010	<0.00010	<0.00010	0.00031	<0.00010	<0.00010	<0.00010	<0.00010	0.00021	0.00016	<0.00010	0.00011	<0.00010				**0.0049**	0.0006	**0.003**
Cobalt (Co), total	mg/L		0.000046	0.000028	0.000021	0.000123	0.0000284	0.0000188	0.000009	0.00001	0.000007	0.0000454	0.0000318	0.0000218	0.0000101				0.0004	<0.0004	<0.0004
Copper (Cu), total	mg/L	*	0.00089	0.00069	0.000533	0.000822	0.000326	0.000233	0.000179	0.00017	0.000176	0.00029	0.000216	0.000544	0.000324	<0.002	<0.002		0.0003	0.0011	0.0006
Iron (Fe), total	mg/L	**0.3**	0.11	0.0613	0.0519	0.179	0.0478	0.0579	0.0293	0.0248	0.024	0.166	0.0888	0.0268	0.0077	**0.42**	0.28		**1.4**	0.3	0.26
Lead (Pb), total	mg/L	*	0.000038	0.000016	0.000022	0.000272	0.0000246	0.000016	0.000005	<0.0000050	0.000262	0.0000738	0.0000567	0.0000972	0.0000214				0.001	0.0009	0.001
Lithium (Li), total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00056	0.00074	<0.00050	0.00069	0.00088	0.00087	0.0008	0.00051						
Magnesium (Mg), total	mg/L		2.54	2.36	4.2	3.38	4.53	5.63	6.4	6.17	6.88	7.35	7.25	7.33	7.21	3.58	4.97	6.34	7.3	3	4.6
Manganese (Mn), total	mg/L	*	0.0118	0.00531	0.00401	0.0103	0.00476	0.00457	0.00174	0.00186	0.00253	0.0259	0.0145	0.00431	0.00139	0.05	0.04	0.017	0.36	0.032	0.048
Mercury (Hg), total	mg/L	**0.000026**	0.0000045	0.0000025	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020				<0.00001	<0.00001	<0.00001
Molybdenum (Mo), total	mg/L	**0.073**	0.000254	0.000256	0.000337	0.000259	0.000305	0.000434	0.000483	0.000455	0.000522	0.000602	0.00061	0.000728	0.000738				<0.0004	<0.0004	0.0004
Nickel (Ni), total	mg/L	*	0.00063	0.000567	0.00039	0.000691	0.000276	0.000211	0.000173	0.00017	0.000156	0.000275	0.000206	0.000271	0.000175					<0.001	0.001

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-6	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7
			26-May-2017	01-Jun-2017	07-Jun-2017	13-Jun-2017	19-Jul-2017	10-Aug-2017	14-Sep-2017	05-Oct-2017	02-Nov-2017	05-Dec-2017	09-Jan-2018	15-Feb-2018	15-Mar-2018	18-Jul-1994	31-Aug-1994	02-Dec-1994	06-Apr-1995	11-Jun-1995	15-Aug-1995
Phosphorus (P), total	mg/L		0.0219	0.0111	0.0074	0.0077	0.0047	0.0073	<0.0020	0.0023	0.003	0.0084	0.0054	0.0083	0.0058				0.007	0.008	0.006
Potassium (K), total	mg/L		1.36	0.859	0.79	0.565	0.438	0.637	0.883	0.81	0.812	0.904	0.954	1.54	1.14	1.2	1.5	1.3	1.8	1.2	1.3
Selenium (Se), total	mg/L	**0.002**	0.000386	0.000303	0.000483	0.00034	0.000412	0.000641	0.000783	0.000709	0.000939	0.00109	0.00115	0.00169	0.00161	<0.0005	<0.0005		0.0007	<0.00005	0.0001
Silicon (Si), total	mg/L		1.7	1.66	2.02	2.17	2.45	2.57	3	2.35	3.04	3.04	2.78	3.13	3.15	1.8	2.7	3	3.7	1.7	2.3
Silver (Ag), total	mg/L	**0.00025**	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050				<0.00001	<0.00001	<0.00001
Sodium (Na), total	mg/L		0.26	0.273	0.464	0.439	0.577	0.694	0.765	0.725	0.722	0.795	0.842	1.23	0.922	0.7	0.9	0.9	1.3	0.59	1
Strontium (Sr), total	mg/L		0.0564	0.0557	0.0903	0.081	0.112	0.14	0.163	0.148	0.155	0.19	0.16	0.173	0.167	0.103	0.143	0.155	0.18	0.081	0.13
Sulphur (S), total	mg/L		3.2	<3.0	4.9	4.3	6	7.2	7.7	6.9	7.8	8.2	7.9	7.8	8.1	6.3	7.4	9.5	9.7	6.4	7.5
Thallium (Tl), total	mg/L	**0.0008**	0.000002	0.000002	<0.0000020	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020						
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.02			0.002	<0.002	<0.002
Titanium (Ti), total	mg/L		<0.0020	0.00053	<0.00050	0.007	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00152	<0.00050	0.00062	<0.00050	<0.003	<0.003	<0.003	0.003	0.0025	0.0022
Uranium (U), total	mg/L	**0.015**	0.000173	0.00013	0.000467	0.000271	0.000437	0.000647	0.000908	0.000807	0.000974	0.00111	0.00119	0.00132	0.00128						
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020	0.00042	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020				<0.0003	<0.0003	<0.0003
Zinc (Zn), total	mg/L	*	0.0012	0.00082	0.00116	0.00152	0.00055	0.00055	0.00051	0.00044	0.0005	0.00202	0.00171	0.00793	0.00923	**0.02**	0.02		0.034	**0.018**	0.005
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010				0.0005		0.0003
Aluminum (Al), dissolved	mg/L	*	0.0439	0.0248	0.0104	0.011	0.00894	0.00503	0.00279	0.00189	0.00217	0.00174	0.00172	0.00214	0.00441		<0.02		0.008	0.018	<0.006
Antimony (Sb), dissolved	mg/L		0.000023	<0.000020	<0.000020	<0.000020	<0.000020	0.000036	<0.000020	<0.000020	<0.000020	0.000023	<0.000020	0.000023	0.000027						
Arsenic (As), dissolved	mg/L		0.000105	0.000087	0.000086	0.000112	0.000075	0.00008	0.000074	0.000077	0.000074	0.000073	0.000059	0.000093	0.000075				<0.00005	0.0002	<0.00005
Barium (Ba), dissolved	mg/L		0.0195	0.0188	0.0284	0.0224	0.0321	0.0401	0.0446	0.04	0.042	0.0475	0.046	0.0535	0.0472		0.068	0.073	0.11	0.042	0.062
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010				<0.0001	<0.0001	<0.0001
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050				<0.002	<0.002	<0.002
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.008	<0.008	0.022	0.022	0.017
Cadmium (Cd), dissolved	mg/L	*	0.000017	0.000012	0.000011	0.00001	0.000011	0.0000118	0.000016	0.000013	0.000014	0.0000339	0.0000212	0.0000882	0.000143				0.00008	0.00004	0.00002
Calcium (Ca), dissolved	mg/L		19.3	18.8	31.9	26.5	37.7	46.5	50.6	41.7	53.2	58.5	53.9	55.6	54.1		46.1	62	60	28	48
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00011	0.00028	<0.00010	<0.00010	<0.00010				0.0048	0.00005	0.0008
Cobalt (Co), dissolved	mg/L		0.00003	0.00002	0.000013	0.000019	0.000015	0.0000093	0.000006	0.000008	0.000007	0.0000076	0.0000066	0.0000248	0.000014				<0.0004	<0.0004	<0.0004
Copper (Cu), dissolved	mg/L		0.000856	0.000694	0.000475	0.000536	0.000297	0.000184	0.000147	0.000153	0.000148	0.000315	0.000195	0.000487	0.000331		<0.001		0.0004	0.0009	0.0004
Iron (Fe), dissolved	mg/L	**0.35**	0.0652	0.0386	0.0258	0.0285	0.0182	0.017	0.0184	0.0118	0.0087	0.0092	0.0034	0.0014	0.0101		0.041		0.073	0.14	0.05
Lead (Pb), dissolved	mg/L		0.000011	<0.0000050	0.000006	0.000011	0.000005	<0.0000050	<0.0000050	<0.0000050	0.00002	0.0000387	0.00001	0.0000401	0.0000222				0.0008	0.0004	<0.0001
Lithium (Li), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00054	0.0007	0.00059	0.00071	0.0008	0.00082	0.00067	0.00061						
Magnesium (Mg), dissolved	mg/L		2.61	2.28	3.99	3.22	4.82	5.49	6.36	6.26	6.24	7.24	7.03	7.07	7.09		4.84	6.21	7.1	2.8	4.7
Manganese (Mn), dissolved	mg/L		0.00284	0.000949	0.000965	0.00239	0.00132	0.00184	0.000912	0.000483	0.000246	0.000894	0.000315	0.00496	0.00152		0.002	0.017	0.32	0.019	0.048
Mercury (Hg), dissolved	mg/L		0.0000037	0.0000024	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020				<0.00001	<0.00001	<0.00001
Molybdenum (Mo), dissolved	mg/L		0.000231	0.000237	0.000305	0.000249	0.000313	0.000407	0.000484	0.00048	0.000521	0.000594	0.000592	0.000748	0.000787				<0.0004	<0.0004	<0.0004
Nickel (Ni), dissolved	mg/L		0.000612	0.000514	0.000376	0.000412	0.000254	0.00017	0.000158	0.000143	0.000143	0.000248	0.000139	0.000286	0.000189					<0.001	<0.001
Phosphorus (P), dissolved	mg/L		0.0148	0.0087	0.0034	0.0048	0.0052	0.0045	<0.0020	0.002	0.0023	0.0033	0.0081	0.005	0.0072				<0.004	0.009	<0.004
Potassium (K), dissolved	mg/L		1.42	0.86	0.792	0.548	0.484	0.628	0.898	0.796	0.757	0.991	0.901	1.44	1.11		1.3	1.4	1.8	1.1	1.3
Selenium (Se), dissolved	mg/L		0.000387	0.000238	0.000488	0.000399	0.000407	0.000601	0.000733	0.000602	0.000907	0.00111	0.00114	0.00165	0.00145		<0.0005		0.00076	<0.00005	0.0001
Silicon (Si), dissolved	mg/L		1.59	1.6	1.9	1.93	2.29	2.43	2.52	2.08	2.87	3.02	2.77	3.06	2.85		2.74	3.3	3.5	1.6	2.3
Silver (Ag), dissolved	mg/L		0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050				<0.00001	<0.00001	<0.00001
Sodium (Na), dissolved	mg/L		0.278	0.269	0.435	0.424	0.697	0.683	0.78	0.735	0.703	0.944	0.83	0.99	0.904		0.87	0.97	1.3	0.62	1.1
Strontium (Sr), dissolved	mg/L		0.0567	0.0553	0.0941	0.0758	0.113	0.139	0.162	0.141	0.151	0.185	0.151	0.167	0.175		0.137	0.165	0.18	0.077	0.13
Sulphur (S), dissolved	mg/L		3	<3.0	4.9	4.1	5.9	6.9	6.9	7	6.7	8	7.4	7.6	7.5		7.6	10.2	8.8	6.1	7.8
Thallium (Tl), dissolved	mg/L		0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020						
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	0.00022	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020				0.003	<0.002	<0.002
Titanium (Ti), dissolved	mg/L		0.00054	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		<0.003	<0.003	0.0021	0.0012	0.0016
Uranium (U), dissolved	mg/L		0.000173	0.000126	0.000434	0.000256	0.000426	0.000631	0.000892	0.00087	0.00101	0.0011	0.00123	0.00133	0.00125						
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020				<0.0003	<0.0003	<0.0003
Zinc (Zn), dissolved	mg/L		0.00091	0.00056	0.00037	0.00046	0.00066	0.00039	0.00041	0.0003	0.00069	0.00307	0.00083	0.00293	0.00944		0.006		0.028	0.015	0.006
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010				<0.0003	0.0003	0.0004

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7
			22-Aug-1995	30-Aug-1995	06-Sep-1995	13-Sep-1995	23-Aug-2002	19-Aug-2004	24-Aug-2006	14-Aug-2008	19-Aug-2010	16-Aug-2012	21-Aug-2014	30-Apr-2015	12-May-2015	22-Jun-2015	28-Jul-2015	23-Aug-2015	11-Sep-2015	14-Oct-2015	20-Nov-2015
Discharge (Flow)	L/s													21.3	293.7	184	115.5	162.1	196.5	107.4	53.9
Total Suspended Solids	mg/L		7	<4	<4	<4	<4	<4	<4	<4	<1	<4.0	<4.0	<1.0	14.4	<1.0	<1.0	1.2	1.9	<1.0	1.1
pH (field)	pH units	6.5 - 9							8.3	8.2	8.2	8.0	8.02	7.86	7.32	7.88	7.88	7.81	7.92	7.81	7.66
pH (lab)	pH units	6.5 - 9	7.8	7.5	8	7.8		8.2	8	8.1	8.3	8.1	8.16	8.22	7.45	7.83	8.01	7.92	8.14	8.15	8.16
Specific Conductance (field)	µS/cm								243	270	282	222	279	302	74.7	216.4	263.9	240.6	250.6	299.8	341.2
Specific Conductance (lab)	µS/cm		257	261	382	205	209	280	250	270	302	233	277	343	89.6	220	256	250	266	339	329
Temperature (field)	C								5.9	8.3	9.8	8.1	8.5	0.4	-0.2	10.7	7.4	7.6	5.1	0.3	0
Dissolved Oxygen (field)	mg/L	6.5							10.0	10.0		9.8		10.5	11.3	9.69	9.6	9.9	8.7	12.2	11.6
Dissolved Oxygen (field)	%								86	100		82.2		87	91	87.4	84.1	98	82	98	94
ORP (field)	mV													239.2	238.7	58.5	107.9	172.5	78.7	218.7	98.3
Turbidity (internal)	NTU															0.56	0.65	0.66	2.302	0.74	2.39
Hardness (from total)	mg/L		149	143	144	160	107	147	140	150	150	117	136	178	46.6	111	137	126	149	177	168
Hardness (from dissolved)	mg/L		149	138	138	163	114	152	140	147	155	119	127	186	46.9	121	137	126	139	174	188
Colour	TCU													13.4	230	14.9	12.3	13	12.7	10.6	8.5
Total Acidity	mg/L						1.4	1.2	0.9	3	0.9	0.81	<0.50	<0.50	1.1	1.02	<0.50	<0.50	<0.50	<0.50	<0.50
Acidity (pH 4.5)	mg/L						<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		120	120	109	116	77	117	130	110	130	91	107	145	35.7	82	99.4	92.5	97.9	141	128
Alkalinity, bicarbonate HCO3	mg/L		146	146	133	141	93.9	143	158	140	160	111	130	177	43.5	100	121	113	119	172	156
Alkalinity, hydroxide OH	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.5	<0.5	<0.5	<0.5	<1	<1.0	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	120												<0.50	1.3	<0.50	<0.50	<0.50	0.74	0.54	<0.50
Fluoride	mg/L	0.12												0.075	0.033	0.051	0.054	0.056	0.051	0.1	0.071
Sulphate, dissolved	mg/L	*	21.6	28.7	26.4	28.2	29.6	29.4	30.5	27	26	27.3	24.9	31.3	<0.50	27	31.6	32.4	38.4	32.4	38
Cyanide, total	mg/L	0.005	<0.001	<0.001	<0.001	<0.001								<0.00050	0.00153	0.00068	<0.00050	<0.00050	0.00072	0.00054	<0.00050
Cyanide, Weak Acid Dissociable	mg/L	0.005	<0.001	<0.001	<0.001	<0.001								<0.00050	0.00147	0.0006	<0.00050	<0.00050	0.00072	0.00058	<0.00050
Ammonia (N)	mg/L	*	<0.005	<0.005	0.044	<0.005	<0.005	0.016	0.006	<0.005	0.18	0.0057	0.012	0.0116	0.0064	<0.0050	0.0062	<0.0050	<0.0050	0.0091	0.0131
Nitrite (N)	mg/L	0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	0.0044		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.002
Nitrate (N)	mg/L	3.0	0.06	0.06	0.05	0.07	<0.02	<0.02	<0.02	0.02	<0.02	<0.020	<0.020	0.0973	<0.020	0.005	0.0112	0.0107	0.0116	0.101	0.0952
Nitrite & Nitrate, as N	mg/L		0.06	0.06	0.05	0.07	<0.02	<0.02	<0.02	0.02	<0.02	<0.020	<0.020	0.102	<0.020	0.005	0.0112	0.0107	0.0116	0.101	0.0972
Phosphorus,total-colourimetric	mg/L	0.035	0.007	0.01	0.015	<0.003								0.0021	0.0318	0.0032	0.0034	0.0035	0.0028	0.0064	0.003
Phosphorus, Total Dissolved	mg/L													0.0027	0.0282	0.0029	0.0036	0.0029	0.0024	<0.0020	0.0024
Dissolved Organic Carbon	mg/L													1.18	17.2	2.18	1.83	1.8	1.8	2.41	0.99
Aluminum (Al), total	mg/L	*	0.081	0.029	0.028	0.015	0.06	0.005	0.01	0.02	0.011	0.0114	0.0174	0.00197	**0.237**	0.0206	0.0227	0.0121	0.0435	0.0114	0.0195
Antimony (Sb), total	mg/L	0.009										0.000079	0.00008	0.000039	0.000066	0.000073	0.000105	0.000078	0.000102	0.000043	0.000056
Arsenic (As), total	mg/L	0.005	0.0002	0.00056	0.00009	0.00012		<0.001	<0.001	0.0002	<0.0001	0.000266	0.000298	0.000184	0.000966	0.000407	0.000401	0.000329	0.000685	0.000301	0.000473
Barium (Ba), total	mg/L		0.071	0.066	0.065	0.072	0.064	0.086	0.066	0.065	0.084	0.0614	0.0708	0.0974	0.0429	0.0575	0.0754	0.0614	0.0761	0.0574	0.0916
Beryllium (Be), total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	0.000027	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L		<0.002	<0.002	<0.002	<0.002				<0.001	<0.001	<0.0000050	<0.0000050	<0.0000050	<0.000020	<0.0000050	<0.0000050	<0.000020	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	1.5	0.014	0.015	0.022	0.021	<0.008	<0.008	<0.008	<0.05	<0.05	<0.05	<0.02	<0.01	<0.050	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*	0.00003	0.00002	0.00003	0.00004		0.00008	0.00012	**0.00053**	0.00007	**0.000182**	0.000136	0.0000859	**0.000415**	0.000145	0.000169	0.000163	**0.00044**	0.000176	**0.000296**
Calcium (Ca), total	mg/L		51	49	49	55	35.7	48.9	45.1	50.7	49.2	38.8	44.7	58.8	15.2	36.5	45.3	42.3	49.4	60.9	55.5
Chromium (Cr), total	mg/L	0.001	**0.0056**	**0.0021**	0.0005	0.0005		<0.001	<0.001	<0.001	<0.001	<0.00010	0.00011	<0.00010	<0.00050	<0.00010	<0.00010	<0.00050	0.00011	<0.00010	<0.00010
Cobalt (Co), total	mg/L		<0.0004	<0.0004	<0.0004	<0.0004		<0.0005	<0.0005	<0.0005	<0.0005	0.000032	0.000055	0.0000419	0.000391	0.000057	0.0000499	0.000035	0.000116	0.000042	0.00015
Copper (Cu), total	mg/L	*	0.0008	0.0007	0.0034	0.0008		0.0009	0.0008	0.0008	0.0005	0.000738	0.000688	0.000202	**0.00281**	0.00077	0.000866	0.0011	0.00191	0.000693	0.000534
Iron (Fe), total	mg/L	0.3	**0.61**	**0.36**	**0.34**	0.28	**0.354**	0.226	0.135	0.136	0.215	0.187	0.215	0.128	**2.02**	**0.363**	**0.311**	0.216	**0.61**	0.238	**0.751**
Lead (Pb), total	mg/L	*	0.0002	0.0001	0.0002	<0.0001		<0.0005	<0.0005	0.0003	<0.0002	0.000065	0.00011	0.0000081	0.000855	0.000196	0.000137	0.000097	0.000521	0.000176	0.000201
Lithium (Li), total	mg/L								<0.002	<0.005	<0.005	0.00115	0.00172	0.0043	0.00115	0.00127	0.00129	0.00131	0.00115	0.00139	0.00262
Magnesium (Mg), total	mg/L		5.3	5.1	5.2	5.5	4.32	5.98	5.34	5.74	6.56	4.92	6	7.47	2.07	4.78	5.77	4.88	6.2	6.02	7.12
Manganese (Mn), total	mg/L	*	0.062	0.049	0.043	0.041	0.032	0.03	0.012	0.011	0.014	0.0193	0.0296	0.054	0.199	0.0331	0.0374	0.0231	0.0572	0.0298	0.159
Mercury (Hg), total	mg/L	0.000026	<0.00001	<0.00001	<0.00001	<0.00001			<0.00001	<0.00002	<0.00002		0.0000038	<0.0000020	0.0000042	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	0.073	0.0004	<0.0004	<0.0004	<0.0004				<0.001	<0.001	0.000364	0.000527	0.000677	0.000319	0.000449	0.000508	0.000511	0.000439	0.000716	0.000571
Nickel (Ni), total	mg/L	*	0.004	0.001	0.002	<0.001				<0.001	<0.001	0.000415	0.000396	0.000442	0.00154	0.000472	0.000429	0.00039	0.000624	0.000376	0.000527

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7
			22-Aug-1995	30-Aug-1995	06-Sep-1995	13-Sep-1995	23-Aug-2002	19-Aug-2004	24-Aug-2006	14-Aug-2008	19-Aug-2010	16-Aug-2012	21-Aug-2014	30-Apr-2015	12-May-2015	22-Jun-2015	28-Jul-2015	23-Aug-2015	11-Sep-2015	14-Oct-2015	20-Nov-2015
Phosphorus (P), total	mg/L		0.016	0.008	0.008	0.008								<0.0020	0.042	0.0069	0.0073	<0.010	0.0046	0.0035	0.0039
Potassium (K), total	mg/L		1.4	1.4	1.4	1.6	2	2	1	1.39	1.44	1.13	1.34	2.13	2.41	1.05	1.56	1.26	1.62	1.49	1.64
Selenium (Se), total	mg/L	**0.002**	0.00023	<0.00005	0.00007	0.00011		<0.001	<0.001	0.0005	0.0004	0.000462	0.000523	0.000853	0.000253	0.0006	0.000729	0.000596	0.000866	0.00139	0.00111
Silicon (Si), total	mg/L		2.8	2.6	2.8	2.8			2.59	2.72	3.18	2.46	2.5	4.03	1.85	2.18	2.55	2.58	2.79	3.02	3.54
Silver (Ag), total	mg/L	**0.00025**	<0.00001	<0.00001	<0.00001	<0.00001						<0.0000050	<0.0000050	<0.0000050	0.0000222	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L		0.97	0.96	0.97	1.1	0.75	1.01	0.84	0.95	0.94	0.711	0.91	1.29	0.33	0.674	0.933	0.83	0.893	1.17	1.2
Strontium (Sr), total	mg/L		0.15	0.14	0.14	0.15	0.109	0.152	0.127	0.149	0.168	0.118	0.149	0.204	0.0489	0.122	0.148	0.129	0.151	0.19	0.193
Sulphur (S), total	mg/L		8.2	8.3	9.6	10	10.1	10	10.5	11	8	10	<15	11	<15	9	11.3	<15	11.8	11.6	13
Thallium (Tl), total	mg/L	**0.0008**										0.000002	<0.0000020	<0.0000020	0.0000069	<0.0000020	0.0000027	0.000004	0.000004	0.000002	0.000002
Tin (Sn), total	mg/L		<0.002	0.003		<0.002				<0.005	<0.005	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		0.0064	0.0031	0.0032	0.002	<0.003	<0.003	<0.003	<0.005	<0.005	<0.00050	0.00123	<0.00050	0.0077	0.00091	0.00077	<0.0050	0.00215	<0.00050	0.0008
Uranium (U), total	mg/L	**0.015**						0.00083	0.0006	0.0008	0.0008	0.000508	0.000798	0.00134	0.000278	0.000666	0.000872	0.00077	0.0011	0.00167	0.00134
Vanadium (V), total	mg/L		<0.0003	<0.0003	<0.0003	<0.0003						<0.00020	<0.00020	<0.00020	0.00051	<0.00020	<0.00020	<0.00050	0.00034	<0.00020	0.00023
Zinc (Zn), total	mg/L	*	0.009	0.007	0.007	0.006	**0.039**	0.013	0.025	0.016	0.01	**0.0322**	0.0222	0.0295	**0.0554**	**0.0264**	0.0298	0.0317	**0.0764**	0.0316	0.0643
Zirconium (Zr), total	mg/L		<0.0003	0.0004	0.0004	0.0005				<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	0.00046	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00011
Aluminum (Al), dissolved	mg/L	*	**<0.06**	<0.006	<0.006	0.007	<0.02	0.001	0.002	0.006	<0.003	0.00525	0.00157	0.00389	**0.102**	0.00301	0.00186	0.00201	0.00376	0.00307	0.00691
Antimony (Sb), dissolved	mg/L											0.000082	0.000078	0.000092	0.000047	0.000074	0.000099	0.000078	0.000094	0.000037	0.000052
Arsenic (As), dissolved	mg/L		0.00024	0.0003	0.00005	0.00008		<0.001	<0.001	0.0002	0.0002	0.000233	0.00018	0.000164	0.000327	0.000254	0.000252	0.000233	0.000318	0.000148	0.00017
Barium (Ba), dissolved	mg/L		0.068	0.0641	0.061	0.072	0.067	0.084	0.066	0.067	0.088	0.059	0.0678	0.105	0.0343	0.0581	0.0735	0.0643	0.0693	0.0555	0.0911
Beryllium (Be), dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.002	<0.002	<0.002	<0.002				<0.001	<0.001	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		0.013	0.015	0.011	0.012	<0.008	<0.008	<0.008	<0.05	<0.05	<0.05	<0.02	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	<0.00001	0.00001	0.00002	0.00003		0.00006	0.0001	0.00019	0.00004	0.000117	0.000064	0.0000248	**0.000146**	0.0000838	0.0000977	0.000102	0.00017	0.000094	0.000071
Calcium (Ca), dissolved	mg/L		51	47	47	56	38.3	50.8	45.2	49.8	51.5	39.3	41.2	61.2	15.4	40.3	45.2	42.1	44.6	59.6	63.2
Chromium (Cr), dissolved	mg/L		0.0004	0.0004	0.0004	0.0005		<0.001	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00010	0.00012	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		<0.0004	<0.0004	<0.0004	<0.0004		<0.0005	<0.0005	<0.0005	<0.0005	0.000016	0.000009	0.0000385	0.000126	0.0000135	0.0000143	0.000014	0.000028	0.000015	0.0001
Copper (Cu), dissolved	mg/L		0.0006	0.0007	0.0005	0.0009		0.0005	0.0005	0.0007	0.0004	0.000657	0.000497	0.000183	0.0017	0.000602	0.000558	0.000656	0.000716	0.000421	0.000303
Iron (Fe), dissolved	mg/L	**0.35**	0.13	0.13	0.11	0.12	0.126	0.011	0.055	0.04	0.074	0.092	0.0429	0.0136	0.305	0.0553	0.057	0.0472	0.0528	0.0299	0.0587
Lead (Pb), dissolved	mg/L		<0.0001	<0.0001	<0.0001	0.0002		<0.0005	<0.0005	0.0002	<0.0002	0.000022	0.000008	<0.0000050	0.0000658	0.0000232	0.0000137	0.000016	0.000045	0.000011	0.000008
Lithium (Li), dissolved	mg/L								<0.002	<0.005	<0.005	0.00109	0.00172	0.00458	0.00056	0.0015	0.0015	0.00133	0.00174	0.00142	0.00263
Magnesium (Mg), dissolved	mg/L		5.3	4.9	4.9	5.6	4.54	6.14	5.39	5.47	6.29	4.92	5.85	8.05	2.05	4.94	5.78	5.18	6.75	6.05	7.28
Manganese (Mn), dissolved	mg/L		0.05	0.04	0.038	0.04	0.023	0.02	0.003	0.002	0.004	0.0132	0.00221	0.0554	0.0507	0.00829	0.0131	0.00924	0.0175	0.0104	0.13
Mercury (Hg), dissolved	mg/L		<0.00001	<0.00001	<0.00001	<0.00001			<0.00001	<0.00002	<0.00002		0.0000022	<0.0000020	0.0000045	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		<0.0004	<0.0004	<0.0004	0.0004				<0.001	<0.001	0.000371	0.000514	0.000664	0.000265	0.000469	0.000486	0.000498	0.000448	0.000721	0.000617
Nickel (Ni), dissolved	mg/L		<0.001	<0.001	<0.001	<0.001				<0.001	<0.001	0.000373	0.000339	0.000366	0.00102	0.00046	0.000433	0.000392	0.000537	0.000313	0.000492
Phosphorus (P), dissolved	mg/L		0.008	0.004	0.008	0.011								<0.0020	0.0174	<0.0020	<0.0020	<0.0020	0.0053	<0.0020	0.0026
Potassium (K), dissolved	mg/L		1.3	1.4	1.3	1.7	1	1	1	1.31	1.47	1.15	1.23	2.21	2.65	1.13	1.55	1.43	1.87	1.49	1.72
Selenium (Se), dissolved	mg/L		0.00012	0.00006	0.00006	0.00011		<0.001	<0.001	0.0006	0.0004	0.000738	0.000522	0.000869	0.000255	0.000632	0.000718	0.000677	0.00075	0.00124	0.00111
Silicon (Si), dissolved	mg/L		2.7	2.5	2.6	2.8			2.59	2.93	3.04	2.57	2.33	4.2	1.68	2.27	2.53	2.55	2.72	3	3.49
Silver (Ag), dissolved	mg/L		<0.00001	<0.00001	<0.00001	<0.00001						<0.0000050	0.00001	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		0.96	0.97	0.91	1.1	0.84	1.08	0.89	0.88	1.01	0.713	0.94	1.36	0.482	0.723	0.931	0.858	0.977	1.2	1.24
Strontium (Sr), dissolved	mg/L		0.15	0.14	0.13	0.15	0.116	0.152	0.127	0.143	0.174	0.117	0.14	0.218	0.0506	0.133	0.152	0.135	0.17	0.193	0.196
Sulphur (S), dissolved	mg/L		8.2	8	9.2	10	11.1	10.4	10.7	11	8	10	<15	10.8	<3.0	9	10.9	11.6	14.5	10.7	12.4
Thallium (Tl), dissolved	mg/L											0.000002	0.000002	<0.0000020	0.0000031	<0.0000020	0.0000027	0.000002	0.000003	<0.0000020	0.000002
Tin (Sn), dissolved	mg/L		0.002		<0.002	0.002				<0.005	<0.005	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		0.0015	0.0012	0.0017	0.0018	<0.003	<0.003	<0.003	<0.005	<0.005	<0.00050	<0.00050	<0.00050	0.0008	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L							0.00033	0.0007	0.0008	0.001	0.000485	0.000768	0.00141	0.000199	0.000667	0.000865	0.000831	0.00108	0.00168	0.00136
Vanadium (V), dissolved	mg/L		<0.0003	<0.0003	<0.0003	<0.0003						<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.006	0.007	0.004	0.006	0.031	0.01	0.029	0.016	0.007	0.0273	0.0111	0.029	0.033	0.0182	0.0196	0.025	0.0475	0.0194	0.0478
Zirconium (Zr), dissolved	mg/L		<0.0003	0.0006	<0.0003	<0.0003				<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	0.00017	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-7 02-Dec-2015	KZ-7 20-Jan-2016	KZ-7 09-Feb-2016	KZ-7 20-Mar-2016	KZ-7 20-Apr-2016	KZ-7 05-May-2016	KZ-7 14-May-2016	KZ-7 14-Jun-2016	KZ-7 27-Jul-2016	KZ-7 27-Aug-2016	KZ-7 08-Sep-2016	KZ-7 03-Oct-2016	KZ-7 16-Nov-2016	KZ-7 20-Dec-2016	KZ-7 16-Jan-2017	KZ-7 23-Feb-2017	KZ-7 21-Mar-2017	KZ-9 18-Jul-1994	KZ-9 31-Aug-1994
Discharge (Flow)	L/s		50	32.6	30.5	16.3	31	54.1		177.6	133.3	418	283.4		72.5	37	35.3	21.3	21.6		
Total Suspended Solids	mg/L		<1.0	<1.0	1	1	1	1.7	<1.0	1	<1.0	8.8	1.7	<1.0	1.5	1.3	21.3	<1.0	<1.0		
pH (field)	pH units	**6.5 - 9**	7.79	7.3	7.55	7.4	7.64	7.06	7.73	8.03	7.6	7.68	7.63	7.65	7.51	7.43	7.38	7.22	7.36		
pH (lab)	pH units	**6.5 - 9**	8.07	8.16	8.19	8.05	8.25	7.98	8.24	8.1	8.16	8.11	8.06	7.96	8.05	8.16	8.09	8.1	8.06	7.6	7.5
Specific Conductance (field)	µS/cm		338	348.6	334.2	344	268.3	222.4	218.8	237.9	255.5	285.4	260.2	272.1	296.7	332.4	335.7	375.5	337.9		
Specific Conductance (lab)	µS/cm		342	356	360	357	318	221	250	243	250	248	274	292	338	372	348	361	364	225	292
Temperature (field)	C		0.1	0	0	0.5	0.7	0.4	4.4	7.6	9.1	8.4	4.7	0.9	0.1	0.2	0	-0.1	-0.1		
Dissolved Oxygen (field)	mg/L	**6.5**	10.3	10.8	10.1	10.05	11.98	12.29	10.9	9.92	9.91	9.12	9.99	10.34	11.44	10.74	11.02	10.78	11.3		
Dissolved Oxygen (field)	%		85	88	82	81.6	98.6	100.1	98.2	98.6	99.9	90.9	91.4	86	92	89.7	92.1	86.5	91.1		
ORP (field)	mV		40.3	288.4	243	23.9	37.4	57.4	111.1	81.8	58.8	238.3	31.5	58.3	52.2	124.6	141.8	142.8	137.2		
Turbidity (internal)	NTU		1.45	1.202	2.176	3.304	2.838	2.47		0.474	1.33	9.448	1.56	1.594	1.732	1.61	4.242	8.134	0.702		
Hardness (from total)	mg/L		175	191	176	181	176	114	124	128	127	121	128	149	177	184	181	182	191	109	161
Hardness (from dissolved)	mg/L		169	186	178	185	165	112	126	119	127	125	147	143	169	182	178	186	207		160
Colour	TCU		<5.0	10.7	10.7	<5.0	12.2	44.2	9.4			15.9									
Total Acidity	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	0.58	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.94	<0.50	0.56	0.67		
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
Alkalinity, total	mg/L		135	153	156	154	138	92.4	110	95.7	93.4	85.6	99.9	108	140	150	147	152	159	106	131
Alkalinity, bicarbonate HCO3	mg/L		165	187	190	188	168	113	134	117	114	104	122	132	171	182	179	186	194	106	131
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5	<0.5
Chloride	mg/L	**120**	<0.50	0.63	0.63	<0.50	0.65	1.1	0.59	0.71	0.53	0.9	0.82	<0.50	<0.50	0.75	0.55	<0.50	<0.50		
Fluoride	mg/L	**0.12**	0.054	0.073	0.067	0.063	0.061	0.055	0.065	0.045	0.05	0.047	0.058	0.057	0.069	0.067	0.067	0.079	0.079		
Sulphate, dissolved	mg/L	*	38.5	36.2	34.9	33.5	29.6	18.7	23.5	31.6	36.8	33.6	52.3	38.9	38.6	43.7	39.8	36.2	35.2	21.8	20.9
Cyanide, total	mg/L	**0.005**	<0.00050	0.00058	<0.00050	<0.00050	0.0005	0.00062	0.00051	0.00102	0.00051	<0.00050	0.00075	<0.00050	0.00057	<0.00050	<0.00050	<0.00050	<0.00050		
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	<0.00050	0.00067	<0.00050	<0.00050	<0.00050	0.00057	0.0005	0.00093	0.00065	<0.00050	0.00077	<0.00050	0.00065	<0.00050	<0.00050	<0.00050	<0.00050		
Ammonia (N)	mg/L	*	0.0229	0.0378	0.018	0.0083	0.008	0.0158	0.0062	0.023	0.018	0.052	0.011	0.0091	0.03	0.037	0.035	0.039	0.037		
Nitrite (N)	mg/L	**0.02**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	<0.0020	<0.0020	<0.0020	0.003	<0.0020	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	<0.0020		
Nitrate (N)	mg/L	**3.0**	0.0959	0.125	0.131	0.126	0.088	0.0524	0.0639	0.0209	0.0105	0.0157	0.0381	0.0897	0.122	0.134	0.133	0.155	0.163		
Nitrite & Nitrate, as N	mg/L		0.0959	0.125	0.131	0.126	0.088	0.0545	0.0639	0.0209	0.0105	0.0187	0.0381	0.0897	0.125	0.134	0.133	0.155	0.163		
Phosphorus,total-colourimetric	mg/L	**0.035**	0.002	0.0025	0.003	0.003	0.0029	0.008	0.0042	<0.0020	0.0053	0.018	0.0041	0.0039	<0.0020	0.0025		0.0032	0.0022		
Phosphorus, Total Dissolved	mg/L		0.0022	0.0025	0.0031	0.0032	0.0038	0.0074	0.0069	<0.0020	0.003	0.0175	0.003	0.0035	0.0024	0.0033	0.0246	0.0029	0.0035		
Dissolved Organic Carbon	mg/L		1.64	1.61	<0.50	<0.50	3.56	4.85	2.55	1.62	2.54	2.92	2.49	2.22	1.46	1.71	<0.50	0.59	<0.50		
Aluminum (Al), total	mg/L	*	0.0288	0.0151	0.0187	0.0198	0.0208	0.0587	0.0125	0.00296	0.0173	**0.333**	0.0347	0.0331	0.0076	0.0111	**0.128**	0.00552	0.00591	<0.06	<0.06
Antimony (Sb), total	mg/L	**0.009**	0.000061	0.000035	0.000035	0.000042	0.000046	0.00007	0.000057	0.000064	0.000079	0.000124	0.000071	0.000055	0.000048	0.000044	0.000055	0.000026	0.00003		
Arsenic (As), total	mg/L	**0.005**	0.000428	0.000523	0.000645	0.000416	0.000452	0.000622	0.000399	0.000234	0.000395	0.00105	0.000351	0.000414	0.00023	0.00024	0.00108	0.000165	0.000163		
Barium (Ba), total	mg/L		0.0953	0.105	0.112	0.115	0.0999	0.0633	0.0679	0.0504	0.0651	0.0629	0.0622	0.0688	0.0896	0.0967	0.105	0.101	0.118	0.054	0.086
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.00001	0.000022	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000020	<0.000020	<0.0000050	<0.000010	0.000012	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.0000050	<0.0000050		
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.04	<0.04
Cadmium (Cd), total	mg/L	*	**0.000281**	0.000194	0.000204	0.000158	0.000221	0.00017	0.000096	0.000071	**0.000201**	**0.000319**	**0.000366**	**0.000528**	**0.000324**	0.000165	**0.00039**	0.000112	0.000105		
Calcium (Ca), total	mg/L		57.3	62.6	57.4	59.3	58	37.6	40.7	42	42.1	39.7	42	50	58.9	60.7	59.5	60.2	63.4	37.5	54.7
Chromium (Cr), total	mg/L	**0.001**	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00050	<0.00050	<0.00010	<0.00010	0.00063	<0.00010	0.00011	<0.00010	0.00012	0.00033	<0.00010	<0.00010		
Cobalt (Co), total	mg/L		0.000156	0.00015	0.000143	0.000121	0.000085	0.000076	0.000034	0.00001	0.000037	0.000301	0.000058	0.000132	0.000099	0.000112	0.000306	0.000056	0.000057		
Copper (Cu), total	mg/L	*	0.000489	0.000409	0.000492	0.00034	0.000545	0.00134	0.00071	0.000556	0.00109	0.00358	0.00157	0.00124	0.000436	0.00026	0.00122	0.00018	0.000181	<0.002	<0.002
Iron (Fe), total	mg/L	**0.3**	**0.71**	**0.935**	**0.893**	**0.678**	**0.525**	**0.506**	**0.314**	0.0618	0.264	**0.89**	0.212	**0.456**	0.275	0.249	**1.72**	0.154	0.149	0.26	**0.51**
Lead (Pb), total	mg/L	*	0.000177	0.000216	0.000324	0.00016	0.000119	0.000631	0.000149	0.000021	0.000177	0.00275	0.000479	0.000438	0.000087	0.000074	0.000897	0.000037	0.000039		
Lithium (Li), total	mg/L		0.00241	0.00312	0.00344	0.00431	0.0041	0.00236	0.00218	0.00104	0.00171	0.00131	0.00101	0.00129	0.00255	0.00308	0.00384	0.00418	0.00452		
Magnesium (Mg), total	mg/L		7.62	8.34	7.87	7.88	7.64	4.79	5.53	5.66	5.37	5.27	5.62	5.87	7.22	7.76	7.75	7.79	7.94	3.69	5.88
Manganese (Mn), total	mg/L	*	0.141	0.138	0.135	0.0987	0.081	0.0418	0.0272	0.00633	0.0254	0.0617	0.0245	0.0597	0.101	0.119	0.196	0.0683	0.068	0.026	0.057
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020		
Molybdenum (Mo), total	mg/L	**0.073**	0.000567	0.00065	0.00072	0.000749	0.000645	0.000536	0.000596	0.000478	0.000484	0.000405	0.000418	0.000475	0.000599	0.000633	0.00065	0.000676	0.000781		
Nickel (Ni), total	mg/L	*	0.00059	0.000514	0.000555	0.000498	0.000554	0.00067	0.00039	0.000284	0.00044	0.00111	0.000566	0.000625	0.000552	0.000531	0.00101	0.000403	0.00046		

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-7	KZ-9	KZ-9
			02-Dec-2015	20-Jan-2016	09-Feb-2016	20-Mar-2016	20-Apr-2016	05-May-2016	14-May-2016	14-Jun-2016	27-Jul-2016	27-Aug-2016	08-Sep-2016	03-Oct-2016	16-Nov-2016	20-Dec-2016	16-Jan-2017	23-Feb-2017	21-Mar-2017	18-Jul-1994	31-Aug-1994
Phosphorus (P), total	mg/L		0.005	0.0076	0.0092	0.0063	0.0065	<0.010	<0.010	0.0041	0.0056	0.0145	0.0039	0.0041	0.0058	0.0029	0.0187	0.0067	0.0158		
Potassium (K), total	mg/L		1.78	1.95	1.86	1.89	2.22	1.66	1.46	0.968	1.19	1.27	1.27	1.34	1.49	1.68	1.68	1.78	1.92	0.9	1.5
Selenium (Se), total	mg/L	**0.002**	0.00111	0.00102	0.000916	0.000868	0.000777	0.000652	0.000643	0.000668	0.0007	0.000645	0.000851	0.00126	0.00118	0.000978	0.00103	0.000966	0.000999	<0.0005	0.0005
Silicon (Si), total	mg/L		3.68	3.95	3.75	3.63	3.66	2.7	2.63	2.47	2.8	3.13	2.76	2.72	3.54	3.57	3.96	3.7	4.03	1.7	3
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	0.00002	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.0000050	<0.0000050		
Sodium (Na), total	mg/L		1.23	1.36	1.3	1.36	1.29	0.74	0.91	0.667	0.84	0.71	0.795	0.857	1.05	1.16	1.17	1.29	1.33	0.6	1
Strontium (Sr), total	mg/L		0.189	0.221	0.21	0.21	0.203	0.125	0.143	0.13	0.134	0.119	0.126	0.156	0.183	0.195	0.19	0.204	0.23	0.11	0.177
Sulphur (S), total	mg/L		13.2	13.7	12.9	11.9	10.1	<15	<15	11.1	12.2	11.8	12.4	13.2	13.5	13.7	12.7	12.5	13	5.5	6.9
Thallium (Tl), total	mg/L	**0.0008**	0.000002	0.000002	<0.0000020	0.000002	0.000002	0.000003	0.000003	<0.0000020	0.000003	0.000009	0.000003	0.000003	<0.0000020	0.000002	0.000006	<0.0000020	0.000002		
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		
Titanium (Ti), total	mg/L		0.00058	0.00059	0.00087	0.00111	0.00103	<0.0050	<0.0050	<0.00050	<0.0020	0.017	0.00174	0.00147	<0.00050	0.00067	0.0069	<0.00050	0.00055	<0.003	<0.003
Uranium (U), total	mg/L	**0.015**	0.00146	0.00162	0.0015	0.00158	0.00142	0.000796	0.000937	0.000798	0.000735	0.000647	0.000973	0.00114	0.00137	0.00138	0.00151	0.00147	0.00153		
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00050	<0.00050	<0.00020	<0.00020	0.0008	<0.00020	<0.00020	<0.00020	<0.00020	0.00038	<0.00020	<0.00020		
Zinc (Zn), total	mg/L	*	**0.0761**	0.0651	0.0638	0.0497	0.0457	**0.035**	0.0199	0.0142	**0.0392**	**0.0642**	**0.0652**	**0.091**	**0.0758**	0.0645	**0.0919**	0.0455	0.0468	<0.01	<0.01
Zirconium (Zr), total	mg/L		0.00011	0.00019	0.00017	0.00013	0.00011	0.00013	<0.00010	<0.00010	<0.00010	0.00014	<0.00010	<0.00010	<0.00010	<0.00010	0.0002	<0.00010	<0.00010		
Aluminum (Al), dissolved	mg/L	*	0.00134	0.00227	0.00106	0.00542	0.00655	0.00764	0.00381	0.00192	0.00263	0.00748	0.00498	0.00314	0.00141	0.001	0.00132	0.00422	0.00093		<0.02
Antimony (Sb), dissolved	mg/L		0.000051	0.000028	0.000027	0.000034	0.000043	0.00006	0.00006	0.000058	0.000081	0.000072	0.000069	0.000058	0.000046	0.000039	0.000044	0.000028	0.000032		
Arsenic (As), dissolved	mg/L		0.000176	0.000154	0.000114	0.000124	0.00029	0.00043	0.000267	0.000195	0.000249	0.000288	0.000279	0.000175	0.000136	0.000118	0.00011	0.000097	0.000101		
Barium (Ba), dissolved	mg/L		0.0863	0.103	0.108	0.107	0.0908	0.0614	0.0626	0.0471	0.0621	0.0555	0.0646	0.0681	0.0864	0.0966	0.096	0.102	0.0975		0.076
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.008
Cadmium (Cd), dissolved	mg/L	*	0.000117	0.00004	0.000024	0.000025	0.000081	0.000107	0.000059	0.000069	0.000122	0.000151	**0.000323**	**0.000357**	0.000137	0.000085	0.00008	0.000072	0.000084		
Calcium (Ca), dissolved	mg/L		55.1	61.7	58.6	61.2	53.9	37.2	41.5	38.8	42.4	40.8	49.9	47.8	56.3	60	58.5	61.9	69.2		54.9
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		
Cobalt (Co), dissolved	mg/L		0.00009	0.000066	0.000058	0.000052	0.000058	0.000045	0.000018	0.00001	<0.0000050	0.000024	0.000025	0.000034	0.000097	0.000102	0.000076	0.00005	0.000046		
Copper (Cu), dissolved	mg/L		0.000214	0.000132	0.000143	0.000125	0.000439	0.000853	0.000565	0.000533	0.000699	0.00165	0.00119	0.000657	0.00023	0.000178	0.000174	0.000141	0.000178		<0.001
Iron (Fe), dissolved	mg/L	**0.35**	0.111	0.0091	0.0061	0.0072	0.0894	0.246	0.136	0.044	0.0605	0.0372	0.0684	0.0661	0.0158	0.0346	0.0349	0.0188	0.021		0.16
Lead (Pb), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	0.000006	0.000012	0.000227	0.000047	0.000015	0.000024	0.000155	0.000115	0.000044	0.000005	<0.0000050	0.000029	<0.0000050	<0.0000050		
Lithium (Li), dissolved	mg/L		0.00216	0.00285	0.00348	0.00449	0.00393	0.00168	0.0021	<0.00050	0.00131	0.0007	0.00119	0.00079	0.00238	0.00301	0.00355	0.00403	0.00399		
Magnesium (Mg), dissolved	mg/L		7.5	7.77	7.7	7.76	7.32	4.73	5.46	5.42	5.17	5.53	5.4	5.8	6.99	7.76	7.8	7.54	8.32		5.52
Manganese (Mn), dissolved	mg/L		0.11	0.0981	0.0877	0.0716	0.0592	0.0348	0.0165	0.00624	0.00147	0.0128	0.0166	0.0245	0.0923	0.117	0.0869	0.0612	0.0611		0.05
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020		
Molybdenum (Mo), dissolved	mg/L		0.000575	0.00069	0.000709	0.000731	0.000641	0.000515	0.000542	0.000431	0.000496	0.000396	0.000404	0.000461	0.000546	0.000626	0.000613	0.000688	0.000664		
Nickel (Ni), dissolved	mg/L		0.000479	0.000394	0.00042	0.000413	0.000471	0.00048	0.000465	0.00028	0.000368	0.000472	0.000469	0.000431	0.000491	0.000499	0.000467	0.000395	0.000394		
Phosphorus (P), dissolved	mg/L		<0.0020	<0.0020	0.0031	<0.0020	<0.0020	0.0057	0.0039	0.0035	<0.0020	<0.0020	<0.0020	<0.0020	0.0025	0.0027	0.0037	0.0048	0.0052		
Potassium (K), dissolved	mg/L		1.7	1.87	1.87	1.93	2.02	1.66	1.47	0.928	1.16	1.21	1.4	1.29	1.47	1.6	1.66	1.75	1.95		1.2
Selenium (Se), dissolved	mg/L		0.00118	0.000995	0.000862	0.000901	0.000811	0.000618	0.000562	0.000529	0.000687	0.000638	0.000894	0.00123	0.00111	0.000986	0.000981	0.000957	0.000951		<0.0005
Silicon (Si), dissolved	mg/L		3.77	3.84	3.68	3.68	3.54	2.52	2.61	2.05	2.83	2.51	2.8	2.73	3.48	3.74	3.49	3.5	3.42		2.92
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000008	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		
Sodium (Na), dissolved	mg/L		1.22	1.3	1.3	1.34	1.25	0.738	0.925	0.638	0.797	0.753	0.798	0.851	1.01	1.13	1.19	1.33	1.41		1.01
Strontium (Sr), dissolved	mg/L		0.184	0.213	0.206	0.211	0.184	0.122	0.138	0.12	0.122	0.122	0.147	0.146	0.175	0.198	0.185	0.199	0.21		0.163
Sulphur (S), dissolved	mg/L		14	13	12	11.5	10.3	6.4	7.3	10.4	12.1	11.9	12.9	13	12.2	13.4	11.5	11.5	11.2		6.85
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	0.000002	0.000002	0.000002	0.000003	0.000003	0.000002	0.000003	0.000002	0.000003	0.000003	0.000002	<0.0000020	<0.0000020	0.000002		
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		<0.003
Uranium (U), dissolved	mg/L		0.00137	0.00153	0.00146	0.00157	0.00138	0.000764	0.000887	0.000783	0.000718	0.000679	0.000948	0.0011	0.00129	0.00139	0.00142	0.00154	0.00136		
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		
Zinc (Zn), dissolved	mg/L		0.0434	0.04	0.0382	0.0342	0.0319	0.0248	0.0129	0.015	0.0241	0.0281	0.056	0.0669	0.0637	0.061	0.0506	0.0422	0.0437		0.004
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9
			03-Dec-1994	05-Apr-1995	11-Jun-1995	22-Aug-1995	13-Sep-1995	23-Aug-2002	19-Aug-2004	24-Aug-2006	14-Aug-2008	19-Aug-2010	16-Aug-2012	21-Aug-2014	30-Apr-2015	11-May-2015	13-May-2015	23-Jun-2015	24-Jun-2015	29-Jul-2015	23-Aug-2015
Discharge (Flow)	L/s															967.5	575.7		275.3	202.2	240.8
Total Suspended Solids	mg/L		<4	<4	<4	<4	15	<4	<4	<4	<4	2	<4.0	<4.0	1.6	66.2		1.3		1.2	1.9
pH (field)	pH units	6.5 - 9								8	8.3	7.4	7.5	7.97	7.08	7.59		7.48		7.52	7.46
pH (lab)	pH units	6.5 - 9	7.3	7.6	7.7	8	7.9		8.2	8	8.1	8.02	8.01	8.16	7.73	7.52		8.1		7.9	7.95
Specific Conductance (field)	µS/cm									285	340	333	254	355	351.9	81.1		242.1		297.4	272.5
Specific Conductance (lab)	µS/cm		351	387	217	278	223	269	365	314	310	344	270	342	399	96.8		244		289	283
Temperature (field)	C									5.2	7.5	8.6	6.4	7.1	-0.2	-0.2		12		9	6.6
Dissolved Oxygen (field)	mg/L	6.5								10.3	9.1		10.6		10.6	11.9		9.6		9.88	10.2
Dissolved Oxygen (field)	%									86	89		86.1		86	95		89.1		85.6	98
ORP (field)	mV														191.3	133.7		1.2		-0.9	184.1
Turbidity (internal)	NTU																	0.71		0.81	1.11
Hardness (from total)	mg/L		190	214	118	165		147	196	180	188	154	130	172	208	54		186		159	144
Hardness (from dissolved)	mg/L		196	209	115	164	170	157	203	180	171	179	145	167	216	50.5		134		156	146
Colour	TCU														24.4	218		14		11	13.3
Total Acidity	mg/L							1.2	1.3	1.4	1.7	4.9	1.71	<0.50	4.66	0.94		<0.50		<0.50	0.8
Acidity (pH 4.5)	mg/L							<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50		<0.50		<0.50	<0.50
Alkalinity, total	mg/L		166	194	92.2	138	135	120	173	144	140	160	111	150	176	42.4		101		124	114
Alkalinity, bicarbonate HCO3	mg/L					168	165	146	211	176	170	190	135	183	214	51.7		123		151	139
Alkalinity, hydroxide OH	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50		<0.50		<0.50	<0.50
Alkalinity, carbonate CO3	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.50	<0.50	<0.50	<0.50		<0.50		<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L					<0.5	<0.5	<1	<1.0	<0.5	0.6	<0.5	<0.50	<0.50	<0.50	<0.50		<0.50		<0.50	<0.50
Chloride	mg/L	120													<0.50	1		0.72		<0.50	<0.50
Fluoride	mg/L	0.12													0.097	0.032		0.057		0.066	0.063
Sulphate, dissolved	mg/L	*	28.4	23.9	18.9	20.5	25.7	25.3	22.7	24.8	23	26	25.5	25.2	29.4	<0.50		25.8		28.2	31
Cyanide, total	mg/L	0.005		<0.001	<0.001	<0.001	<0.001								<0.00050	0.00151		<0.00050		<0.00050	<0.00050
Cyanide, Weak Acid Dissociable	mg/L	0.005		<0.001	<0.001	<0.001	<0.001								<0.00050	0.00146		<0.00050		0.00068	<0.00050
Ammonia (N)	mg/L	*	0.025	0.018	<0.005	<0.005	<0.005	<0.005	0.022	<0.005	<0.005	0.12	0.0051	0.019	0.0241	0.01		0.0085		0.01	<0.0050
Nitrite (N)	mg/L	0.02		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	0.0023			<0.0020		<0.0020	0.002
Nitrate (N)	mg/L	3.0	0.18	0.2	<0.02	<0.02	0.04	<0.02	0.03	0.02	0.05	0.02	0.028	0.033	0.116	<0.020		0.0115		0.034	0.0387
Nitrite & Nitrate, as N	mg/L		0.18	0.2	0.02	<0.02	0.04	<0.02	0.03	0.02	0.05	0.02	0.028	0.033	0.118	<0.020		0.0115		0.034	0.0407
Phosphorus,total-colourimetric	mg/L	0.035	<0.003	<0.003	0.012	0.007	0.032								0.006	0.0272		0.0023		<0.0020	0.0059
Phosphorus, Total Dissolved	mg/L														0.0059	0.028		<0.0020		0.0027	0.0024
Dissolved Organic Carbon	mg/L														1.89	16.1		2.63		0.56	1.7
Aluminum (Al), total	mg/L	*		0.012	0.023	0.045		0.02	0.01	0.007	0.025	0.008	0.0197	0.0218	0.0117	**0.689**		0.0626		0.026	0.0142
Antimony (Sb), total	mg/L	0.009											0.000064	0.000051	0.00003	0.000058		0.00006		0.000063	0.000063
Arsenic (As), total	mg/L	0.005		0.00026	0.0006	0.0009			0.001	<0.001	0.0004	0.0002	0.000236	0.00108	0.000387	0.00192		0.000455		0.000303	0.000279
Barium (Ba), total	mg/L		0.083	0.09	0.049	0.067		0.068	0.086	0.067	0.074	0.088	0.0727	0.073	0.105	0.0606		0.0609		0.0815	0.0685
Beryllium (Be), total	mg/L			<0.0001	<0.0001	<0.0001					<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	0.000043		<0.000010		<0.000010	<0.000010
Bismuth (Bi), total	mg/L			<0.002	<0.002	<0.002					<0.001	<0.001	<0.0000050	<0.0000050	<0.0000050	<0.000020		<0.0000050		<0.0000050	<0.000020
Boron (B), total	mg/L	1.5	<0.04	0.062	0.023	0.024		<0.008	<0.008	<0.008	<0.05	<0.05	<0.05	<0.02	<0.01	<0.050		<0.010		<0.010	<0.050
Cadmium (Cd), total	mg/L	*		0.00002	0.00003	0.00004			0.00004	0.00003	**0.001**	0.00005	0.000058	0.000057	0.0000637	**0.000378**		0.000084		0.0000703	0.000069
Calcium (Ca), total	mg/L		65	73	39	53		46.7	60.3	55.4	59.3	51.1	43.1	51.7	69.5	17.8		66.6		53	48
Chromium (Cr), total	mg/L	0.001		**0.0014**	0.0005	0.0004			<0.001	<0.001	<0.001	<0.001	<0.00010	0.00011	<0.00010	**0.00179**		0.00015		<0.00010	<0.00050
Cobalt (Co), total	mg/L			<0.0004	<0.0004	<0.0004			<0.0005	<0.0005	<0.0005	<0.0005	0.00007	0.000111	0.000217	0.000859		0.000147		0.0000864	0.000061
Copper (Cu), total	mg/L	*		0.0004	0.001	0.0006			0.0005	0.0004	0.0007	0.0004	0.000605	0.000503	0.000369	**0.00469**		0.00105		0.000542	0.00096
Iron (Fe), total	mg/L	0.3		**0.59**	0.17	**0.42**		0.279	0.213	0.081	**0.373**	**0.564**	**0.311**	**0.307**	**0.486**	**5.2**		**0.866**		**0.431**	0.266
Lead (Pb), total	mg/L	*		0.0001	0.0005	0.0002			<0.0005	<0.0005	0.0019	<0.0002	0.000068	0.00007	0.000112	0.00247		0.000482		0.0000966	0.000067
Lithium (Li), total	mg/L									0.002	<0.005	<0.005	0.00191	0.00258	0.00472	0.0012		<0.00050		0.00233	0.00193
Magnesium (Mg), total	mg/L		6.7	7.8	5.1	7.9		7.42	11.1	9.35	9.8	6.41	5.42	10.4	8.33	2.34		4.75		6.38	5.76
Manganese (Mn), total	mg/L	*	0.096	0.15	0.026	0.1		0.062	0.087	0.021	0.055	0.081	0.0497	0.0926	0.15	0.234		0.0434		0.0549	0.0405
Mercury (Hg), total	mg/L	0.000026		<0.00001	<0.00001	<0.00001				<0.00001	<0.00002	<0.00002		<0.0000020	<0.0000020	0.0000033		<0.0000020		<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	0.073		<0.0004	<0.0004	<0.0004					<0.001	<0.001	0.00049	0.0014	0.000719	0.000435		0.000471		0.000563	0.000576
Nickel (Ni), total	mg/L	*		0.001	<0.001	<0.001					<0.001	<0.001	0.000391	0.00058	0.000667	0.00271		0.000481		0.000475	0.00036

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9
			03-Dec-1994	05-Apr-1995	11-Jun-1995	22-Aug-1995	13-Sep-1995	23-Aug-2002	19-Aug-2004	24-Aug-2006	14-Aug-2008	19-Aug-2010	16-Aug-2012	21-Aug-2014	30-Apr-2015	11-May-2015	13-May-2015	23-Jun-2015	24-Jun-2015	29-Jul-2015	23-Aug-2015
Phosphorus (P), total	mg/L			0.005	0.012	0.016									0.0045	0.098		0.0116		0.0046	0.026
Potassium (K), total	mg/L		1.4	1.8	1.1	1.4		2	1	2	1.22	1.38	1.26	1.17	2.2	2.21		1.19		1.53	1.3
Selenium (Se), total	mg/L	**0.002**		0.0011	<0.00005	<0.00005			<0.001	<0.001	0.0006	0.0004	0.000647	0.000673	0.00104	0.000303		0.000973		0.00064	0.00069
Silicon (Si), total	mg/L		3.4	3.8	2.1	2.9				2.91	2.84	3.16	2.59	3.03	4.33	2.69		2.38		2.92	2.64
Silver (Ag), total	mg/L	**0.00025**		<0.00001	<0.00001	<0.00001							<0.0000050	<0.0000050	<0.0000050	0.0000284		0.0000107		<0.0000050	<0.0000050
Sodium (Na), total	mg/L		1.2	1.6	0.75	1		0.93	1.2	1.05	7.28	0.98	0.864	1.13	1.52	0.4		0.748		1.06	0.97
Strontium (Sr), total	mg/L		0.186	0.21	0.11	0.16		0.143	0.186	0.155	0.185	0.181	0.143	0.176	0.248	0.0573		0.139		0.171	0.152
Sulphur (S), total	mg/L		9.2	7.7	6.3	7.7		8.8	8	8.7	9	8	<10	<15	10.5	<15		8.7		10.3	<15
Thallium (Tl), total	mg/L	**0.0008**											<0.0000020	<0.0000020	<0.0000020	0.0000125		<0.0000020		<0.0000020	0.000002
Tin (Sn), total	mg/L			<0.002	<0.002	<0.002							<0.00020	<0.00020	<0.00020	<0.00020		<0.00020		<0.00020	<0.00020
Titanium (Ti), total	mg/L		<0.003	0.0029	0.002	0.0032		<0.003	<0.003	<0.003	<0.005	<0.005	0.00086	0.00104	0.0007	0.0323		0.00442		0.00173	<0.0050
Uranium (U), total	mg/L	**0.015**							0.00201	0.0015	0.0013	0.0009	0.000668	0.00169	0.00156	0.000359		0.000624		0.000989	0.000861
Vanadium (V), total	mg/L			<0.0003	<0.0003	<0.0003							<0.00020	<0.00020	<0.00020	0.00218		0.00032		<0.00020	<0.00050
Zinc (Zn), total	mg/L	*		0.013	0.007	0.009		0.006	<0.005	<0.005	0.009	0.006	0.0109	0.00771	0.00905	**0.0479**		0.0137		0.0098	0.0103
Zirconium (Zr), total	mg/L			0.0003	0.0004	0.0011					<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	0.0005		<0.00010		<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*		0.012	0.014	0.012	0.03	<0.02	0.002	0.001	0.007	<0.003	0.00556	0.002	0.00345	**0.0556**		0.00228		0.00165	0.00178
Antimony (Sb), dissolved	mg/L												0.00006	0.00005	0.000056	0.000037		0.000063		0.000066	0.000057
Arsenic (As), dissolved	mg/L			0.00013	0.0004	0.0006	0.00065		<0.001	<0.001	0.0003	0.0003	0.000222	0.000756	0.000288	0.000308		0.000208		0.000212	0.00021
Barium (Ba), dissolved	mg/L		0.082	0.086	0.048	0.065	0.073	0.072	0.085	0.069	0.069	0.098	0.0713	0.0721	0.107	0.0375		0.0658		0.0794	0.0695
Beryllium (Be), dissolved	mg/L			<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010		<0.000010		<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L			<0.002	<0.002	<0.002	<0.002				<0.001	<0.001	<0.0000050	<0.0000050	0.0000081	<0.0000050		<0.0000050		<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.008	<0.004	0.024	0.02	0.013	<0.008	<0.008	<0.008	<0.05	<0.05	<0.05	<0.02	<0.01	<0.010		<0.010		<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*		0.00002	0.00002	<0.00001	**0.0005**		0.00002	0.00002	0.00007	0.00003	0.000044	0.000031	0.0000606	0.0000685		0.0000341		0.0000399	0.000043
Calcium (Ca), dissolved	mg/L		67.3	71	38	53	55	50.1	62.6	55	54.2	60.3	48.8	49.2	72	16.8		45.4		52.2	48.7
Chromium (Cr), dissolved	mg/L			0.0007	0.0006	0.0004	0.0024		<0.001	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00010	0.00011		<0.00010		<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L			<0.0004	<0.0004	<0.0004	<0.0004		<0.0005	<0.0005	<0.0005	<0.0005	0.00006	0.000055	0.000147	0.0000932		0.0000263		0.0000459	0.000044
Copper (Cu), dissolved	mg/L			0.0004	0.0009	0.0005	0.0024		0.0004	0.0004	0.0004	0.0004	0.000581	0.000306	0.000398	0.00171		0.00066		0.000382	0.000574
Iron (Fe), dissolved	mg/L	**0.35**		0.11	0.092	0.054	**0.53**	0.067	0.009	0.026	0.102	0.229	0.186	0.0852	0.0889	0.289		0.0646		0.0855	0.101
Lead (Pb), dissolved	mg/L			0.0005	0.0002	0.0001	0.0026		<0.0005	<0.0005	<0.0002	<0.0002	0.000018	0.000006	0.0000067	0.0000565		0.0000067		<0.0000050	0.000007
Lithium (Li), dissolved	mg/L									0.002	<0.005	<0.005	0.00191	0.00264	0.00511	0.00101		0.00156		0.00219	0.00174
Magnesium (Mg), dissolved	mg/L		6.76	7.6	5	7.8	7.9	7.85	11.4	9.55	8.58	6.83	5.61	10.6	8.94	2.09		5.04		6.32	5.8
Manganese (Mn), dissolved	mg/L		0.098	0.14	0.019	0.058	0.11	0.048	0.076	0.011	0.031	0.09	0.0483	0.0581	0.147	0.0436		0.0183		0.0409	0.0337
Mercury (Hg), dissolved	mg/L			<0.00001	<0.00001	<0.00001	<0.00001			<0.00001	<0.00002	<0.00002		0.0000042	<0.0000020	0.0000034		<0.0000020		<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L			<0.0004	0.0004	0.0005	0.0009				<0.001	<0.001	0.000463	0.00142	0.000699	0.000273		0.000511		0.000589	0.000568
Nickel (Ni), dissolved	mg/L			0.001	<0.001	<0.001	0.004				<0.001	<0.001	0.000318	0.00042	0.00068	0.00101		0.000355		0.000332	0.000514
Phosphorus (P), dissolved	mg/L			<0.004	0.011	0.009	0.019								0.0021	0.0138		0.0026		<0.0020	<0.0020
Potassium (K), dissolved	mg/L		1.6	1.7	1.1	1.3	1.5	1	1	<1	1.09	1.57	1.31	1.16	2.28	2.22		1.38		1.49	1.39
Selenium (Se), dissolved	mg/L			0.001	<0.00005	<0.00005	0.00013		<0.001	<0.001	0.0007	0.0004	0.000479	0.000647	0.00106	0.000218		0.000576		0.000625	0.000686
Silicon (Si), dissolved	mg/L		3.47	3.7	2	2.8	2.8			2.94	3.11	3.4	2.93	2.91	4.41	1.65		2.5		2.82	2.72
Silver (Ag), dissolved	mg/L			<0.00001	<0.00001	<0.00001	<0.00001						<0.0000050	0.000006	<0.0000050	<0.0000050		<0.0000050		<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		1.11	1.6	0.75	1	1.1	0.97	1.32	1.04	0.93	1.19	0.91	1.1	1.61	0.353		0.877		1.07	0.976
Strontium (Sr), dissolved	mg/L		0.184	0.2	0.11	0.15	0.16	0.153	0.187	0.157	0.164	0.203	0.141	0.171	0.263	0.0559		0.15		0.178	0.156
Sulphur (S), dissolved	mg/L		8.97	7.5	6.2	7.6	8.9	9.5	8.2	8.7	9	9	<10	<15	10.8	<3.0		8.8		10.3	10.8
Thallium (Tl), dissolved	mg/L												<0.0000020	<0.0000020	<0.0000020	<0.0000020		<0.0000020		<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L			0.004	<0.002	0.003	0.004						<0.00020	<0.00020	<0.00020	<0.00020		<0.00020		<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.003	0.0027	0.0014	0.0016	0.0022	<0.003	<0.003	<0.003	<0.005	<0.005	<0.00050	<0.00050	<0.00050	0.00068		<0.00050		<0.00050	<0.00050
Uranium (U), dissolved	mg/L								0.00035	0.0016	0.0012	0.0011	0.000642	0.00169	0.00165	0.000185		0.000707		0.000964	0.000908
Vanadium (V), dissolved	mg/L			<0.0003	<0.0003	<0.0003	<0.0003						<0.00020	<0.00020	<0.00020	<0.00020		<0.00020		<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L			0.011	0.018	0.005	0.014	<0.005	<0.005	0.005	0.006	<0.005	0.00966	0.00263	0.00891	0.0134		0.00561		0.00646	0.00705
Zirconium (Zr), dissolved	mg/L			<0.0003	<0.0003	0.0011	0.0009				<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	0.00014		<0.00010		<0.00010	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9
			10-Sep-2015	15-Oct-2015	20-Nov-2015	02-Dec-2015	20-Jan-2016	09-Feb-2016	20-Mar-2016	20-Apr-2016	04-May-2016	19-May-2016	14-Jun-2016	27-Jul-2016	27-Aug-2016	07-Sep-2016	04-Oct-2016	16-Nov-2016	20-Dec-2016	16-Jan-2017	23-Feb-2017
Discharge (Flow)	L/s		313.4	165.5	79.2	80.2	45.2	40.4	26.9	43.2	94.5		220.3	183.4	535	471.7	301.7	87.3	59.4	52.7	30.1
Total Suspended Solids	mg/L		1.5	1.5	1.1	<1.0	1	1.4	<1.0	2.4	4.1	13.8	2.1	1.1	19.1	5.9	2.7	1.6	1.8	2.2	4.5
pH (field)	pH units	**6.5 - 9**	7.6	7.31	8.71	7.05	7.21	7.01	6.97	7.31	7.31	7.33	7.1	7.19	7.79	7.52	7.5	7.05	7.13	7.16	6.76
pH (lab)	pH units	**6.5 - 9**	8.13	8.05	8.15	7.75	8	7.9	8.14	8.04	7.84	8.16	8.07	8.22	8.05	7.97	7.95	7.89	7.75	7.93	7.8
Specific Conductance (field)	µS/cm		280.6	348.1	376.1	375.1	397.1	392.1	404.7	301.7	236.7	235.9	250.6	286.1	295	283.7	297.3	331.1	397.4	384.2	450.4
Specific Conductance (lab)	µS/cm		298	337	362	379	405	421	480	361	239	236	257	283	251	298	331	380	417	400	432
Temperature (field)	C		5.7	0	0	0	0	0	0.8	0.7	2.6	4	7.9	8.4	6.8	5.8	-0.1	-0.1	-0.1	-0.3	-0.5
Dissolved Oxygen (field)	mg/L	**6.5**	10.6	12.2	12.1	10.7	10.9	10.1	9.62	12.04	10.78	11.8	9.77	9.53	10.3	8.98	11.33	11.91	11.32	11.3	11.12
Dissolved Oxygen (field)	%		100	97	98	88	88	81	78.5	97.5	93.3	105	96.8	94.5	98.9	84.8	90.6	95.4	92.3	94.2	87.7
ORP (field)	mV		48.9	109.8	34.8	79.1	299.5	273.7	60.4	15.9	15.9	37.6	134.1	8.5	244.7	6.1	-32.2	18.4	55	82.7	104.5
Turbidity (internal)	NTU		1.622	0.95	1.28	1.05	1.054	1.99	1.054	1.758	1.55		0.218	1.12	7.76	1.26	1.276	0.458	1.45	1.012	3.394
Hardness (from total)	mg/L		169	181	186	199	228	214	239	153	121	105	132	145	123	150	172	198	218	211	225
Hardness (from dissolved)	mg/L		167	176	192	186	219	203	250	188	116	122	127	147	128	157	162	188	218	214	232
Colour	TCU		12.6	8.6	6.9	16.4	18.4	28.3	<5.0	12	31.2	16.3			15.5						
Total Acidity	mg/L		<0.50	<0.50	<0.50	<0.50	3.3	3.76	<0.50	3.73	3.72	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.97	7.48	3.42	9.09
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		120	139	153	161	184	193	220	166	106	101	106	114	92.9	120	135	166	188	181	193
Alkalinity, bicarbonate HCO3	mg/L		146	170	187	197	224	235	268	203	129	124	129	139	113	147	164	203	229	221	235
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**	<0.50	0.56	0.52	<0.50	0.98	0.87	0.55	1.1	1.1	0.53	<0.50	0.54	0.71	0.77	0.92	0.62	0.75	0.82	0.76
Fluoride	mg/L	**0.12**	0.059	0.064	0.079	0.068	0.088	0.086	0.061	0.069	0.065	0.07	0.056	0.05	0.054	0.062	0.067	0.082	0.085	0.086	0.1
Sulphate, dissolved	mg/L	*	33.8	32.2	34.2	31.5	34.1	34.1	41.7	26.4	16.6	22.1	29.5	33.3	30.3	35.7	33.3	34.2	39.4	32.6	34.3
Cyanide, total	mg/L	**0.005**	0.00071	<0.00050	<0.00050	<0.00050	0.00055	<0.00050	<0.00050	0.00051	0.00066	0.00057	0.00107	<0.00050	<0.00050	0.00065	<0.00050	0.00057	0.00054	<0.00050	<0.00050
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	0.00077	0.00053	<0.00050	<0.00050	0.00065	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00144	0.00057	<0.00050	0.0007	<0.00050	0.00061	<0.00050	<0.00050	<0.00050
Ammonia (N)	mg/L	*	<0.0050	0.0185	0.0194	0.0234	0.0339	0.0172	<0.0050	0.0188	0.0171	0.021	0.022	0.035	0.1	0.036	0.017	0.02	0.05	0.035	0.039
Nitrite (N)	mg/L	**0.02**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0023	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3.0**	0.0453	0.139	0.171	0.175	0.199	0.191	0.507	0.123	0.0571	0.0355	0.0274	0.0274	0.0197	0.0902	0.173	0.208	0.231	0.211	0.227
Nitrite & Nitrate, as N	mg/L		0.0453	0.139	0.171	0.175	0.199	0.191	0.507	0.123	0.0571	0.0355	0.0274	0.0274	0.022	0.0902	0.173	0.208	0.231	0.211	0.227
Phosphorus,total-colourimetric	mg/L	**0.035**	0.0022	0.0038	0.003	0.0023	0.0025	0.0021	<0.0020	0.0027	0.006	0.0042	0.003	0.004	0.0308	0.0045	0.0062	0.0021	0.0028	0.0048	0.0043
Phosphorus, Total Dissolved	mg/L		0.0023	0.0026	<0.0020	0.0021	0.0021	0.0031	0.0022	0.0026	0.0067	0.0034	0.0024	0.0031	0.0231	0.0048	0.0045	0.0022	0.0026	0.0037	0.0043
Dissolved Organic Carbon	mg/L		1.6	1.59	1.88	1.9	0.84	<0.50	<0.50	3.36	3.8	1.25	0.96	2.62	3.93	3.08	1.64	1.11	1.71	<0.50	1.05
Aluminum (Al), total	mg/L	*	0.0346	0.0227	0.0194	0.0226	0.00854	0.0193	0.00272	0.0225	0.0422	**0.175**	0.0291	0.0139	**0.216**	0.0357	0.0405	0.0147	0.00831	0.0127	0.0153
Antimony (Sb), total	mg/L	**0.009**	0.00007	0.000052	0.000043	0.000041	0.000025	0.000032	0.00002	<0.000050	<0.000050	0.000054	0.000063	0.000064	0.000117	0.000051	0.00004	0.000042	0.000035	0.000047	0.000028
Arsenic (As), total	mg/L	**0.005**	0.000427	0.000357	0.000377	0.00037	0.000416	0.000682	0.000117	0.000304	0.00038	0.000483	0.000267	0.000256	0.000925	0.000268	0.000371	0.000381	0.000235	0.000242	0.000315
Barium (Ba), total	mg/L		0.083	0.0814	0.0949	0.0979	0.108	0.115	0.18	0.0784	0.0656	0.0534	0.0634	0.0738	0.0682	0.0694	0.0764	0.113	0.107	0.0984	0.108
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000013	<0.000010	0.000011	0.000014	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000020	<0.000020	<0.000020	<0.0000050	<0.000010	0.00001	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050	<0.050	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*	0.000105	0.000092	0.000097	0.000082	0.000074	0.000085	0.000042	0.000073	0.000076	0.000076	0.000056	0.000062	0.000145	0.000104	0.000155	0.000129	0.000075	0.000075	0.000173
Calcium (Ca), total	mg/L		56.5	60.9	61.8	66.2	76.4	72	78.7	50.7	40.2	35.4	44.3	48.4	41.1	49.6	57.9	66.3	72.7	70	75.6
Chromium (Cr), total	mg/L	**0.001**	0.00012	0.0004	<0.00010	<0.00010	<0.00010	0.00015	0.00021	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	0.00044	0.00011	0.00013	<0.00010	<0.00010	0.00012	<0.00010
Cobalt (Co), total	mg/L		0.000112	0.00011	0.000127	0.000129	0.000176	0.000192	0.000006	0.000138	0.000105	0.000258	0.000084	0.000058	0.000239	0.000082	0.000133	0.000109	0.000122	0.000127	0.000186
Copper (Cu), total	mg/L	*	0.000879	0.000514	0.000359	0.000341	0.000263	0.000381	0.000069	0.00061	0.00124	0.00174	0.000677	0.00078	0.00291	0.00108	0.000789	0.00038	0.00028	0.000287	0.000327
Iron (Fe), total	mg/L	**0.3**	**0.466**	**0.548**	**1.11**	**1.18**	**1.54**	**2.81**	0.0028	**0.476**	**0.527**	**0.671**	**0.328**	0.287	**0.804**	0.265	**0.583**	**1.17**	**0.448**	**0.538**	**0.737**
Lead (Pb), total	mg/L	*	0.000227	0.000165	0.000078	0.00006	0.000056	0.000196	0.000033	0.00012	0.000283	0.000585	0.000159	0.000076	0.00233	0.000229	0.000266	0.000115	0.000067	0.000346	0.000075
Lithium (Li), total	mg/L		0.00174	0.002	0.00341	0.00306	0.00414	0.00438	0.00197	0.00365	0.00248	0.00195	0.00149	0.00235	0.00195	0.00138	0.0016	0.00348	0.00377	0.00458	0.00502
Magnesium (Mg), total	mg/L		6.83	6.98	7.7	8.11	8.96	8.37	10.2	6.36	4.93	3.99	5.26	5.83	4.94	6.46	6.67	7.93	8.77	8.78	8.78
Manganese (Mn), total	mg/L	*	0.0431	0.0609	0.0888	0.0898	0.127	0.135	0.00198	0.0852	0.0573	0.0402	0.0379	0.0414	0.0487	0.029	0.06	0.085	0.0989	0.111	0.133
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	0.00054	0.000661	0.000623	0.000641	0.000703	0.000739	0.00145	0.000564	0.000571	0.000415	0.000497	0.000517	0.000438	0.000496	0.000572	0.000747	0.000707	0.000681	0.000698
Nickel (Ni), total	mg/L	*	0.00132	0.000656	0.000414	0.000415	0.00051	0.000552	0.000102	0.0005	0.0007	0.00083	0.000361	0.00035	0.00089	0.000489	0.000504	0.000465	0.000434	0.000508	0.000535

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9
			10-Sep-2015	15-Oct-2015	20-Nov-2015	02-Dec-2015	20-Jan-2016	09-Feb-2016	20-Mar-2016	20-Apr-2016	04-May-2016	19-May-2016	14-Jun-2016	27-Jul-2016	27-Aug-2016	07-Sep-2016	04-Oct-2016	16-Nov-2016	20-Dec-2016	16-Jan-2017	23-Feb-2017
Phosphorus (P), total	mg/L		0.0077	0.0052	0.0086	0.0044	0.007	0.0154	<0.0020	<0.010	<0.010	0.017	0.0095	0.0053	0.0168	0.0084	0.0057	0.0041	0.0061	0.0046	0.0121
Potassium (K), total	mg/L		1.6	1.52	1.69	1.71	1.97	1.92	1.31	1.6	1.59	1.17	1.21	1.19	1.28	1.34	1.31	1.49	1.68	1.68	1.88
Selenium (Se), total	mg/L	**0.002**	0.000967	0.00144	0.00126	0.00124	0.00129	0.00116	**0.00307**	0.000695	0.000627	0.000529	0.000611	0.000615	0.000655	0.00104	0.00138	0.00141	0.00139	0.00114	0.00126
Silicon (Si), total	mg/L		2.96	3.32	3.73	3.88	4.27	4.08	3.36	3.52	2.78	2.15	2.36	3.03	3.44	2.88	3.01	3.69	3.92	3.95	3.99
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	0.000007	<0.000010	0.000017	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L		1	1.08	1.31	1.36	1.58	1.55	1.1	1.12	0.8	0.67	0.759	0.95	0.81	0.946	0.964	1.15	1.41	1.43	1.67
Strontium (Sr), total	mg/L		0.173	0.187	0.218	0.212	0.26	0.247	0.261	0.181	0.136	0.114	0.146	0.152	0.134	0.16	0.183	0.205	0.238	0.217	0.254
Sulphur (S), total	mg/L		10.8	11.9	11.5	11.4	12.1	11.5	13.8	<15	<15	<15	9.7	11.4	10.3	12.5	11.5	11.8	12.6	11.9	11.5
Thallium (Tl), total	mg/L	**0.0008**	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000002	0.000003	<0.0000020	0.000002	0.000006	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		0.00235	0.00122	0.00096	<0.00050	<0.00050	0.00056	<0.00050	<0.0050	<0.0050	0.0102	0.00216	<0.0020	0.0122	0.00219	0.00274	<0.00050	<0.00050	<0.00050	0.00132
Uranium (U), total	mg/L	**0.015**	0.00123	0.00144	0.00148	0.00164	0.00178	0.00183	0.00313	0.00122	0.000851	0.000635	0.000802	0.000778	0.000657	0.00109	0.00134	0.00173	0.0017	0.00171	0.0017
Vanadium (V), total	mg/L		0.00026	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	0.00062	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	*	0.0202	0.0186	0.0212	0.02	0.0171	0.017	0.00171	0.0101	0.0134	0.0157	0.0114	0.0106	**0.0343**	0.026	0.0332	0.0284	0.02	0.0267	0.0213
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00015	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*	0.00452	0.00121	0.00286	0.001	0.00202	0.0008	0.00315	0.00267	0.0051	0.00437	0.00114	0.00169	0.00581	0.00321	0.00227	0.00091	0.00171	0.00223	0.002
Antimony (Sb), dissolved	mg/L		0.000061	0.000044	0.000039	0.000036	0.000025	0.000024	0.00002	0.000035	0.000046	0.000058	0.000053	0.000064	0.00007	0.000054	0.000053	0.000039	0.000031	0.00004	0.000033
Arsenic (As), dissolved	mg/L		0.000218	0.000185	0.000158	0.000181	0.000184	0.000171	0.000109	0.000285	0.000309	0.000219	0.000164	0.000197	0.00025	0.00017	0.000155	0.000154	0.000215	0.000166	0.000188
Barium (Ba), dissolved	mg/L		0.0773	0.0819	0.0949	0.0916	0.108	0.108	0.179	0.0929	0.0609	0.0608	0.0581	0.0732	0.0597	0.0704	0.0903	0.0895	0.106	0.0967	0.104
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000006	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.000071	0.000071	0.000061	0.000054	0.000055	0.000052	0.000033	0.000072	0.000054	0.000036	0.000036	0.000046	0.000063	0.000079	0.000095	0.000079	0.000072	0.000071	0.000059
Calcium (Ca), dissolved	mg/L		56.2	59.5	64	61.5	73.5	67.4	83.8	62.2	38.6	40.8	42.7	49.5	43	53.1	54.3	62.4	73	71.2	78.7
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00017	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		0.000035	0.000051	0.000105	0.000088	0.00013	0.000144	0.000005	0.000091	0.000072	0.000015	0.00002	0.000016	0.00003	0.000024	0.000038	0.000087	0.000124	0.000127	0.00015
Copper (Cu), dissolved	mg/L		0.000574	0.000308	0.000241	0.000222	0.000189	0.00017	0.000068	0.000488	0.000805	0.000644	0.00048	0.000499	0.00141	0.00074	0.000394	0.000223	0.000232	0.000254	0.000161
Iron (Fe), dissolved	mg/L	**0.35**	0.101	0.0735	0.0672	0.111	0.0148	0.0153	<0.0010	0.206	0.238	0.113	0.0625	0.071	0.0475	0.062	0.0666	0.0239	0.268	0.284	0.202
Lead (Pb), dissolved	mg/L		0.000017	0.000006	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000006	0.000032	0.000085	0.000048	0.000023	0.000006	0.000153	0.000043	0.000012	0.000005	0.000014	0.000196	<0.0000050
Lithium (Li), dissolved	mg/L		0.00216	0.00216	0.0033	0.00319	0.00355	0.0047	0.0022	0.00396	0.00228	0.00176	0.00119	0.00196	0.0015	0.00153	0.00169	0.00295	0.00386	0.00449	0.00481
Magnesium (Mg), dissolved	mg/L		6.4	6.76	7.76	7.97	8.58	8.3	9.98	7.85	4.78	4.79	5.03	5.72	5.09	5.92	6.33	7.72	8.74	8.75	8.66
Manganese (Mn), dissolved	mg/L		0.0264	0.0471	0.0839	0.0797	0.115	0.119	0.00146	0.0917	0.0456	0.0173	0.0157	0.0266	0.0153	0.0149	0.0313	0.0761	0.105	0.106	0.119
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.000527	0.000641	0.00062	0.000661	0.000722	0.000706	0.00149	0.000674	0.000516	0.000533	0.000476	0.000521	0.000443	0.0005	0.000631	0.000617	0.000673	0.000685	0.000704
Nickel (Ni), dissolved	mg/L		0.00035	0.000309	0.000364	0.000373	0.000455	0.000501	0.000081	0.000533	0.000514	0.00034	0.000262	0.000299	0.000435	0.000346	0.000323	0.000409	0.000463	0.000498	0.000406
Phosphorus (P), dissolved	mg/L		0.0029	<0.0020	<0.0020	<0.0020	0.0034	<0.0020	0.0026	<0.0020	0.0029	0.0028	0.006	<0.0020	<0.0020	<0.0020	<0.0020	0.0035	0.0037	<0.0020	0.0065
Potassium (K), dissolved	mg/L		1.58	1.5	1.72	1.68	1.96	1.89	1.28	2	1.56	1.39	1.17	1.19	1.22	1.3	1.25	1.53	1.65	1.69	1.84
Selenium (Se), dissolved	mg/L		0.000876	0.00126	0.00119	0.00134	0.00119	0.00104	0.00326	0.000943	0.000649	0.000626	0.000557	0.000622	0.000638	0.00097	0.00133	0.00132	0.00128	0.00123	0.00131
Silicon (Si), dissolved	mg/L		2.97	3.12	3.63	4.09	4.15	4.09	3.44	3.88	2.67	2.26	2.17	3.04	2.86	3.07	2.87	3.5	3.83	3.68	4.22
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		0.976	1.05	1.31	1.3	1.59	1.53	1.04	1.41	0.797	0.782	0.763	0.918	0.837	0.873	0.952	1.19	1.42	1.46	1.59
Strontium (Sr), dissolved	mg/L		0.173	0.184	0.217	0.211	0.259	0.247	0.254	0.22	0.135	0.136	0.136	0.15	0.127	0.16	0.168	0.202	0.24	0.22	0.247
Sulphur (S), dissolved	mg/L		11.3	11.2	11.5	12.3	12.1	11.5	13.5	9.5	5.6	7.7	9.6	11.4	9.9	11.2	11.2	12.1	12.3	10.7	11.1
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000002	0.000002	0.000002	0.000002	0.000003	0.000002	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.00118	0.00138	0.00152	0.00157	0.00177	0.00168	0.00303	0.00153	0.000799	0.000729	0.000714	0.00076	0.000661	0.00109	0.00151	0.00141	0.00168	0.00166	0.00167
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.0129	0.0139	0.0182	0.0132	0.0133	0.0122	0.00086	0.0103	0.00973	0.00565	0.00699	0.00624	0.0126	0.0166	0.0211	0.0231	0.0201	0.0187	0.0144
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9
			21-Mar-2017	29-Apr-2017	17-May-2017	27-May-2017	01-Jun-2017	07-Jun-2017	13-Jun-2017	19-Jul-2017	10-Aug-2017	14-Sep-2017	05-Oct-2017	03-Nov-2017	05-Dec-2017	09-Jan-2018	14-Feb-2018	21-Feb-2018	01-Mar-2018	07-Mar-2018	15-Mar-2018
Discharge (Flow)	L/s		28.7	34.7	356.5			290.2			435.1	154.7	127.8	91	46.8	39.4	31.2				
Total Suspended Solids	mg/L		1.8	3.3	24.6	9.6	26.7	5.9	14.4	5.9	4.5	1.7	1.4	1	1.1	2	2.8	2.5	3.4	11.3	1
pH (field)	pH units	**6.5 - 9**	6.87	7.32	7.81	7.48	7.49	7.96	7.51	7.69	7.43	7.64	7.65	7.1	7.07	7.34	6.77	6.65	7.45	8.03	6.66
pH (lab)	pH units	**6.5 - 9**	7.32	8.07	7.87	7.87	7.79	8.13	8.08	8.23	8.27	8.29	8.26	8.06	8.13	7.96	8.37	7.93	8.35	8.35	8.23
Specific Conductance (field)	µS/cm		386.1	396.5	113.6	201.5	170.5	228.3	182.0	254.1	274	399.3	348.8	330.4	516.8	458.3			364.2	413.8	318.2
Specific Conductance (lab)	µS/cm		423	399	120	200	168	233	182	251	313	334	339	359	380	396	456	499	507	632	447
Temperature (field)	C		-0.2	0	0.6	4.7	4.5	5.2	6.3	7.7	8.6	2.2	1.6	-0.1	-0.3	-0.4	-0.4	-0.1	-0.1	-0.2	-0.4
Dissolved Oxygen (field)	mg/L	**6.5**	10.77	12.12	11.6	11.04	8.03	10.7	9.80	10.96	10.16	12.01	10.82	12.14	9.29	10.12	10.08	9.28	9.39	10.15	9.42
Dissolved Oxygen (field)	%		86	97.2	94	85.7	62.1	99	79.5	92	101.6	101.4	91.2	96.4	73.1	80.4	79.8	63.4	64.2	69.1	63.7
ORP (field)	mV		108.3	178.3	386.9	179.5	288.6	374.4	256.4	288.1	75.2	-5	16.5	54.1	85	63.1	62.4	177.6	229.8	227.5	182.9
Turbidity (internal)	NTU		2.192	2.194	4.342	2.76	3.08	1.15	1.26	2.00	1.26	1.34	1.28	1.04	2.022		2.644				1.616
Hardness (from total)	mg/L		225	171	60.6	95.6	83.1	114	88.4	119	162	170	165	176	209	197	240	234	275	346	195
Hardness (from dissolved)	mg/L		225	195	55.3	96.8	79.3	112	85.3	130	162	169	167	182	202	192	225	228	272	324	221
Colour	TCU																				
Total Acidity	mg/L		13.5	11.8	<0.50	2.26	0.79	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	4.1	3.5	10.5	11.4	10.5	<1.0	1.4	15.1
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, total	mg/L		193	183	52.4	82.3	66.9	93.2	70.9	105	136	147	147	154	167	176	203	225	216	274	208
Alkalinity, bicarbonate HCO3	mg/L		235	224	63.9	100	81.6	114	86.5	128	166	179	179	187	203	215	239	275	258	323	254
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	4.33	<0.50	2.75	5.12	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	3.61	<0.50	2.29	4.27	<0.50
Chloride	mg/L	**120**	1.5	0.75	1.2	0.65	0.52	0.53	0.64	<0.50	<0.50	0.58	0.66	0.77	0.72	<0.50	3.1	1.2	0.58	8.5	0.7
Fluoride	mg/L	**0.12**	0.1	0.097	0.038	0.05	0.042	0.048	0.048	0.056	0.063	0.074	0.073	0.078	0.083	0.088	0.11	0.097	0.073	0.083	0.11
Sulphate, dissolved	mg/L	*	33.1	35.2	<0.50	18.6	18	25.6	21.8	26.8	31.2	33.5	34.4	39.2	35.6	36	35.4	40.7	52.6	67.3	30.5
Cyanide, total	mg/L	**0.005**	<0.00050	0.00067	0.00138	0.00072	0.00073	0.00075	0.00071	0.00054	0.00066	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00071	<0.00050	0.00057	0.00085	0.0007
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	<0.00050	0.00066	0.00103	0.0006	0.00086	<0.00050	0.00095	0.0008	0.00053	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00087	<0.00050	0.00069	0.00077	<0.00050
Ammonia (N)	mg/L	*	0.047	0.028	0.038	0.012	0.019	0.015	0.047	0.019	0.011	0.009	0.011	0.014	0.005	0.015	0.022	0.069	0.008	0.022	0.04
Nitrite (N)	mg/L	**0.02**	<0.0020	<0.0020	0.0021	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0027	<0.0020	<0.0020
Nitrate (N)	mg/L	**3.0**	0.221	0.167	0.0112	0.0765	0.0417	0.0691	0.0251	0.0429	0.0874	0.105	0.115	0.161	0.164	0.182	0.201	0.337	0.474	0.717	0.19
Nitrite & Nitrate, as N	mg/L		0.221	0.167	0.0133	0.0765	0.0417	0.0691	0.0251	0.0429	0.0874	0.105	0.115	0.161	0.164	0.182	0.201	0.337	0.477	0.717	0.19
Phosphorus,total-colourimetric	mg/L	**0.035**	0.0037	0.0069	**0.0351**	0.0168	0.0199	0.0083	0.0117	0.0046	0.0032	0.0038	0.0028	0.0048	0.0038	0.0047	0.0125	0.0056	0.0065	0.0134	0.0041
Phosphorus, Total Dissolved	mg/L		0.0054	0.0043	0.0324	0.0128	0.0188	0.0063	0.0041	0.0041	0.0031	0.0035	0.0025	0.0039	0.007	0.0052	0.0101	0.0048	0.0041	0.0114	0.0041
Dissolved Organic Carbon	mg/L		1.11	2.16	15.2	5.49	3.11	2.19	5.67	3.3	2.3	1.54	1.27	1.39	1.78	1.95	1.23	3.2	1.38	1.9	<0.50
Aluminum (Al), total	mg/L	*	0.0277	0.0099	**0.463**	**0.11**	**0.206**	0.0941	**0.178**	0.0662	0.0443	0.00828	0.0101	0.00799	0.00839	0.0054	0.0109	0.0106	0.00264	0.00392	0.00553
Antimony (Sb), total	mg/L	**0.009**	0.00003	0.000077	0.000056	0.00007	0.000072	0.000071	0.000058	0.000058	0.000061	0.00004	0.000044	0.000039	0.000049	0.000052	0.000033	0.000114	0.00003	0.000039	0.000033
Arsenic (As), total	mg/L	**0.005**	0.000412	0.000289	0.00115	0.000522	0.000704	0.000347	0.000466	0.000296	0.000294	0.000267	0.000258	0.000228	0.000242	0.000274	0.000344	0.000282	0.000132	0.000115	0.000316
Barium (Ba), total	mg/L		0.112	0.0994	0.0556	0.0539	0.0463	0.0548	0.0465	0.0613	0.0805	0.0857	0.0794	0.0856	0.1	0.0997	0.116	0.121	0.172	0.185	0.0924
Beryllium (Be), total	mg/L		<0.000010	<0.000010	0.000031	0.000014	0.000013	<0.000010	<0.000010	0.000012	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L		<0.0000050	<0.000010	0.00001	<0.000010	<0.000010	<0.0000050	0.000013	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*	0.000088	0.000075	**0.000306**	0.000105	0.000133	0.00006	0.000115	0.0000871	0.000102	0.000109	0.000096	0.000094	0.0000867	0.0000787	0.0000912	0.000208	0.0000489	0.0000389	0.000129
Calcium (Ca), total	mg/L		75.8	55.7	19.7	31.6	27.4	37.2	29.6	40	55.2	56.7	55.4	58.3	69.9	65.9	81.7	77.9	91	112	63.2
Chromium (Cr), total	mg/L	**0.001**	0.0001	0.00011	0.00082	0.00027	0.00048	0.00025	0.00042	0.00017	0.00012	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0001	0.00031	0.00029	0.00061	<0.00010
Cobalt (Co), total	mg/L		0.000239	0.000152	0.000545	0.00017	0.0003	0.000126	0.000275	0.000092	0.0000852	0.000078	0.00009	0.000093	0.000117	0.000128	0.000233	0.000206	0.0000084	0.0000159	0.000215
Copper (Cu), total	mg/L	*	0.000314	0.00043	**0.00373**	0.00192	0.00244	0.00122	0.0023	0.00123	0.000793	0.000434	0.000389	0.000412	0.000312	0.000249	0.000555	0.00251	0.000206	0.000172	0.000408
Iron (Fe), total	mg/L	**0.3**	**0.924**	**0.494**	**1.67**	**0.524**	**0.849**	**0.366**	**0.56**	0.269	0.296	**0.377**	**0.426**	**0.456**	**0.431**	**1.09**	**0.843**	**0.513**	0.0171	0.0261	**0.529**
Lead (Pb), total	mg/L	*	0.000135	0.000051	0.0015	0.000623	0.00112	0.000264	0.000527	0.000426	0.000201	0.000044	0.00004	0.000072	0.0000328	0.0000289	0.0000878	0.000295	0.0000163	0.0000442	0.0000349
Lithium (Li), total	mg/L		0.00514	0.00477	0.00162	0.00152	0.00135	0.00147	0.0012	0.00124	0.00159	0.00274	0.00247	0.00335	0.00402	0.00452	0.006	0.00415	0.00189	0.00248	0.0046
Magnesium (Mg), total	mg/L		8.8	7.81	2.78	4.02	3.58	5.02	3.5	4.66	5.95	6.84	6.5	7.29	8.42	7.84	8.69	9.5	11.6	15.9	9.06
Manganese (Mn), total	mg/L	*	0.171	0.107	0.121	0.0384	0.0356	0.0221	0.0237	0.0155	0.0319	0.0616	0.0663	0.074	0.0945	0.0999	0.185	0.141	0.003	0.0116	0.164
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	0.0000053	0.0000021	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	0.000709	0.000612	0.000313	0.000441	0.00039	0.000492	0.000451	0.000409	0.000615	0.000645	0.000615	0.000579	0.00065	0.000647	0.000694	0.000874	0.00138	0.00159	0.0006
Nickel (Ni), total	mg/L	*	0.000573	0.00049	0.00221	0.00099	0.00128	0.000682	0.00118	0.00059	0.000464	0.000383	0.000387	0.000412	0.000496	0.000496	0.000716	0.000879	0.000155	0.000161	0.000635

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9	KZ-9
			21-Mar-2017	29-Apr-2017	17-May-2017	27-May-2017	01-Jun-2017	07-Jun-2017	13-Jun-2017	19-Jul-2017	10-Aug-2017	14-Sep-2017	05-Oct-2017	03-Nov-2017	05-Dec-2017	09-Jan-2018	14-Feb-2018	21-Feb-2018	01-Mar-2018	07-Mar-2018	15-Mar-2018
Phosphorus (P), total	mg/L		0.0325	0.0101	0.0548	0.0229	0.046	0.0143	0.0182	0.04	0.0127	<0.0020	0.0032	0.006	0.007	0.0052	0.007	0.0126	0.0083	0.0083	0.0074
Potassium (K), total	mg/L		1.97	2.13	1.92	1.39	1.17	1.2	0.98	0.91	1.21	1.46	1.31	1.42	1.69	1.59	1.81	2.32	1.47	2.37	1.93
Selenium (Se), total	mg/L	**0.002**	0.00128	0.000831	0.00043	0.000691	0.000555	0.00068	0.000532	0.000644	0.00112	0.00116	0.000941	0.00118	0.00109	0.0011	0.00114	0.00164	**0.00327**	**0.00501**	0.00116
Silicon (Si), total	mg/L		4.68	3.78	2.4	2.25	2.17	2.37	2.41	2.76	2.97	3.42	2.84	3.55	3.69	3.51	4.19	3.73	3.49	4.88	4.21
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.000010	0.000014	<0.000010	0.00001	0.000007	0.000016	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L		1.59	1.54	0.44	0.57	0.49	0.725	0.549	0.74	0.943	1.11	1.12	1.26	1.45	1.48	3.23	2.4	1.35	5.87	2
Strontium (Sr), total	mg/L		0.286	0.215	0.073	0.101	0.0846	0.121	0.0936	0.12	0.17	0.197	0.172	0.187	0.241	0.209	0.25	0.254	0.298	0.355	0.247
Sulphur (S), total	mg/L		12.2	10.4	3.2	6.3	5.7	8.7	6.8	8.5	11	12.3	10.3	12.6	13.2	11.9	9.8	11.7	17.8	22.3	10.7
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	<0.0000020	0.0000099	0.000003	0.000006	0.000003	0.000005	0.0000037	0.000003	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		0.00083	<0.0020	0.0194	0.0053	0.0143	0.00639	0.0143	0.0036	0.00338	<0.00050	0.00053	<0.00050	<0.00050	<0.00050	<0.00050	0.00084	<0.00050	<0.00050	<0.00050
Uranium (U), total	mg/L	**0.015**	0.00167	0.0016	0.00038	0.000651	0.000457	0.00076	0.000413	0.000733	0.00112	0.00133	0.00128	0.00136	0.00149	0.00162	0.0018	0.00202	0.00294	0.00382	0.00142
Vanadium (V), total	mg/L		<0.00020	<0.00020	0.00081	0.00047	0.00081	0.00037	0.00056	0.00027	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	*	0.0194	0.0138	**0.0565**	**0.0231**	**0.0278**	0.0146	**0.0215**	0.0169	0.0176	0.0159	0.0134	0.0194	0.0201	0.0156	0.0168	0.021	0.00435	0.00689	0.0215
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	0.00035	0.00011	0.00011	<0.00010	0.00014	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*	0.00196	0.00316	**0.1**	0.0157	0.00939	0.00589	0.0135	0.0108	0.00385	0.00226	0.00243	0.002	0.0021	0.00179	0.00292	0.0032	0.00087	0.00066	0.00341
Antimony (Sb), dissolved	mg/L		0.000046	0.000065	0.000038	0.000062	0.000073	0.000071	0.000058	0.000094	0.000059	0.000041	0.00005	0.000036	0.000034	0.00004	0.000026	0.000169	0.000027	0.000044	0.000045
Arsenic (As), dissolved	mg/L		0.00022	0.000242	0.000333	0.00031	0.00026	0.00024	0.000221	0.000225	0.000213	0.000221	0.000199	0.00018	0.00019	0.000164	0.000219	0.000256	0.000131	0.000107	0.000252
Barium (Ba), dissolved	mg/L		0.112	0.0979	0.0367	0.0521	0.0431	0.0532	0.0421	0.0632	0.0801	0.0849	0.0811	0.0825	0.0967	0.0954	0.117	0.123	0.179	0.218	0.104
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	0.000011	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.000058	0.000072	0.000121	0.000068	0.000048	0.000041	0.000043	0.00007	0.0000753	0.000076	0.000075	0.000076	0.0000797	0.0000693	0.0000876	0.000276	0.0000333	0.0000471	0.000112
Calcium (Ca), dissolved	mg/L		75.9	64.5	17.5	31.9	26.2	37.2	28.5	43.8	54.9	56.1	55.6	61.3	67.4	63	75.1	74.9	90.6	102	73.9
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	0.00015	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00032	<0.00010	<0.00010	0.00037	0.00024	0.00048	<0.00010
Cobalt (Co), dissolved	mg/L		0.00018	0.000147	0.000126	0.00006	0.000038	0.000041	0.000042	0.000027	0.0000406	0.00007	0.000083	0.000096	0.000106	0.000134	0.000234	0.000187	0.0000057	0.000012	0.0002
Copper (Cu), dissolved	mg/L		0.000231	0.000349	0.00218	0.00147	0.00139	0.000906	0.00157	0.000928	0.000536	0.000383	0.000339	0.00029	0.000282	0.000355	0.000245	0.0031	<0.000050	0.000229	0.000536
Iron (Fe), dissolved	mg/L	**0.35**	0.257	0.321	0.278	0.21	0.145	0.119	0.0879	0.0749	0.141	0.248	0.263	0.247	0.211	0.168	0.274	0.194	0.0027	0.0038	0.316
Lead (Pb), dissolved	mg/L		0.000012	0.000006	0.000116	0.000135	0.000105	0.000032	0.000047	0.000081	0.0000132	0.000007	<0.0000050	<0.0000050	0.0000105	0.0000175	0.0000126	0.000166	0.0000139	0.0000216	0.0000294
Lithium (Li), dissolved	mg/L		0.00563	0.00495	0.00111	0.00148	0.00091	0.00124	0.00091	0.00133	0.00156	0.00259	0.00262	0.00329	0.00387	0.00439	0.0056	0.0039	0.00202	0.00294	0.00514
Magnesium (Mg), dissolved	mg/L		8.51	8.19	2.8	4.17	3.36	4.74	3.45	5.02	5.95	6.96	6.86	7.14	8.15	8.44	9.09	9.85	11	17.1	8.93
Manganese (Mn), dissolved	mg/L		0.135	0.11	0.0504	0.0276	0.0156	0.0177	0.0113	0.0111	0.0283	0.0596	0.0662	0.0728	0.092	0.104	0.193	0.133	0.00149	0.0105	0.162
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	0.0000058	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.000755	0.000675	0.000267	0.000441	0.000406	0.00045	0.000402	0.000475	0.000618	0.000626	0.000624	0.0006	0.000654	0.000648	0.00073	0.000898	0.00133	0.00193	0.000718
Nickel (Ni), dissolved	mg/L		0.000471	0.000522	0.00125	0.00071	0.00058	0.00042	0.000665	0.000449	0.000347	0.000404	0.00037	0.000398	0.000486	0.000492	0.000782	0.00103	0.000128	0.000149	0.000645
Phosphorus (P), dissolved	mg/L		<0.0020	0.0038	0.0188	0.0116	0.0064	0.0088	0.0047	0.0036	0.0038	0.0023	0.0034	0.0043	0.005	0.0023	0.0026	0.0102	0.0031	0.0088	0.006
Potassium (K), dissolved	mg/L		1.85	2.25	1.87	1.44	1.15	1.22	0.948	0.962	1.22	1.51	1.36	1.4	1.66	1.74	1.89	2.59	1.45	2.74	2
Selenium (Se), dissolved	mg/L		0.00118	0.000932	0.00039	0.00069	0.000572	0.000687	0.000569	0.000785	0.0011	0.001	0.000989	0.0012	0.00111	0.00113	0.00112	0.00159	0.00321	0.00472	0.00112
Silicon (Si), dissolved	mg/L		3.59	3.8	1.78	2.06	1.82	2.09	2.02	2.86	2.85	3.06	2.89	3.4	3.69	2.93	4.24	3.72	3.57	4.98	3.95
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	0.0000069	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		1.65	1.6	0.476	0.613	0.461	0.737	0.542	0.834	0.96	1.16	1.17	1.27	1.42	1.68	2.71	2.81	1.29	6.92	2
Strontium (Sr), dissolved	mg/L		0.242	0.222	0.068	0.103	0.087	0.121	0.0903	0.138	0.172	0.196	0.177	0.19	0.238	0.215	0.262	0.262	0.287	0.347	0.263
Sulphur (S), dissolved	mg/L		10.8	10.7	3.1	6	5.9	8.2	6.6	8.9	11	11.7	11.2	11.8	12.9	12.5	10.5	12.3	17.9	23.2	9.8
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	0.0000027	0.000002	0.000003	0.000002	0.000002	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	0.0013	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.00177	0.00159	0.00027	0.000637	0.000429	0.000733	0.000389	0.000772	0.00111	0.00136	0.00132	0.00138	0.00147	0.00155	0.00181	0.0021	0.00336	0.0038	0.00156
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.0163	0.0143	0.0299	0.0152	0.0123	0.0102	0.0114	0.0131	0.0137	0.0134	0.0124	0.0198	0.0197	0.0157	0.0168	0.0221	0.00352	0.0041	0.0182
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	0.00023	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13
			31-Aug-1994	02-Dec-1994	07-Apr-1995	08-May-1995	11-Jun-1995	23-Jul-1995	15-Aug-1995	22-Aug-1995	30-Aug-1995	06-Sep-1995	13-Sep-1995	30-Apr-2015	12-May-2015	13-May-2015	24-Jun-2015	29-Jul-2015	23-Aug-2015	11-Sep-2015	14-Oct-2015
Discharge (Flow)	L/s													9.6		334.9	142	93.9	164.4	195.9	94.8
Total Suspended Solids	mg/L			<4	<4	25	11	<4	<4	7	<4	<4	<4	7.3	34		1.1	1	1.3	1.7	1
pH (field)	pH units	6.5 - 9												7.55	7.96		7.84	7.96	7.69	7.92	7.75
pH (lab)	pH units	6.5 - 9	7.9	7.3	8	7	7.1	7.4	7.4	7.6	7	7.4	7	8.24	7.53		7.86	7.78	7.83	8.02	7.89
Specific Conductance (field)	µS/cm													196.8	60.9		122.3	145.3	128.2	127.4	155.8
Specific Conductance (lab)	µS/cm		374	154	188	91	84	125	110	124	128	90	107	228	71.7		124	142	137	134	156
Temperature (field)	C													-0.1	0.4		8.1	10.3	6.8	5.3	1.5
Dissolved Oxygen (field)	mg/L	6.5												10.8	11.9		10.51	9.85	10.4	9.3	12.3
Dissolved Oxygen (field)	%													87	96		89.4	87.9	101	87	102
ORP (field)	mV													303.8	268.2		39.7	77.4	187.4	103.4	251.8
Turbidity (internal)	NTU																0.47	0.02	0.21	1.94	
Hardness (from total)	mg/L		252	69.2	98.9	47.7	47	61.1	54.9	66.9	61.1	63.6	69.8	113	36.1		60.8	70.8	64.1	68.7	76
Hardness (from dissolved)	mg/L		229	71.1	98.9	46.5	46.5	61.1	51.9	69.8	61.1	64	66.9	111	35.6		61.4	70.5	64.7	70.9	73.4
Colour	TCU													24.6	122		22	18.7	18.1	19	15.5
Total Acidity	mg/L													0.95	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50
Acidity (pH 4.5)	mg/L													<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		185	69.3	88.7	43.3	37.7	56.8	51.3	58.5	53.4	48.4	49.8	99.3	33.6		49.7	51.7	53.8	56.3	63.3
Alkalinity, bicarbonate HCO3	mg/L		185					69.2	62.5	71.3	65.1	59	60.7	121	40.9		60.7	63.1	65.6	68.7	77.3
Alkalinity, hydroxide OH	mg/L							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.5					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	120												1.2	0.85		0.73	<0.50	<0.50	<0.50	0.53
Fluoride	mg/L	0.12												0.064	0.033		0.043	0.043	0.044	0.044	0.039
Sulphate, dissolved	mg/L	*	41.3	10.3	12.1	5	6.6	10.3	7	7.6	5.9	7.5	7.8	13.7	<0.50		10.2	11.6	14.2	12.4	13.6
Cyanide, total	mg/L	0.005			<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	0.0005	0.00119		<0.00050	0.00061	<0.00050	0.0008	<0.00050
Cyanide, Weak Acid Dissociable	mg/L	0.005			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050	0.00116		<0.00050	0.0007	0.00056	0.00059	<0.00050
Ammonia (N)	mg/L	*		0.011	0.007	0.008	<0.005	<0.005	<0.005	<0.005	<0.005	0.007	<0.005	0.0074	0.0063		0.0083	0.0102	<0.0050	<0.0050	0.0134
Nitrite (N)	mg/L	0.02			<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0020			<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	3.0		0.11	0.15	0.03	0.04	<0.02	0.05	<0.02	0.03	0.05	0.06	0.0935	0.035		0.0175	0.0198	0.0378	0.0246	0.0581
Nitrite & Nitrate, as N	mg/L			0.11	0.15	0.03	0.04	<0.02	0.05	<0.02	0.03	0.05	0.06	0.0935	0.035		0.0175	0.0198	0.0378	0.0246	0.0581
Phosphorus,total-colourimetric	mg/L	0.035		0.004	<0.003	0.031	0.02	<0.003	<0.003	0.006	0.008	0.008	0.005	0.0032	0.0197		0.003	0.0038	0.003	0.0029	0.0026
Phosphorus, Total Dissolved	mg/L													0.0037	0.0197		0.0028	0.0045	0.0031	0.003	<0.0020
Dissolved Organic Carbon	mg/L													2.94	11		3.77	1.8	2.7	3	3.16
Aluminum (Al), total	mg/L	*	**3.25**		0.021	**0.44**	**0.15**	0.036	0.028	**0.11**	0.026	0.034	0.037	0.0969	**0.666**		0.0293	0.0567	0.016	0.0262	0.0273
Antimony (Sb), total	mg/L	0.009												<0.000050	<0.000050		<0.000050	0.000033	<0.000050	0.000023	0.00003
Arsenic (As), total	mg/L	0.005	**0.0069**		<0.00005	0.0004	0.002	<0.00005	<0.00005	0.0001	0.00011	<0.00005	0.0001	0.000291	0.000639		0.000226	0.000276	0.000236	0.000206	0.000185
Barium (Ba), total	mg/L		0.121	0.084	0.09	0.06	0.065	0.078	0.072	0.085	0.076	0.078	0.089	0.121	0.0744		0.0864	0.105	0.0907	0.0935	0.0951
Beryllium (Be), total	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.000017	0.000039		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L				<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.000020	<0.000020		<0.000020	<0.0000050	0.000029	<0.0000050	<0.0000050
Boron (B), total	mg/L	1.5	<0.04	<0.04	0.062	0.025	0.018	0.016	0.015	0.028	0.014	0.016	0.019	<0.05	<0.050		<0.050	<0.010	<0.050	<0.010	<0.010
Cadmium (Cd), total	mg/L	*			<0.00001	0.00004	0.00002	0.00001	0.00001	0.00003	<0.00001	0.00001	0.00002	0.0000359	**0.000109**		0.0000197	0.0000275	0.000031	0.000031	0.000026
Calcium (Ca), total	mg/L		72.6	23.5	34	16	16	21	19	23	21	22	24	37.9	11.8		20.5	23.7	21.7	23.2	25.8
Chromium (Cr), total	mg/L	0.001	**0.008**		0.0003	**0.0016**	**0.0012**	0.0004	0.0003	**0.0015**	**0.0014**	**0.0011**	0.0005	<0.00050	**0.00192**		<0.00050	0.00015	<0.00050	<0.00010	<0.00010
Cobalt (Co), total	mg/L				<0.0004	0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.000091	0.000562		0.00003	0.0000634	0.000032	0.000033	0.000035
Copper (Cu), total	mg/L	*	**0.022**		0.0004	**0.0021**	0.001	0.0006	0.0008	0.0009	0.0005	0.0005	0.0008	0.00082	**0.0026**		0.00084	0.000575	0.00103	0.000561	0.000483
Iron (Fe), total	mg/L	0.3	**9.43**		0.15	0.085	0.25	0.091	0.082	0.23	0.083	0.09	0.1	0.258	**1.34**		0.0664	0.141	0.0697	0.0704	0.0779
Lead (Pb), total	mg/L	*			0.0003	<0.0001	0.0003	0.0003	0.0001	0.0002	0.0001	0.0002	0.0002	0.000196	0.00106		<0.000050	0.0000698	<0.000050	0.000045	0.000047
Lithium (Li), total	mg/L													0.00236	0.00185		0.00087	0.00122	0.00108	0.00113	0.00107
Magnesium (Mg), total	mg/L		17.2	2.56	3.4	1.8	1.7	2.1	1.8	2.3	2.1	2.1	2.4	4.47	1.61		2.32	2.8	2.43	2.59	2.81
Manganese (Mn), total	mg/L	*	0.258	0.049	0.045	0.079	0.02	0.02	0.022	0.039	0.021	0.019	0.023	0.0748	0.196		0.016	0.0455	0.0197	0.0158	0.0233
Mercury (Hg), total	mg/L	0.000026			<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0000020	0.0000025		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	0.073			<0.0004	<0.0004	<0.0004	0.0011	0.0006	<0.0004	0.0005	0.0006	0.0005	0.000953	0.000545		0.000548	0.000595	0.000496	0.000488	0.000611
Nickel (Ni), total	mg/L	*			<0.001	0.002	<0.001	<0.001	<0.001	0.001	<0.001	0.001	<0.001	0.00065	0.00223		0.00063	0.0006	0.00042	0.000423	0.000395

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13
			31-Aug-1994	02-Dec-1994	07-Apr-1995	08-May-1995	11-Jun-1995	23-Jul-1995	15-Aug-1995	22-Aug-1995	30-Aug-1995	06-Sep-1995	13-Sep-1995	30-Apr-2015	12-May-2015	13-May-2015	24-Jun-2015	29-Jul-2015	23-Aug-2015	11-Sep-2015	14-Oct-2015
Phosphorus (P), total	mg/L		0.21		<0.004	0.047	0.012	0.005	<0.004	0.013	<0.004	<0.004	0.006	0.014	0.066		<0.010	0.0239	<0.010	0.0023	0.0049
Potassium (K), total	mg/L		4.2	1.6	2.1	2.4	1.3	1.5	1.3	1.6	1.5	1.5	1.8	2.63	2.52		1.43	1.74	1.28	1.39	1.62
Selenium (Se), total	mg/L	**0.002**	0.0009		0.00016	<0.00005	<0.00005	0.00035	0.0001	<0.00005	0.00006	<0.00005	0.00009	0.000236	0.000133		0.000138	0.000152	0.000123	0.000135	0.000198
Silicon (Si), total	mg/L		9.2	3	3.6	2.9	2.6	2.4	2.3	2.6	2.4	2.6	2.7	4.78	3.02		2.54	2.54	2.34	2.59	3
Silver (Ag), total	mg/L	**0.00025**			<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.0000128	0.000019		0.0000258	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L		1.9	1	1.2	0.61	0.77	0.84	0.79	0.96	0.88	1	1	1.41	0.58		0.9	1.09	0.96	0.929	0.976
Strontium (Sr), total	mg/L		0.244	0.067	0.087	0.039	0.044	0.057	0.05	0.062	0.056	0.066	0.065	0.106	0.0349		0.0609	0.0751	0.0677	0.0665	0.073
Sulphur (S), total	mg/L		14.1	3.2	3.7	1.5	1.9	2.2	2.2	2.3	2.3	2.8	2.8	<15	<15		<15	4.7	<15	4.2	4.9
Thallium (Tl), total	mg/L	**0.0008**												0.0000051	0.0000128		0.0000049	0.0000023	0.000002	<0.0000020	<0.0000020
Tin (Sn), total	mg/L				<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.00020	<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		0.147	0.004	0.002	0.021	0.011	0.0023	0.0019	0.0071	0.0021	0.0025	0.0029	0.0054	0.0403		<0.0050	0.00238	<0.0050	0.00114	0.00072
Uranium (U), total	mg/L	**0.015**												0.00259	0.000844		0.00041	0.000568	0.000456	0.00054	0.000676
Vanadium (V), total	mg/L		0.01		<0.0003	0.0015	0.0006	<0.0003	<0.0003	0.0003	<0.0003	<0.0003	<0.0003	0.00094	0.0022		<0.00050	0.00026	<0.00050	0.00039	0.00031
Zinc (Zn), total	mg/L	*	0.07		0.008	**0.008**	**0.019**	0.004	0.003	0.005	0.004	0.004	0.003	0.0038	**0.0114**		0.0028	0.00353	0.0045	0.00436	0.00316
Zirconium (Zr), total	mg/L		0.013		0.0003	0.0004	<0.0003	0.0009	0.0006	<0.0003	0.0004	<0.0003	0.0006	0.0001	0.00023		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*	<0.02		0.008	**0.07**	0.026	0.009	<0.006	0.01	0.009	0.011	0.011	0.00495	0.0341		0.00784	0.00715	0.00683	0.00873	0.00592
Antimony (Sb), dissolved	mg/L													0.000046	<0.000020		0.000027	0.000028	0.000024	0.000029	0.000021
Arsenic (As), dissolved	mg/L		0.0016		<0.00005	0.0002	0.0001	<0.00005	<0.00005	0.00011	0.00009	<0.00005	0.00006	0.000219	0.000253		0.000193	0.000249	0.000193	0.000196	0.000162
Barium (Ba), dissolved	mg/L		0.037	0.083	0.089	0.051	0.061	0.078	0.066	0.085	0.076	0.083	0.083	0.126	0.0504		0.0843	0.109	0.0935	0.0932	0.0947
Beryllium (Be), dissolved	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.000010	<0.000010		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L				<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0000050	<0.0000050		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.008	<0.008	0.007	0.02	0.013	0.016	<0.004	0.016	0.015	0.016	0.019	<0.01	<0.010		<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*			0.00001	0.00002	0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	0.00002	0.00001	0.0000107		0.0000121	0.0000175	0.000014	0.000024	0.000015
Calcium (Ca), dissolved	mg/L		68.7	24.2	34	16	16	21	18	24	21	22	23	37.2	12		20.9	23.7	21.8	24.2	25
Chromium (Cr), dissolved	mg/L				0.0003	0.0017	0.0003	0.0004	0.005	0.0003	0.0007	0.0009	0.0005	<0.00010	<0.00010		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L					0.0005	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.0000117	0.0000189		0.000016	0.0000219	0.000016	0.000018	0.000015
Copper (Cu), dissolved	mg/L		<0.001		0.0004		0.0007	0.0006	0.0004	0.0006	0.0005	0.0005	0.0007	0.000327	0.00086		0.000775	0.000435	0.000474	0.000484	0.000436
Iron (Fe), dissolved	mg/L	**0.35**	**0.694**		0.069	0.29	0.047	0.034	0.03	0.049	0.028	0.32	0.035	0.0271	0.0961		0.0247	0.0311	0.0198	0.0187	0.0186
Lead (Pb), dissolved	mg/L				0.0014	0.0004	0.0002	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.0003	0.0000051	0.0000161		0.000006	<0.0000050	<0.0000050	0.000006	<0.0000050
Lithium (Li), dissolved	mg/L													0.00225	0.00102		0.00101	0.00127	0.00083	0.00175	0.00113
Magnesium (Mg), dissolved	mg/L		13.9	2.6	3.4	1.6	1.6	2.1	1.7	2.4	2.1	2.2	2.3	4.31	1.34		2.26	2.77	2.5	2.57	2.68
Manganese (Mn), dissolved	mg/L		0.051	0.021	0.038	0.046	0.0067	0.016	0.013	0.013	0.013	0.012	0.013	0.0108	0.000376		0.00601	0.0168	0.00842	0.00609	0.00972
Mercury (Hg), dissolved	mg/L				<0.00001	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0000020	0.0000023		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L				<0.0004	<0.0004	0.0006	0.0008	0.0006	<0.0004	0.0004	0.0004	0.0004	0.000939	0.000403		0.000527	0.000566	0.000491	0.000485	0.000566
Nickel (Ni), dissolved	mg/L				<0.001		<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	0.000427	0.000779		0.000466	0.000492	0.000392	0.000412	0.000341
Phosphorus (P), dissolved	mg/L					0.015	0.008	0.008	0.008	0.005	0.005	0.007	0.008	0.0031	0.0087		0.0034	0.0049	<0.0020	0.003	0.0024
Potassium (K), dissolved	mg/L		2.1	1.3	2.1	2.3	1.3	1.5	1.2	1.6	1.5	1.5	1.6	2.84	2.51		1.4	1.48	1.39	1.42	1.59
Selenium (Se), dissolved	mg/L		<0.0005		0.00015	<0.00005	<0.00005	0.00032	0.0001	<0.00005	0.00005	<0.00005	0.00015	0.000237	0.000106		0.000124	0.000138	0.000138	0.000153	0.000176
Silicon (Si), dissolved	mg/L		4.37	2.99	3.6	2.4	2.4	2.5	2.1	2.6	2.4	2.8	2.5	4.81	2.03		2.57	2.47	2.44	2.69	2.87
Silver (Ag), dissolved	mg/L				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0000050	<0.0000050		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		1.51	0.91	1.2	0.64	0.76	0.87	0.74	0.97	0.9	0.97	1	1.29	0.48		0.937	0.989	0.961	0.936	0.942
Strontium (Sr), dissolved	mg/L		0.211	0.068	0.087	0.038	0.043	0.058	0.046	0.064	0.056	0.06	0.062	0.117	0.0336		0.0625	0.0758	0.0668	0.0695	0.0718
Sulphur (S), dissolved	mg/L		14	3.24	3.7	1.5	1.9	2.2	2	2.4	2.3	2.7	2.6	5	<3.0		3.6	4.9	4.3	4.4	4.6
Thallium (Tl), dissolved	mg/L													<0.0000020	0.0000023		<0.0000020	0.0000024	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L				<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.00020	<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.003	<0.003	0.0014	0.0012	0.0015	0.0008	0.0007	0.0009	0.0008	0.001	0.001	<0.00050	<0.00050		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L													0.00244	0.00033		0.000396	0.000565	0.000403	0.000521	0.000649
Vanadium (V), dissolved	mg/L				<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00020	0.00031		<0.00020	<0.00020	<0.00020	0.00023	<0.00020
Zinc (Zn), dissolved	mg/L		<0.002				0.003	0.004	0.003	0.003	0.002	0.002	0.002	0.00099	0.0012		0.00158	0.00179	0.00233	0.00297	0.00203
Zirconium (Zr), dissolved	mg/L				<0.0003	0.0008	<0.0003	0.0005	0.0004	<0.0003	0.0004	<0.0003	0.0006	<0.00010	<0.00010		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13
			06-Nov-2015	02-Dec-2015	21-Jan-2016	08-Feb-2016	21-Mar-2016	20-Apr-2016	16-May-2016	14-Jun-2016	26-Jul-2016	28-Aug-2016	06-Sep-2016	03-Oct-2016	16-Nov-2016	21-Dec-2016	17-Jan-2017	22-Feb-2017	20-Mar-2017	30-Apr-2017	17-May-2017
Discharge (Flow)	L/s		33.9	47.8	13.1	10.5	7.2	23.3	80.6	104.5	121.9	268.2	327.4	144	47.9	25.4	23.2	15.3	21.3	9.5	244.9
Total Suspended Solids	mg/L		1.3	<1.0	<1.0	<1.0	<1.0	<1.0	1	1.6	1.4	3	1.4	1.1	1	<1.0	<1.3	1.1	1.8	<1.0	7.1
pH (field)	pH units	**6.5 - 9**	7.79	7.78	7.6	7.51	6.82	7.56	7.53	7.99	7.49	7.75	7.62	7.7	7.12	7.19	7.5	7.48	7.76	8.08	7.63
pH (lab)	pH units	**6.5 - 9**	8.07	8.05	7.99	7.99	7.83	8.07	7.99	7.98	7.98	7.95	7.96	7.66	7.96	7.98	8.11	8.03	7.95	8.2	7.76
Specific Conductance (field)	µS/cm		156.4	181.4	147.5	168.3	183.5	178.8	98	126.1	149.5	157.7	128.5	133.5	159.2	198.2	213.6	219.8	221.4	237.1	84.6
Specific Conductance (lab)	µS/cm		166	183	181	179	187	211	119	130	148	135	136	151	181	206	220	228	245	240	94.6
Temperature (field)	C		-2	0.4	0	0	0.9	0.2	2.4	9.7	8.6	6.1	7	1.1	-0.2	0	-0.1	-0.2	-0.2	0	1.7
Dissolved Oxygen (field)	mg/L	**6.5**	12.68	11.1	11.5	10.9	12.35	13.58	12.7	9.33	10.43	9.96	10.76	10.85	12.06	11.07	11.81	10.82	11.29	11.37	11.5
Dissolved Oxygen (field)	%		98.4	92	94	87	101.2	109.2	110.4	95.8	104.4	94.1	105	90.1	95.7	90.9	97.6	85.7	90.4	91.6	97
ORP (field)	mV			113.6	248.9	198.3	66.5	85.6	109.1	130.4	65.6	286.2	114.2	99.7	43.6	70.7	66.7	111.4	95.1	261.4	414.5
Turbidity (internal)	NTU		0.31	0.15		0.482	0.612	0.318		0.746	0.81	1.402	0.53	0.292	0.424	0.922	2.998	1.926	4.922	1.352	1.532
Hardness (from total)	mg/L		83.4	89.8	88.8	84.9	91.8	91	56.5	61.5	71.2	68	60.6	70.9	80.2	98.8	105	110	127	112	43.3
Hardness (from dissolved)	mg/L		78.4	87.6	89.4	87	88.4	116	59.4	61.5	72.6	64	63.4	69	84.5	103	107	109	121	112	38.3
Colour	TCU		13.6	13.9	10.6	17.2	5.5	14.6	18.3			11.8									
Total Acidity	mg/L		0.56	<0.50	0.67	<0.50	1.96	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.22	<0.50	<0.50
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		66.3	75.6	77.5	77.9	83.8	94.5	53.5	55.3	60.3	54.4	55.9	59.9	76.1	87.1	95.1	99.6	104	109	44.5
Alkalinity, bicarbonate HCO3	mg/L		80.9	92.3	94.6	95	102	115	65.2	67.5	73.6	66.4	68.2	73.1	92.8	106	116	122	127	133	54.3
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**	<0.50	<0.50	0.57	<0.50	<0.50	<0.50	0.54	0.54	<0.50	0.72	<0.50	0.57	<0.50	0.58	0.88	0.54	0.87	0.59	0.59
Fluoride	mg/L	**0.12**	0.044	0.039	0.045	0.047	0.045	0.053	0.044	0.042	0.043	0.042	0.046	0.044	0.05	0.049	0.051	0.056	0.058	0.061	0.036
Sulphate, dissolved	mg/L	*	16	15.4	13.8	13.5	14.6	14.5	8.17	11.4	12.8	11.5	12.8	13.8	16	18.1	17	17.9	19.9	18	<0.50
Cyanide, total	mg/L	**0.005**	0.00057	<0.00050	0.00063	<0.00050	<0.00050	<0.00050	0.00053	0.00107	<0.00050	<0.00050	0.00071	<0.00050	0.00064	0.00077	<0.00050	<0.00050	<0.00050	0.00068	0.00105
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	<0.00050	<0.00050	0.00072	0.00065	0.00054	<0.00050	<0.00050	0.00065	0.00055	<0.00050	0.00073	<0.00050	0.00071	<0.00050	<0.00050	<0.00050	<0.00050	0.00063	0.00099
Ammonia (N)	mg/L	*	<0.0050	<0.0050	0.009	0.0066	0.051	0.0124	<0.0050	0.0073	0.024	0.03	0.012	0.01	0.023	0.062	0.044	0.054	0.067	0.042	0.039
Nitrite (N)	mg/L	**0.02**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0022	<0.0020	<0.0020	0.0021
Nitrate (N)	mg/L	**3.0**	0.0793	0.0855	0.154	0.159	0.151	0.0808	0.0344	0.0404	0.0287	0.0452	0.0412	0.0618	0.0969	0.111	0.109	0.143	0.15	0.142	0.0046
Nitrite & Nitrate, as N	mg/L		0.0793	0.0855	0.154	0.159	0.151	0.0808	0.0344	0.0404	0.0287	0.0452	0.0412	0.0618	0.0969	0.111	0.109	0.146	0.15	0.142	0.0067
Phosphorus,total-colourimetric	mg/L	**0.035**	0.0029	0.0037	0.0026	0.0037	<0.0020	0.0062	0.0053	0.0036	0.0053	<0.0020	0.0053	0.006	<0.0020	0.0044	0.0035	0.0031	0.0137	0.0052	0.0237
Phosphorus, Total Dissolved	mg/L		0.0044	0.0023	0.0022	0.0047	<0.0020	0.0052	0.0062	0.009	0.0049	0.0088	0.0068	0.0056	<0.0020	0.0047	0.0033	0.0042	0.0114	0.0068	0.0193
Dissolved Organic Carbon	mg/L		3.71	3.09	1.43	<0.50	1.29	3.74	3.17	2.5	3.9	4.63	4.11	4.8	2.5	3.32	2.32	2.47	3.37	3.39	9.68
Aluminum (Al), total	mg/L	*	0.0347	0.0273	0.0149	0.0228	0.0136	0.0072	0.02	0.081	0.0343	0.0261	0.0251	0.0182	0.015	0.0194	0.00958	0.0211	0.0201	0.00792	**0.143**
Antimony (Sb), total	mg/L	**0.009**	0.000036	0.000034	<0.000020	<0.000020	<0.000020	<0.000050	<0.000050	0.000055	0.000028	0.000023	0.000026	0.000028	0.000033	0.000035	0.000035	0.00003	0.000207	0.000054	<0.000020
Arsenic (As), total	mg/L	**0.005**	0.000218	0.000229	0.000188	0.000307	0.000193	0.000151	0.00015	0.000252	0.00026	0.000231	0.000199	0.000207	0.000184	0.000216	0.000242	0.000283	0.000318	0.000212	0.000339
Barium (Ba), total	mg/L		0.108	0.111	0.139	0.149	0.153	0.0949	0.0768	0.0975	0.0988	0.093	0.0839	0.0918	0.11	0.124	0.124	0.128	0.129	0.128	0.063
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000015	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000011
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000020	<0.000020	0.000005	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*	0.000041	0.000034	0.000041	0.000043	0.000027	0.000021	0.000015	0.000039	0.000033	0.000034	0.00003	0.000027	0.000031	0.000041	0.000049	0.000042	0.000061	0.000026	0.0000683
Calcium (Ca), total	mg/L		28.3	30.3	30	29	31.4	30.8	19.1	21	24.1	23.1	20.2	24.1	27.1	33.6	35.6	37.5	43.6	38.1	14.5
Chromium (Cr), total	mg/L	**0.001**	0.00012	<0.00010	<0.00010	<0.00010	<0.00010	<0.00050	<0.00050	0.00019	0.00012	<0.00010	<0.00010	0.0001	<0.00010	0.00011	<0.00010	<0.00010	0.0002	<0.00010	0.0003
Cobalt (Co), total	mg/L		0.000049	0.000047	0.000051	0.000072	0.000058	0.000024	0.000025	0.000078	0.000055	0.000037	0.000037	0.000032	0.000038	0.000045	0.000047	0.000066	0.000065	0.000044	0.000154
Copper (Cu), total	mg/L	*	0.000521	0.0005	0.000347	**0.00633**	0.000269	0.00056	0.00083	0.000779	0.00088	0.000596	0.000583	0.00196	0.000474	0.000484	0.000364	0.000302	0.000759	0.00031	0.00121
Iron (Fe), total	mg/L	**0.3**	0.103	0.132	0.171	**0.357**	0.221	0.0823	0.0758	0.206	0.119	0.0877	0.0675	0.0747	0.108	0.143	0.15	0.197	0.241	0.132	**0.358**
Lead (Pb), total	mg/L	*	0.000085	0.000052	0.000042	0.000101	0.000023	<0.000050	<0.000050	0.000204	0.000065	0.000056	0.000038	0.000058	0.000077	0.00005	0.000028	0.000047	0.000476	0.000007	0.000169
Lithium (Li), total	mg/L		0.00104	0.0013	0.00095	0.00148	0.00157	0.00214	0.00103	0.00102	0.00144	0.00137	0.00113	0.00105	0.00147	0.00165	0.00197	0.00203	0.00215	0.00218	0.00115
Magnesium (Mg), total	mg/L		3.1	3.44	3.41	3.07	3.23	3.43	2.13	2.22	2.66	2.5	2.51	2.61	3.03	3.6	3.87	4.01	4.36	4.16	1.75
Manganese (Mn), total	mg/L	*	0.0376	0.042	0.0824	0.115	0.0945	0.0246	0.0136	0.0398	0.0382	0.0175	0.0144	0.0187	0.0411	0.0551	0.109	0.124	0.135	0.108	0.093
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000129	<0.0000020	0.0000032
Molybdenum (Mo), total	mg/L	**0.073**	0.000676	0.000633	0.000737	0.000696	0.000755	0.000664	0.0005	0.000547	0.00057	0.000462	0.000448	0.000552	0.000656	0.000747	0.000747	0.000802	0.000819	0.000868	0.000493
Nickel (Ni), total	mg/L	*	0.00043	0.000398	0.000362	0.000408	0.000345	0.00037	0.00044	0.000519	0.00049	0.000498	0.000462	0.000972	0.000393	0.000454	0.000373	0.000394	0.000531	0.000403	0.00098

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13
			06-Nov-2015	02-Dec-2015	21-Jan-2016	08-Feb-2016	21-Mar-2016	20-Apr-2016	16-May-2016	14-Jun-2016	26-Jul-2016	28-Aug-2016	06-Sep-2016	03-Oct-2016	16-Nov-2016	21-Dec-2016	17-Jan-2017	22-Feb-2017	20-Mar-2017	30-Apr-2017	17-May-2017
Phosphorus (P), total	mg/L		0.0116	0.0027	<0.0020	0.0048	0.0034	<0.010	<0.010	0.008	0.0074	0.0055	0.0048	0.007	0.0034	0.0049	0.0044	0.0073	0.0384	0.008	0.0327
Potassium (K), total	mg/L		1.81	1.84	2.35	2.32	2.34	2.19	1.66	1.35	1.27	1.22	1.17	1.33	1.67	2.03	2.16	2.31	2.6	2.84	2.66
Selenium (Se), total	mg/L	**0.002**	0.000251	0.000296	0.000297	0.000304	0.000328	0.000252	0.000158	0.000142	0.000147	0.000143	0.000142	0.000164	0.000242	0.000327	0.000291	0.000367	0.00041	0.000331	0.000175
Silicon (Si), total	mg/L		3.5	3.74	4.08	3.62	3.57	4.21	2.55	2.46	2.31	2.31	2.43	2.88	3.61	4.16	4.13	4.18	4.89	4.4	2.41
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000006	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010
Sodium (Na), total	mg/L		1.11	1.11	1.19	1.13	1.14	1.02	0.72	0.814	0.92	0.871	0.879	0.917	1	1.15	1.17	1.22	1.61	1.17	0.49
Strontium (Sr), total	mg/L		0.0852	0.0911	0.094	0.0862	0.0913	0.0889	0.055	0.0681	0.0698	0.07	0.0593	0.0701	0.0821	0.0968	0.103	0.108	0.133	0.112	0.043
Sulphur (S), total	mg/L		4.7	5.6	5.2	4.8	4.5	<15	<15	3.9	4.3	4.1	3.7	4.3	5.4	6	5.6	5.5	6.6	5.6	<3.0
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000002	<0.0000020	0.000003	<0.0000020	0.000003	<0.0000020	0.000002	<0.0000020	<0.0000020	0.000003	0.000002	0.000002	0.000002	0.000002	0.0000047
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		0.00169	0.00102	0.00058	0.00104	<0.00050	<0.0050	<0.0050	0.00538	<0.0020	0.00111	0.00092	0.00066	<0.00050	0.0007	<0.00050	0.00092	0.00082	0.00051	0.0077
Uranium (U), total	mg/L	**0.015**	0.000804	0.00107	0.000861	0.000733	0.000783	0.00154	0.000402	0.000457	0.000605	0.00049	0.000494	0.000606	0.000905	0.00114	0.00139	0.00163	0.00174	0.00191	0.000401
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020	0.00021	<0.00020	<0.00050	<0.00050	0.00037	0.00024	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	*	0.00421	0.00377	0.00388	0.00509	0.00255	0.0018	0.0022	0.00502	0.0038	0.00461	0.0049	0.00425	0.00349	0.00399	0.00449	0.00411	0.0153	0.00254	0.0075
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00012
Aluminum (Al), dissolved	mg/L	*	0.022	0.00487	0.00357	0.00279	0.00485	0.00688	0.0108	0.00827	0.00754	0.00879	0.00853	0.00789	0.00446	0.00423	0.00399	0.00329	0.00345	0.00325	0.0356
Antimony (Sb), dissolved	mg/L		0.00003	0.00003	<0.000020	<0.000020	<0.000020	0.000032	0.00002	0.00002	0.000032	0.000028	0.000027	0.00003	0.00003	0.000029	0.000035	0.000027	0.000101	0.000029	<0.000020
Arsenic (As), dissolved	mg/L		0.000172	0.000156	0.000123	0.000132	0.000122	0.000196	0.000155	0.000161	0.000226	0.000202	0.00016	0.000188	0.00012	0.000179	0.000187	0.000221	0.000183	0.000179	0.000209
Barium (Ba), dissolved	mg/L		0.103	0.101	0.139	0.145	0.151	0.126	0.0719	0.0897	0.0982	0.092	0.0904	0.0945	0.111	0.124	0.129	0.129	0.135	0.131	0.0532
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.000022	0.000015	0.000027	0.000026	0.00002	0.00002	0.000012	0.000013	0.000008	0.000015	0.000019	0.000021	0.000019	0.000034	0.00004	0.000027	0.00003	0.00002	0.0000342
Calcium (Ca), dissolved	mg/L		26.5	29.6	30.5	29.9	30	39.1	20.3	21	24.8	21.5	21.4	23.4	29	35.1	36.3	37.1	41.5	38.1	12.5
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		0.000024	0.000024	0.000022	0.000031	0.000041	0.000024	0.000013	0.000009	0.000011	0.000018	0.000015	0.000014	0.000025	0.000032	0.000043	0.000049	0.000049	0.000043	0.0000479
Copper (Cu), dissolved	mg/L		0.000571	0.000385	0.000272	0.000282	0.000238	0.000439	0.000634	0.000423	0.000472	0.000558	0.000537	0.000455	0.00042	0.000401	0.000337	0.000261	0.000507	0.000268	0.00085
Iron (Fe), dissolved	mg/L	**0.35**	0.0291	0.0417	0.0305	0.0373	0.0411	0.0677	0.0369	0.0123	0.0171	0.0215	0.0153	0.0195	0.0312	0.0653	0.0594	0.0529	0.0476	0.0644	0.103
Lead (Pb), dissolved	mg/L		0.000046	<0.0000050	0.000005	0.000012	0.000006	0.000006	0.000007	<0.0000050	<0.0000050	0.000019	0.000005	0.000005	0.000016	0.000024	0.000008	<0.0000050	0.000058	<0.0000050	0.0000158
Lithium (Li), dissolved	mg/L		0.0008	0.00147	0.00096	0.00118	0.00196	0.00233	0.00102	<0.00050	0.00133	0.00115	0.00114	0.00057	0.00138	0.00158	0.00191	0.00194	0.00236	0.00225	0.00096
Magnesium (Mg), dissolved	mg/L		2.97	3.32	3.24	3.01	3.3	4.45	2.14	2.18	2.6	2.52	2.44	2.56	2.95	3.68	4.05	4.04	4.34	4.22	1.7
Manganese (Mn), dissolved	mg/L		0.0226	0.0226	0.0575	0.0636	0.08	0.0298	0.00559	0.00136	0.000187	0.00566	0.00269	0.00288	0.0247	0.0545	0.108	0.112	0.117	0.102	0.0583
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000031
Molybdenum (Mo), dissolved	mg/L		0.000714	0.000664	0.000755	0.000765	0.000763	0.00077	0.000499	0.000528	0.000549	0.000463	0.000457	0.000544	0.000663	0.000697	0.000738	0.000772	0.000858	0.000854	0.000432
Nickel (Ni), dissolved	mg/L		0.000358	0.000351	0.000291	0.000308	0.000318	0.000455	0.000451	0.000336	0.000358	0.000439	0.000438	0.00039	0.000359	0.000398	0.00044	0.000354	0.000419	0.000393	0.00074
Phosphorus (P), dissolved	mg/L		0.0124	<0.0020	0.0031	0.0033	0.0024	0.0069	0.0065	0.0039	<0.0020	0.0029	0.0051	0.0034	0.0025	0.0038	0.0042	0.0054	0.0059	0.0048	0.0122
Potassium (K), dissolved	mg/L		1.65	1.73	2.37	2.27	2.48	2.92	1.69	1.32	1.29	1.22	1.32	1.3	1.63	2.03	2.3	2.36	2.52	2.87	2.58
Selenium (Se), dissolved	mg/L		0.000248	0.000306	0.000277	0.000311	0.000308	0.000274	0.000123	0.000115	0.00012	0.000128	0.000131	0.000148	0.000246	0.000331	0.000313	0.000363	0.000345	0.000359	0.000148
Silicon (Si), dissolved	mg/L		3.05	3.66	3.82	3.71	3.57	5.03	2.57	2.2	2.52	2.24	2.73	2.82	3.39	3.96	3.95	4.1	4.09	4.75	2.11
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000005	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		1.2	1.03	1.16	1.13	1.18	1.37	0.719	0.801	0.917	0.914	0.9	0.923	0.964	1.13	1.21	1.22	1.63	1.19	0.494
Strontium (Sr), dissolved	mg/L		0.0757	0.0861	0.0956	0.0863	0.0954	0.121	0.0557	0.064	0.0684	0.066	0.068	0.065	0.0766	0.102	0.103	0.111	0.116	0.116	0.0397
Sulphur (S), dissolved	mg/L		4.9	5.7	5	4.4	4.6	5	<3.0	3.9	4.3	3.8	3.7	4.1	4.6	6.3	5	5.8	5.5	5.8	<3.0
Thallium (Tl), dissolved	mg/L		0.000002	<0.0000020	<0.0000020	<0.0000020	0.000002	<0.0000020	0.000004	0.000003	0.000002	<0.0000020	0.000002	0.000002	0.000002	<0.0000020	<0.0000020	<0.0000020	0.000002	<0.0000020	0.000002
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00063
Uranium (U), dissolved	mg/L		0.000781	0.000939	0.000788	0.000684	0.000784	0.002	0.000355	0.000418	0.000593	0.000473	0.000478	0.000604	0.000827	0.00112	0.00146	0.00161	0.00188	0.00184	0.000326
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.00261	0.00142	0.00243	0.00298	0.00197	0.00183	0.00165	0.00137	0.00096	0.00315	0.00309	0.00277	0.00238	0.00371	0.00379	0.00265	0.0119	0.00265	0.0039
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00011

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15
			06-Jun-2017	20-Jul-2017	09-Aug-2017	14-Sep-2017	03-Oct-2017	02-Nov-2017	06-Dec-2017	31-Jan-2018	15-Feb-2018	21-Feb-2018	01-Mar-2018	07-Mar-2018	15-Mar-2018	03-Dec-1994	05-Apr-1995	08-May-1995	11-Jun-1995	23-Jul-1995	15-Aug-1995
Discharge (Flow)	L/s		160.4		235.7	76.8	58.2	33.4	11.2	15.9											
Total Suspended Solids	mg/L		2.5	1.8	1.5	1	1.6	<1.0	<1.0	1.4	1	1.3	<4.6	<1.0	<1.0	<4	<4	5	<4	<4	<4
pH (field)	pH units	**6.5 - 9**	7.48	7.74	7.35	7.75	7.89	7.74	7.57	7.79	7.76	7.64	7.69	7.66	7.48						
pH (lab)	pH units	**6.5 - 9**	7.89	7.94	7.91	7.95	7.98	7.84	7.95	8.16	8.03	8.12	8.19	8.04	8.23	7.9	7.9	7.3	7.6	7.8	7.8
Specific Conductance (field)	µS/cm		113.6	115.8	105.9	172.5	158.6	141.7	236.4	199.7			173.4	197.3	235.4						
Specific Conductance (lab)	µS/cm		117	116	118	143	152	151	156	223	191	256	243	238	242	398	479	162	179	269	272
Temperature (field)	C		9	9.7	9.1	4	2.5	-0.1	-0.4	-0.2	-0.1	-0.1	-0.1	-0.3	-0.5						
Dissolved Oxygen (field)	mg/L	**6.5**	10.5	10.21	9.92	11.65	11.06	11.63	10.07	10.64	9.52	10.35	10.81	10.48	10.09						
Dissolved Oxygen (field)	%		107	90	100.1	103.7	94.5	91.9	79.3	84.5	77.1	70.3	73.8	77.7	68.1						
ORP (field)	mV		401.6	334.1	123.1	84.7	74.4	81.3	88.7	85.9	66.7	294.1	233.1	246.8	253.9						
Turbidity (internal)	NTU		1.15	1.43	0.53	0.95	0.41	0.34	2.01		2.12				1.458						
Hardness (from total)	mg/L		53.7	55.1	56.2	66.3	69.1	67.2	76.9	108	84.4	121	115	112	107	213	271	89.7	108	158	148
Hardness (from dissolved)	mg/L		52.8	55	57.5	65.4	65.2	69.5	75.5	115	88.1	115	113	121	119	214	285	29.8	92.6	162	148
Colour	TCU																				
Total Acidity	mg/L		<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.3	<1.0						
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0						
Alkalinity, total	mg/L		50.4	48.7	52.3	61.4	65.5	62.3	63	95.3	76.3	112	107	107	107	193	251	78.3	78.6	145	133
Alkalinity, bicarbonate HCO3	mg/L		61.5	59.4	63.8	74.8	79.9	76.1	76.8	116	93	137	130	130	131					177	162
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50					<0.5	<0.5
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50					<0.5	<0.5
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50					<0.5	<0.5
Chloride	mg/L	**120**	0.57	<0.50	<0.50	0.55	0.7	0.63	0.67	<0.50	0.67	0.74	<0.50	0.76	<0.50						
Fluoride	mg/L	**0.12**	0.038	0.042	0.04	0.046	0.045	0.046	0.044	0.059	0.055	0.06	0.062	0.062	0.061						
Sulphate, dissolved	mg/L	*	8.5	9.01	9.08	12.3	13.5	14.9	16.2	19.5	19.4	20.5	18.4	18.2	18.6	27.5	32	9.8	15.8	24.8	25.5
Cyanide, total	mg/L	**0.005**	0.00083	0.00064	0.00081	<0.00050	0.00055	0.00054	<0.00050	<0.00050	0.00065	<0.00050	0.00069	0.00096	0.00072		<0.001	<0.001	<0.001	<0.001	<0.001
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	<0.00050	0.00079	0.00065	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00059	0.00102	<0.00050		<0.001	<0.001	<0.001	<0.001	<0.001
Ammonia (N)	mg/L	*	0.02	0.018	0.007	0.012	0.012	0.007	<0.0050	0.014	0.016	0.078	0.024	0.063	0.031	0.011	<0.005	0.006	<0.005	<0.005	<0.005
Nitrite (N)	mg/L	**0.02**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020		<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (N)	mg/L	**3.0**	0.0269	0.0187	0.0186	0.0492	0.0742	0.14	0.138	0.101	0.14	0.0868	0.107	0.109	0.114	0.19	0.2	0.03	0.03	<0.02	<0.02
Nitrite & Nitrate, as N	mg/L		0.0269	0.0187	0.0186	0.0492	0.0742	0.14	0.138	0.101	0.14	0.0868	0.107	0.109	0.114	0.19	0.2	0.03	0.03	<0.02	<0.02
Phosphorus,total-colourimetric	mg/L	**0.035**	0.0088	0.005	0.0076	0.0038	0.0029	0.016	0.0038	0.0068	0.0109	0.0052	0.0053	0.0087	0.0031	<0.003	<0.003	0.021	0.006	<0.003	<0.003
Phosphorus, Total Dissolved	mg/L		0.0107	0.0049	0.012	0.0032	0.0038	0.0028	0.0037	0.0045	0.0089	0.0067	0.0037	0.0078	0.0033						
Dissolved Organic Carbon	mg/L		5.01	5.8	5.28	3.97	3.47	2.2	2.53	3.19	2.36	3.6	3.56	3.26	2.18						
Aluminum (Al), total	mg/L	*	0.0587	0.0332	0.0363	0.0196	0.0328	0.00948	0.013	0.0137	0.058	0.0257	0.00659	0.00838	0.00649		0.007	0.1	0.017	0.009	<0.006
Antimony (Sb), total	mg/L	**0.009**	0.000031	0.000023	0.00004	0.000031	0.000033	<0.000020	<0.000020	0.000043	0.000039	0.00004	0.000042	0.000039	0.000049						
Arsenic (As), total	mg/L	**0.005**	0.000232	0.00021	0.000227	0.000245	0.000241	0.000145	0.000153	0.000242	0.000181	0.000348	0.000223	0.000276	0.000225		0.00024	0.0006	0.0003	<0.00005	0.00009
Barium (Ba), total	mg/L		0.0775	0.079	0.0867	0.101	0.102	0.107	0.135	0.116	0.133	0.144	0.127	0.125	0.12	0.069	0.079	0.036	0.043	0.056	0.05
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.002	<0.002	<0.002	<0.002	<0.002
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.04	0.012	0.02	0.036	0.019	0.013
Cadmium (Cd), total	mg/L	*	0.000026	0.0000255	0.0000326	0.000028	0.000025	0.000021	0.0000306	0.000064	**0.000142**	0.0000533	0.0000306	0.0000595	0.0000642		0.00002	0.00002	0.00002	0.00001	0.00001
Calcium (Ca), total	mg/L		18.1	18.8	19.2	22.5	23.4	22.8	26.1	36.6	28.7	41.1	39	36.8	36.1	65.5	79	28	35	49	47
Chromium (Cr), total	mg/L	**0.001**	0.00015	0.00011	0.00014	<0.00010	0.00013	<0.00010	<0.00010	<0.00010	0.00022	0.00017	<0.00010	<0.00010	<0.00010		0.0004	0.0005	0.0004	0.0004	0.0008
Cobalt (Co), total	mg/L		0.000053	0.0000424	0.0000386	0.00003	0.000044	0.000032	0.0000413	0.0000507	0.0000813	0.0000754	0.0000479	0.0000498	0.0000388		<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Copper (Cu), total	mg/L	*	0.00084	0.000824	0.000746	0.000695	0.000501	0.000323	0.000326	0.000464	0.000719	0.000452	0.000373	0.000499	0.000576		0.0002	0.002	0.001	0.0004	0.0018
Iron (Fe), total	mg/L	**0.3**	0.145	0.0649	0.0887	0.0884	0.123	0.0803	0.0942	0.187		0.294	0.156	0.143	0.114		0.035	**0.34**	0.059	0.029	0.042
Lead (Pb), total	mg/L	*	0.000073	0.0000326	0.0000445	0.000042	0.000064	0.000009	0.0000151	0.0000654	0.0000659	0.000165	0.0000107	0.0000377	0.0000196		0.0005	<0.0001	0.0005	0.0002	<0.0001
Lithium (Li), total	mg/L		0.00131	0.00097	0.00088	0.00113	0.00101	0.00106	0.0011	0.00155	0.00156	0.0021	0.00216	0.00215	0.0019						
Magnesium (Mg), total	mg/L		2.07	1.99	2.01	2.43	2.61	2.47	2.85	3.97	3.07	4.53	4.39	4.76	4.1	12	18	4.8	5	8.6	7.4
Manganese (Mn), total	mg/L	*	0.0174	0.0102	0.0182	0.0256	0.0337	0.0476	0.0625	0.0838	0.0891	0.147	0.0849	0.0926	0.0745	0.02	0.016	0.047	0.01	0.0057	0.011
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020		<0.00001		<0.00001	<0.00001	<0.00001
Molybdenum (Mo), total	mg/L	**0.073**	0.000521	0.000471	0.000486	0.000621	0.000671	0.00062	0.000717	0.000805	0.000809	0.0009	0.000893	0.000833	0.000741		<0.0004	<0.0004	<0.0004	<0.0004	0.0004
Nickel (Ni), total	mg/L	*	0.000622	0.000555	0.00058	0.000472	0.000484	0.000341	0.000358	0.00044	0.000547	0.00056	0.000475	0.000494	0.000411		<0.001	0.002	<0.001	<0.001	0.002

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-13	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15
			06-Jun-2017	20-Jul-2017	09-Aug-2017	14-Sep-2017	03-Oct-2017	02-Nov-2017	06-Dec-2017	31-Jan-2018	15-Feb-2018	21-Feb-2018	01-Mar-2018	07-Mar-2018	15-Mar-2018	03-Dec-1994	05-Apr-1995	08-May-1995	11-Jun-1995	23-Jul-1995	15-Aug-1995
Phosphorus (P), total	mg/L		0.009	0.0059	0.0062	0.0038	0.0043	0.0037	0.0038	0.0145	0.0109	0.0091	0.006	0.0091	0.0067		0.009	0.022	0.007	<0.004	0.005
Potassium (K), total	mg/L		1.51	1.17	1.16	1.43	1.5	1.6	1.87	2.11	2.29	2.48	2.3	2.57	2.3	1.1	1.5	1.4	1.1	1.1	1.1
Selenium (Se), total	mg/L	**0.002**	0.000153	0.000171	0.000183	0.000176	0.000165	0.000199	0.000239	0.000247	0.000321	0.000273	0.000268	0.000324	0.000316		0.0011	0.0003	<0.00005	0.00033	0.0001
Silicon (Si), total	mg/L		2.63	2.97	2.84	2.2	2.22	3.16	3.26	3.8	3.89	3.89	4.16	4.19	4.74	3.3	3.7	2.2	2.2	2.7	2.5
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050			<0.00001	<0.00001	<0.00001	<0.00001
Sodium (Na), total	mg/L		0.71	0.827	0.807	0.929	0.969	0.933	1.04	1.21	1.26	1.53	1.35	1.54	1.31	1.1	1.5	0.61	0.79	0.96	0.92
Strontium (Sr), total	mg/L		0.0534	0.054	0.0565	0.0679	0.0706	0.0679	0.078	0.101	0.0804	0.115	0.117	0.125	0.103	0.182	0.22	0.076	0.1	0.15	0.13
Sulphur (S), total	mg/L		<3.0	3.2	3.3	3.8	4.2	4.6	5.8	5.6	4.8	5.8	6	7.3	5.8	8.5	9.9	3	5.2	6.8	7.1
Thallium (Tl), total	mg/L	**0.0008**	0.000003	<0.0000020	<0.0000020	0.000002	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000021	<0.0000020	<0.0000020						
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		0.005	0.002	<0.002	0.004	0.004
Titanium (Ti), total	mg/L		0.00311	0.00204	0.00162	0.0008	0.00214	<0.00050	0.0005	0.00062	0.00385	0.00177	<0.00050	<0.00050	<0.00050	<0.003	0.0025	0.0032	0.0015	0.0016	0.0017
Uranium (U), total	mg/L	**0.015**	0.000433	0.000326	0.000327	0.000687	0.000733	0.000484	0.000407	0.00135	0.000808	0.00193	0.00174	0.00198	0.00152						
Vanadium (V), total	mg/L		0.00028	<0.00020	0.00022	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00021	<0.00020	<0.00020	<0.00020	<0.00020		<0.0003	0.0003	<0.0003	<0.0003	<0.0003
Zinc (Zn), total	mg/L	*	0.00361	0.00335	0.00424	0.00326	0.00297	0.00261	0.00375	0.00384	0.00534	0.00367	0.00218	0.00321	0.00386		0.008	**0.055**	0.005	0.004	0.004
Zirconium (Zr), total	mg/L		<0.00010	0.00011	0.00012	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		0.0005	0.0003	0.0004	0.0004	<0.0003
Aluminum (Al), dissolved	mg/L	*	0.018	0.0187	0.0175	0.00915	0.00667	0.00548	0.00473	0.00384	0.00363	0.00569	0.00346	0.00329	0.00313		0.011	0.016	0.01	0.007	<0.006
Antimony (Sb), dissolved	mg/L		0.00003	0.000043	0.000054	0.000025	0.000027	0.00002	<0.000020	0.000042	0.000033	0.000053	0.000035	0.000039	0.000042						
Arsenic (As), dissolved	mg/L		0.000202	0.000207	0.000202	0.000201	0.000214	0.00015	0.000134	0.000199	0.000122	0.000233	0.000205	0.000189	0.00019		<0.00005	0.0012	0.0002	<0.00005	<0.00005
Barium (Ba), dissolved	mg/L		0.0772	0.08	0.0866	0.103	0.0993	0.11	0.135	0.12	0.131	0.131	0.128	0.127	0.129	0.069	0.082	0.0048	0.036	0.055	0.051
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050			<0.002	<0.002	<0.002	<0.002
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.008	0.037	0.013	0.038	0.008	0.015
Cadmium (Cd), dissolved	mg/L	*	0.000013	0.000021	0.0000235	0.000022	0.000019	0.000021	0.0000347	0.0000472	0.0000766	**0.000342**	0.0000223	0.0000545	0.0000478		0.00003	<0.00001	0.00001	<0.00001	<0.00001
Calcium (Ca), dissolved	mg/L		17.7	18.6	19.7	22.3	21.7	23.8	25.7	38.9	29.9	38.6	38.2	41.3	40.2	65.6	83	6	30	50	47
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	0.00147	<0.00010	<0.00010	0.00011	0.00013	<0.00010	<0.00010	0.00011	<0.00010	<0.00010	<0.00010		0.0003	<0.0002	0.0005	0.0005	0.0004
Cobalt (Co), dissolved	mg/L		0.000019	0.000021	0.0000253	0.000023	0.000026	0.000034	0.0000352	0.0000447	0.0000411	0.0000547	0.0000457	0.0000382	0.0000428		<0.0004	0.0004	<0.0004	<0.0004	<0.0004
Copper (Cu), dissolved	mg/L		0.000694	0.00075	0.000725	0.000492	0.000437	0.000327	0.000477	0.000378	0.000647	0.000875	<0.000050	0.000418	0.000448		0.0003	0.0019	0.001	0.0005	0.0005
Iron (Fe), dissolved	mg/L	**0.35**	0.0541	0.0358	0.0495	0.0524	0.0482	0.0507	0.0435	0.0877	0.0504	0.1	0.0906	0.094	0.0703		0.018	0.0007	0.026	0.024	0.007
Lead (Pb), dissolved	mg/L		0.000022	0.000013	0.0000154	0.000014	0.000009	0.00019	0.0000489	0.0000064	0.0000478	0.0000814	0.0000118	0.0000234	0.0000122		0.0007	<0.0001	0.0002	0.0002	<0.0001
Lithium (Li), dissolved	mg/L		0.0011	0.00098	0.00085	0.00113	0.00101	0.00109	0.00108	0.00173	0.00135	0.00198	0.00215	0.00217	0.00197						
Magnesium (Mg), dissolved	mg/L		2.08	2.06	2.05	2.38	2.66	2.47	2.76	4.22	3.25	4.46	4.27	4.34	4.6	12.3	19	3.6	4.3	9.1	7.5
Manganese (Mn), dissolved	mg/L		0.00754	0.006	0.011	0.0222	0.0283	0.0443	0.0579	0.083	0.0658	0.133	0.0826	0.0747	0.0813	0.013	0.0063	0.0002	0.0027	0.0059	0.0077
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020		<0.00001		<0.00001	<0.00001	<0.00001
Molybdenum (Mo), dissolved	mg/L		0.000502	0.000485	0.000594	0.000613	0.000648	0.00064	0.000728	0.000824	0.000804	0.000801	0.000795	0.000847	0.00081		<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Nickel (Ni), dissolved	mg/L		0.000533	0.000536	0.000701	0.000429	0.000401	0.000354	0.000395	0.000467	0.000384	0.000551	0.000465	0.000398	0.000432		0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus (P), dissolved	mg/L		0.0058	0.0033	0.0047	0.0023	0.0031	<0.0020	0.005	0.0038	0.0059	0.0078	0.0035	0.0028	0.006			0.009	0.009	0.005	0.008
Potassium (K), dissolved	mg/L		1.58	1.18	1.2	1.43	1.49	1.6	1.98	2.19	2.45	2.59	2.27	2.38	2.54	1.3	1.5	1.3	0.94	1.2	1.1
Selenium (Se), dissolved	mg/L		0.000136	0.00015	0.000132	0.000163	0.000174	0.000191	0.000241	0.000273	0.000284	0.000247	0.000256	0.000285	0.000292		0.00027	0.0003	<0.00005	0.0003	0.0001
Silicon (Si), dissolved	mg/L		2.29	3.05	2.82	2.29	2.09	3.21	3.37	3.98	3.74	3.92	4.07	4.59	4.41	3.24	3.8	2.2	1.9	2.7	2.6
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000007	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050			<0.00001	<0.00001	<0.00001	<0.00001
Sodium (Na), dissolved	mg/L		0.725	0.822	0.839	0.912	0.995	0.948	1.19	1.27	1.36	1.66	1.33	1.35	1.5	1.08	1.6	0.57	0.69	1	0.92
Strontium (Sr), dissolved	mg/L		0.0544	0.056	0.0576	0.0674	0.0683	0.0662	0.0777	0.105	0.0852	0.114	0.115	0.109	0.116	0.183	0.23	0.034	0.085	0.16	0.13
Sulphur (S), dissolved	mg/L		<3.0	<3.0	3.2	3.9	4.3	4.7	5.6	5.5	5.8	5.9	6	5.9	6.3	8.61	10	2.8	4.5	7.1	7.2
Thallium (Tl), dissolved	mg/L		0.000002	0.000002	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000024	<0.0000020	<0.0000020						
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		0.005	0.002	<0.002	0.002	0.004
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.003	0.0026	0.0003	0.0011	0.0016	0.0015
Uranium (U), dissolved	mg/L		0.000401	0.00031	0.000321	0.000679	0.000729	0.000504	0.000407	0.00141	0.000806	0.00176	0.00188	0.00166	0.0016						
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Zinc (Zn), dissolved	mg/L		0.00206	0.00275	0.00365	0.00285	0.00213	0.00241	0.00467	0.00285	0.00402	0.00565	0.0021	0.00306	0.00375		0.009	0.002	0.005	0.004	0.005
Zirconium (Zr), dissolved	mg/L		<0.00010	0.00013	0.00012	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		<0.0003	0.0003	0.0005	<0.0003	<0.0003

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-15 22-Aug-1995	KZ-15 30-Aug-1995	KZ-15 06-Sep-1995	KZ-15 13-Sep-1995	KZ-15 23-Aug-2002	KZ-15 19-Aug-2004	KZ-15 24-Aug-2006	KZ-15 14-Aug-2008	KZ-15 19-Aug-2010	KZ-15 16-Aug-2012	KZ-15 21-Aug-2014	KZ-15 29-Apr-2015	KZ-15 11-May-2015	KZ-15 12-May-2015	KZ-15 13-May-2015	KZ-15 22-Jun-2015	KZ-15 23-Jun-2015	KZ-15 28-Jul-2015	KZ-15 22-Aug-2015
Discharge (Flow)	L/s													83.7	1803.6	2305	2562.7		789.5	634.0	973.8
Total Suspended Solids	mg/L		<4	<4	<4	<4	<4	5	<4	<4	<1	<4.0	<4.0	<1.0	40.2			<1.0		<1.0	<1.0
pH (field)	pH units	**6.5 - 9**							8.1	8.3	8.0	8.0	7.79	7.63	7.71			7.86		7.94	7.81
pH (lab)	pH units	**6.5 - 9**	7.7	7.7	8	7.9		8.2	8.1	8.2	8.3	8.18	8.22	8.42	7.67			8.18		8.08	8.05
Specific Conductance (field)	µS/cm								246	320	337	265	342	418.2	109.1			232.9		289.2	257.7
Specific Conductance (lab)	µS/cm		266	290	202	231	239	333	253	300	355	280	337	476	132			231		282	269
Temperature (field)	C								7.2	9.6	9.7	7.8	8.5	-0.1	-0.2			8.6		10.1	7.7
Dissolved Oxygen (field)	mg/L	**6.5**							10.0	8.3		10.4		12.6	12.2			10.26		9.14	9.9
Dissolved Oxygen (field)	%								87	84		86.6		100	96			88.5		81.4	96
ORP (field)	mV													292.1	234.3			72.2		94.1	231.9
Turbidity (internal)	NTU																	0.24		0.18	0.16
Hardness (from total)	mg/L		158	148	150	155	132	179	140	177	180	147	163	255	70.1			120		157	141
Hardness (from dissolved)	mg/L		152	138	144	162	143	185	140	168	189	144	163	270	72.9			141		156	140
Colour	TCU													6.1	199			11.1		8.7	11.1
Total Acidity	mg/L						1	1.3	1.2	1.6	1.6	0.69	<0.50	<0.50	0.74			1.1		<0.50	<0.50
Acidity (pH 4.5)	mg/L						<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50			<0.50		<0.50	<0.50
Alkalinity, total	mg/L		124	125	111	118	110	154	114	140	170	127	148	224	59.4			102		125	115
Alkalinity, bicarbonate HCO3	mg/L		151	152	135	144	134	188	139	160	200	154	181	263	72.5			124		153	141
Alkalinity, hydroxide OH	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50			<0.50		<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	0.8	<0.50	<0.50	5.1	<0.50			<0.50		<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.5	<0.5	<0.5	<0.5	<1	<1.0	<0.5	0.6	0.6	<0.50	<0.50	4.25	<0.50			<0.50		<0.50	<0.50
Chloride	mg/L	**120**												<0.50	0.98			<0.50		<0.50	<0.50
Fluoride	mg/L	**0.12**												0.12	0.042			0.073		0.074	0.065
Sulphate, dissolved	mg/L	*	19.7	24.1	23.8	21.1	21.3	22.7	18.6	22	29	21.5	25.8	35	<0.50			19.5		23.1	24.4
Cyanide, total	mg/L	**0.005**	<0.001	<0.001	<0.001	<0.001								<0.00050	0.00146			0.00064		0.0005	<0.00050
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	<0.001	<0.001	<0.001	<0.001								<0.00050	0.00137			0.00055		0.00069	<0.00050
Ammonia (N)	mg/L	*	<0.005	<0.005	0.005	<0.005	<0.005	0.02	0.006	<0.005	<0.05	0.006	0.023	0.0199	<0.0050			<0.0050		<0.0050	0.0059
Nitrite (N)	mg/L	**0.02**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	<0.0020				<0.0020		<0.0020	<0.0020
Nitrate (N)	mg/L	**3.0**	0.03	<0.02	0.05	0.05	<0.02	<0.02	0.04	0.06	0.02	0.032	0.032	0.164	<0.020			0.0093		0.0153	0.0229
Nitrite & Nitrate, as N	mg/L		0.03	<0.02	0.05	0.05	<0.02	<0.02	0.04	0.06	0.02	0.032	0.032	0.164	<0.020			0.0093		0.0153	0.0229
Phosphorus,total-colourimetric	mg/L	**0.035**	<0.003	0.007	0.007	<0.003								0.0021	0.0257			0.0032		0.0028	0.0022
Phosphorus, Total Dissolved	mg/L													0.0021	0.0257			0.002		0.0025	0.0022
Dissolved Organic Carbon	mg/L													0.85	14.9			2.26		0.93	1.4
Aluminum (Al), total	mg/L	*	0.02	0.01	0.009	0.011	<0.02	0.035	0.007	0.008	0.01	0.0183	0.00363	0.00204	**0.356**			0.0163		0.0169	0.0057
Antimony (Sb), total	mg/L	**0.009**										0.000041	0.000038	0.000025	<0.000050			0.000033		0.000038	<0.000050
Arsenic (As), total	mg/L	**0.005**	0.0007	0.00015	0.00011	0.00026		<0.001	<0.001	0.0003	0.0004	0.000462	0.000414	0.000371	0.00318			0.0004		0.000433	0.00038
Barium (Ba), total	mg/L		0.056	0.051	0.053	0.055	0.056	0.076	0.054	0.066	0.072	0.0622	0.0654	0.0893	0.0509			0.0531		0.067	0.0533
Beryllium (Be), total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	0.000026			<0.000010		<0.000010	<0.000010
Bismuth (Bi), total	mg/L		<0.002	<0.002	<0.002	<0.002				<0.001	<0.001	<0.0000050	<0.0000050	<0.0000050	<0.000020			<0.0000050		<0.0000050	<0.000020
Boron (B), total	mg/L	**1.5**	0.026	0.011	0.012	0.02	<0.008	<0.008	<0.008	<0.05	<0.05	<0.05	<0.02	<0.01	<0.050			<0.010		<0.010	<0.050
Cadmium (Cd), total	mg/L	*	0.00002	<0.00001	0.00001	0.00006		0.00007	0.00002	**0.00081**	0.00002	0.000028	0.000022	0.0000329	**0.000261**			0.0000287		0.0000229	0.000026
Calcium (Ca), total	mg/L		50	47	48	50	41.3	55.5	45.2	56.6	53.9	45.9	48.5	74.1	21.3			38.4		48.6	43.5
Chromium (Cr), total	mg/L	**0.001**	0.0005	0.0009	0.0004	**0.0011**		<0.001	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00010	**0.00103**			<0.00010		<0.00010	<0.00050
Cobalt (Co), total	mg/L		<0.0004	<0.0004	<0.0004	<0.0004		<0.0005	<0.0005	<0.0005	<0.0005	0.000062	0.000023	0.0000344	0.000725			0.0000524		0.0000374	0.000026
Copper (Cu), total	mg/L	*	0.0009	0.0004	0.0004	0.0008		0.001	0.0005	0.0006	0.0003	0.000576	0.000434	0.000265	**0.00342**			0.000531		0.000425	0.00072
Iron (Fe), total	mg/L	**0.3**	0.077	0.052	0.044	0.04	0.131	0.186	0.029	0.012	0.066	0.0931	0.0418	0.0357	**2.07**			0.104		0.0917	0.0607
Lead (Pb), total	mg/L	*	0.0001	<0.0001	<0.0001	0.0001		<0.0005	<0.0005	0.0002	<0.0002	0.00006	0.000011	0.0000102	0.000939			0.0000561		0.0000233	<0.000050
Lithium (Li), total	mg/L								<0.002	<0.005	<0.005	0.00184	0.00251	0.0039	0.00125			0.00196		0.00208	0.00165
Magnesium (Mg), total	mg/L		8	7.4	7.3	7.4	6.91	9.91	6.68	8.72	11.1	7.98	10.1	17	4.13			5.95		8.67	7.8
Manganese (Mn), total	mg/L	*	0.019	0.015	0.013	0.011	0.035	0.082	0.008	0.003	0.02	0.0272	0.0146	0.0334	0.338			0.0279		0.023	0.0177
Mercury (Hg), total	mg/L	**0.000026**	<0.00001	<0.00001		<0.00001			<0.00001	<0.00002	<0.00002		<0.0000020	<0.0000020	0.0000044			<0.0000020		<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	<0.0004	<0.0004	<0.0004	0.0005				<0.001	0.001	0.000721	0.00108	0.00132	0.000667			0.000677		0.000854	0.000698
Nickel (Ni), total	mg/L	*	0.001	<0.001	<0.001	<0.001				<0.001	<0.001	0.000483	0.000501	0.000946	0.00314			0.00044		0.000483	0.00043

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15
			22-Aug-1995	30-Aug-1995	06-Sep-1995	13-Sep-1995	23-Aug-2002	19-Aug-2004	24-Aug-2006	14-Aug-2008	19-Aug-2010	16-Aug-2012	21-Aug-2014	29-Apr-2015	11-May-2015	12-May-2015	13-May-2015	22-Jun-2015	23-Jun-2015	28-Jul-2015	22-Aug-2015
Phosphorus (P), total	mg/L		<0.004	0.004	<0.004	0.004								0.0032	0.103			0.0036		0.0228	<0.010
Potassium (K), total	mg/L		1.2	1.1	1.1	1.3	1	1	1	1.27	1.23	1.12	1.21	1.65	1.98			1.01		1.34	1
Selenium (Se), total	mg/L	**0.002**	0.00047	0.00005	0.00006	0.00011		<0.001	<0.001	0.0006	0.0005	0.000687	0.000534	0.0013	0.000283			0.000434		0.00047	0.000474
Silicon (Si), total	mg/L		2.8	2.6	2.8	2.7			2.49	2.71	3.48	2.86	2.85	4.34	2.52			2.3		2.9	2.54
Silver (Ag), total	mg/L	**0.00025**	<0.00001	<0.00001	<0.00001	<0.00001						<0.0000050	<0.0000050	<0.0000050	0.0000238			<0.0000050		<0.0000050	<0.0000050
Sodium (Na), total	mg/L		0.98	0.93	0.95	1	0.82	1.11	0.91	1.12	1.03	0.914	1	1.86	0.74			0.745		1.08	0.9
Strontium (Sr), total	mg/L		0.14	0.13	0.14	0.14	0.127	0.17	0.128	0.174	0.185	0.144	0.171	0.262	0.0733			0.126		0.16	0.142
Sulphur (S), total	mg/L		7.6	7.3	8.2	8	6.9	8.1	6.8	9	9	<10	<15	12.6	<15			5.9		8	<15
Thallium (Tl), total	mg/L	**0.0008**										<0.0000020	<0.0000020	<0.0000020	0.0000085			<0.0000020		<0.0000020	<0.0000020
Tin (Sn), total	mg/L		0.003	0.002	0.003	<0.002				<0.005	<0.005	<0.00020	<0.00020	<0.00020	<0.00020			<0.00020		<0.00020	<0.00020
Titanium (Ti), total	mg/L		0.0021	0.0017	0.0019	0.0017	<0.003	<0.003	<0.003	<0.005	<0.005	0.00097	<0.00050	<0.00050	0.0139			0.00073		0.00051	<0.0050
Uranium (U), total	mg/L	**0.015**						0.00216	0.001	0.0017	0.0023	0.00143	0.00216	0.00461	0.000685			0.00114		0.00171	0.00132
Vanadium (V), total	mg/L		<0.0003	<0.0003	<0.0003	<0.0003						<0.00020	<0.00020	<0.00020	0.00119			<0.00020		<0.00020	<0.00050
Zinc (Zn), total	mg/L	*	0.006	0.004	0.003	0.004	<0.005	0.005	<0.005	<0.005	<0.005	0.00202	0.00216	0.00322	**0.0229**			0.00288		0.00208	0.0035
Zirconium (Zr), total	mg/L		<0.0003	<0.0003	0.0003	0.0003				<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	0.00023			<0.00010		<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*	0.01	<0.006	0.01	<0.006	<0.02	0.002	0.001	0.015	<0.003	0.00674	0.00212	0.00064	**0.0502**			0.00307		0.00168	0.00175
Antimony (Sb), dissolved	mg/L											0.000033	0.00003	0.000037	0.000027			0.000037		0.000033	0.000031
Arsenic (As), dissolved	mg/L		0.0004	0.00013	0.00009	0.00023		<0.001	<0.001	0.0004	0.0004	0.00043	0.000362	0.000359	0.000437			0.000363		0.000386	0.000349
Barium (Ba), dissolved	mg/L		0.053	0.048	0.051	0.057	0.06	0.072	0.053	0.066	0.074	0.0638	0.0648	0.0931	0.0366			0.0566		0.0667	0.058
Beryllium (Be), dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010			<0.000010		<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.002	<0.002	<0.002	<0.002				<0.001	<0.001	<0.0000050	<0.0000050	<0.0000050	<0.0000050			<0.0000050		<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		0.021	0.012	0.012	0.013	<0.008	<0.008	<0.008	<0.05	<0.05	<0.05	<0.02	<0.01	<0.010			<0.010		<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	<0.0001	<0.00001	0.00001	0.00006		0.00003	0.00001	**0.00301**	0.00002	0.000025	0.000018	0.0000305	0.0000584			0.000017		0.0000209	0.000018
Calcium (Ca), dissolved	mg/L		48	44	46	52	44.7	57.2	44.6	54.1	57.9	44.8	48.3	78.7	22.2			46.6		48.3	43.5
Chromium (Cr), dissolved	mg/L		0.0004	0.0004	0.0005	0.0004		<0.001	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00010	<0.00010			<0.00010		<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		<0.0004	<0.0004	<0.0004	<0.0004		<0.0005	<0.0005	<0.0005	<0.0005	0.000019	0.000017	0.0000099	0.0000486			0.0000167		0.0000186	0.00002
Copper (Cu), dissolved	mg/L		0.0005	0.0004	0.0005	0.0007		0.0006	0.0006	0.001	0.0004	0.000434	0.000304	0.000218	0.00175			0.000494		0.000353	0.000469
Iron (Fe), dissolved	mg/L	**0.35**	0.011	0.009	0.031	0.018	0.023	0.023	<0.005	0.015	0.01	0.0272	0.0179	0.0037	0.145			0.0156		0.0127	0.0174
Lead (Pb), dissolved	mg/L		0.0001	<0.0001	<0.0001	0.0001		<0.0005	<0.0005	0.0004	<0.0002	0.000008	0.000009	<0.0000050	0.0000173			0.0000091		<0.0000050	<0.0000050
Lithium (Li), dissolved	mg/L								<0.002	<0.005	<0.005	0.00192	0.00234	0.00436	0.00092			0.00155		0.00187	0.00144
Magnesium (Mg), dissolved	mg/L		7.7	6.9	7.1	7.8	7.53	10.3	6.68	8.06	10.9	7.84	10.4	17.9	4.26			6.1		8.65	7.64
Manganese (Mn), dissolved	mg/L		0.0081	0.0078	0.0085	0.01	0.017	0.018	0.005	0.003	0.012	0.0194	0.012	0.0138	0.0119			0.00741		0.0119	0.0117
Mercury (Hg), dissolved	mg/L		<0.00001	<0.00001		<0.00001			<0.00001	<0.00002	<0.00002		0.0000038	<0.0000020	0.0000038			<0.0000020		<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		<0.0004	<0.0004	<0.0004	0.0004				<0.001	0.001	0.000859	0.000993	0.00127	0.000432			0.000714		0.000839	0.000758
Nickel (Ni), dissolved	mg/L		<0.001	<0.001	0.001	<0.001				<0.001	<0.001	0.000411	0.000458	0.00109	0.00146			0.000405		0.000424	0.000524
Phosphorus (P), dissolved	mg/L		0.005	0.008	0.004	0.006								0.0023	0.0126			0.003		<0.0020	<0.0020
Potassium (K), dissolved	mg/L		1.1	1.1	1.1	1.3	<1	1	<1	1.15	1.3	1.1	1.16	1.74	2.07			1.15		1.31	1.15
Selenium (Se), dissolved	mg/L		0.00045	0.00005	0.00005	0.00011		<0.001	<0.001	0.0007	0.0006	0.000636	0.000529	0.00127	0.000252			0.000465		0.000481	0.000507
Silicon (Si), dissolved	mg/L		2.7	2.4	2.8	2.8			2.49	2.96	3.42	2.81	2.72	4.18	2			2.41		2.88	2.69
Silver (Ag), dissolved	mg/L		<0.00001	<0.00001	<0.00001	<0.00001						<0.0000050	<0.0000050	<0.0000050	<0.0000050			<0.0000050		<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		0.95	0.89	0.92	1.1	0.98	1.18	0.91	1.05	1.15	0.894	1.14	1.58	0.484			0.841		1.06	0.945
Strontium (Sr), dissolved	mg/L		0.14	0.12	0.13	0.15	0.137	0.171	0.127	0.161	0.193	0.149	0.17	0.269	0.0701			0.131		0.162	0.14
Sulphur (S), dissolved	mg/L		7.3	7.1	8	8.3	7.6	8.5	6.7	9	9	<10	<15	11.9	<3.0			6.6		8.1	8.1
Thallium (Tl), dissolved	mg/L											<0.0000020	<0.0000020	0.000007	<0.0000020			<0.0000020		<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L		0.003	0.003	0.003	<0.002				<0.005	<0.005	<0.00020	0.00035	<0.00020	<0.00020			0.00031		<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		0.0014	0.0014	0.002	0.0017	<0.003	<0.003	<0.003	<0.005	<0.005	<0.00050	<0.00050	<0.00050	0.00065			<0.00050		<0.00050	<0.00050
Uranium (U), dissolved	mg/L							0.00164	0.0011	0.0017	0.0027	0.00146	0.00207	0.00471	0.000521			0.00116		0.00174	0.00138
Vanadium (V), dissolved	mg/L		<0.0003	<0.0003	<0.0003	<0.0003						<0.00020	<0.00020	<0.00020	<0.00020			<0.00020		<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.005	0.001	0.002	0.004	<0.005	<0.005	<0.005	0.008	<0.005	0.00146	0.00192	0.00291	0.00566			0.00255		0.00125	0.00129
Zirconium (Zr), dissolved	mg/L		0.0004	<0.0003	0.0005	0.0003				<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	<0.00010			<0.00010		<0.00010	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15
			09-Sep-2015	11-Sep-2015	14-Oct-2015	19-Nov-2015	02-Dec-2015	20-Jan-2016	09-Feb-2016	20-Mar-2016	20-Apr-2016	04-May-2016	15-May-2016	13-Jun-2016	26-Jul-2016	27-Aug-2016	07-Sep-2016	01-Oct-2016	15-Nov-2016	20-Dec-2016	16-Jan-2017
Discharge (Flow)	L/s		1085.3		700.2	269.4	341.2	94.5	92.7	84.7	103.5	319.5		530	804.3	2544.6	1490.9	780.7	257.6	166.8	159
Total Suspended Solids	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.5	2.7	<1.0	<1.0	4.7	10.1	3.6	2.1	2.4	1.9
pH (field)	pH units	**6.5 - 9**	8.19	8.03	7.76	7.7	7.29	7.18	7.35	7.23	7.81	7.43	7.85	8.01	7.84	7.91	7.6	7.86	7.77	7.13	7.24
pH (lab)	pH units	**6.5 - 9**	8.17	8.07	8.21	8.42	8.07	8.19	8.16	8.02	8.17	8.12	8.18	8.09	8.2	8.05	8.13	8.25	8.15	8.01	8.16
Specific Conductance (field)	µS/cm		250.7	253.3	340.3	393.2	421.5	483.4	474.2	476.1	387.4	325.1	219.4	206.9	256.7	248.3	250.6	309.1	359.6	459.2	457.8
Specific Conductance (lab)	µS/cm		267	262	335	406	426	490	504	501	462	328	221	259	254	208	268	347	416	477	476
Temperature (field)	C		6.2	7.2	0.8	0	0.1	0	0	1	0.5	0.9	3.9	9.3	8.5	4.9	4.9	-0.1	0.2	-0.1	0.2
Dissolved Oxygen (field)	mg/L	**6.5**	10.2	8.8	12.4	11.4	10.8	10.8	10.1	9.52	12.41	11.22	11.4	9.21	10.03	10.8	9.47	12.83	12.27	12.07	11.17
Dissolved Oxygen (field)	%		96	85	100	91	88	87	80	78	99.3	91.7	102	93.9	99.2	98	86.63	100.5	98.3	98.2	93
ORP (field)	mV		170.3	165.3	278.1	136	208.8	296.7	253	123.7	99.9	122.8	88.9	160.5	103.1	233.2	86.2	76.5	146.3	126.9	151.2
Turbidity (internal)	NTU		1.5		0.19	0.800	0.34		0.414	0.628	0.02	0.72		0.234	0.42	3.19	0.49	0.01	4.01	0.380	0.840
Hardness (from total)	mg/L		140	143	178	219	236	271	259	266	238	169	121	131	137	109	140	174	207	255	256
Hardness (from dissolved)	mg/L		146	148	175	212	224	282	259	263	286	170	118	132	135	108	141	178	209	261	256
Colour	TCU		9.5	9.2	<5.0	5.8	<5.0	<5.0	7.8	<5.0	<5.0	14.8	14.2	5.6		18					
Total Acidity	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	1.51	<0.50	2.13	1.18	0.73	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	3.67	1.74
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		114	112	146	181	193	235	242	242	220	154	102	114	111	81.6	116	151	195	230	230
Alkalinity, bicarbonate HCO3	mg/L		139	137	178	221	235	286	295	295	269	188	125	139	136	99.6	141	185	237	280	280
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**	<0.50	1.7	0.55	<0.50	0.59	0.82	0.55	0.52	0.62	1.1	0.54	0.74	<0.50	0.96	0.7	0.59	<0.50	0.74	0.78
Fluoride	mg/L	**0.12**	0.064	0.067	0.069	0.093	0.078	0.1	0.1	0.1	0.11	0.092	0.074	0.075	0.066	0.052	0.06	0.078	0.094	0.1	0.1
Sulphate, dissolved	mg/L	*	23.9	25.3	29.3	33.1	31.9	36.7	37.3	36.5	34	22.3	15.8	22.5	23.2	22.6	26.6	32.1	31.9	40.6	36.3
Cyanide, total	mg/L	**0.005**	0.00074	0.00074	<0.00050	<0.00050	<0.00050	0.0005	<0.00050	<0.00050	<0.00050	0.00053	0.00055	0.00068	<0.00050	<0.00050	0.00067	0.00054	0.00055	0.00061	<0.00050
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	0.00062	0.00074	<0.00050	<0.00050	<0.00050	0.00062	<0.00050	0.0005	<0.00050	<0.00050	0.00053	0.00053	0.00069	<0.00050	0.00069	0.00084	0.00058	<0.00050	<0.00050
Ammonia (N)	mg/L	*	<0.0050	0.0093	0.0101	0.0089	0.0084	0.0358	0.0117	0.0058	0.0065	<0.0050	<0.0050	0.015	0.03	0.11	0.015	0.099	0.022	0.016	0.03
Nitrite (N)	mg/L	**0.02**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	0.0025	<0.0020
Nitrate (N)	mg/L	**3.0**	0.0429	0.0299	0.135	0.188	0.194	0.209	0.216	0.217	0.145	0.0883	0.0533	0.0123	0.0119	0.0221	0.0722	0.164	0.228	0.244	0.236
Nitrite & Nitrate, as N	mg/L		0.0429	0.0299	0.135	0.188	0.194	0.209	0.216	0.217	0.145	0.0883	0.0533	0.0123	0.0119	0.0221	0.0722	0.164	0.23	0.247	0.236
Phosphorus,total-colourimetric	mg/L	**0.035**	0.0029	<0.0020	0.0076	<0.0020	0.0028	0.0034	0.0028	0.0056	0.0044	0.0063	0.0076	0.0023	0.0031	0.0069	0.008	0.0036	0.0035	0.0056	0.0037
Phosphorus, Total Dissolved	mg/L		<0.0020	0.0025	0.0038	0.0027	0.0023	0.0057	0.0027	0.0029	0.0043	0.0087	0.0118	0.0023	0.0024	0.0062	0.0051	0.0035	0.0023	0.0074	0.0052
Dissolved Organic Carbon	mg/L		1.7	1.8	1.06	1.22	1.55	1.7	<0.50	0.89	1.5	3.24	2.12	1.68	2.54	4.13	2.39	2.02	1.11	1.58	<0.50
Aluminum (Al), total	mg/L	*	0.00465	0.00335	0.0283	0.0103	0.0103	0.00305	0.00964	0.00909	0.005	0.0125	0.0158	0.0055	0.00423	0.0271	0.0265	0.0118	0.0546	0.0196	0.0145
Antimony (Sb), total	mg/L	**0.009**	0.000027	0.000029	0.000025	0.000041	0.000033	0.000026	0.00003	0.000032	<0.000050	<0.000050	<0.000050	<0.000050	0.00003	0.00003	0.000031	0.000033	0.000036	0.000036	0.000037
Arsenic (As), total	mg/L	**0.005**	0.000398	0.000408	0.000561	0.000547	0.000505	0.000531	0.000793	0.000563	0.000554	0.000554	0.000398	0.000408	0.000338	0.000473	0.000473	0.000481	0.00113	0.000594	0.000526
Barium (Ba), total	mg/L		0.0588	0.0598	0.0649	0.0792	0.0859	0.0961	0.102	0.0996	0.0832	0.0629	0.0451	0.0563	0.0544	0.0477	0.0556	0.0648	0.0895	0.0909	0.0896
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000020	<0.000020	<0.000020	<0.000020	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050	<0.050	<0.050	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*	0.00003	0.000026	0.000038	0.000048	0.000038	0.000049	0.000054	0.000044	0.000036	0.000031	0.000027	0.000019	0.00002	0.000036	0.000038	0.000038	0.000084	0.000063	0.00006
Calcium (Ca), total	mg/L		44	44.7	54.9	65.9	69.8	78.3	74.5	77.6	69.2	50.1	37.6	41.2	43.5	34.6	44.6	53.4	59.7	75.5	74.7
Chromium (Cr), total	mg/L	**0.001**	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	**0.00144**	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010	0.00013	0.00017	0.00013
Cobalt (Co), total	mg/L		0.000031	0.000026	0.000056	0.000061	0.00004	0.000059	0.000053	0.000051	0.000028	0.000036	0.000042	0.000018	0.000025	0.000056	0.000082	0.000047	0.000196	0.000074	0.000059
Copper (Cu), total	mg/L	*	0.00044	0.00042	0.000417	0.000331	0.000279	0.000305	0.000355	0.000246	0.00043	0.00072	0.00098	0.0007	0.000501	0.0011	0.000657	0.000432	0.000631	0.000336	0.00039
Iron (Fe), total	mg/L	**0.3**	0.0633	0.0581	0.141	0.112	0.0764	0.0858	0.175	0.105	0.071	0.146	0.108	0.0554	0.0411	0.126	0.149	0.0844	**0.357**	0.118	0.117
Lead (Pb), total	mg/L	*	0.000021	0.000014	0.00008	0.00223	0.00002	0.000031	0.000091	0.000033	<0.000050	0.000062	<0.000050	<0.000050	0.000016	0.000324	0.00011	0.000049	0.000312	0.000052	0.00004
Lithium (Li), total	mg/L		0.00164	0.00226	0.0016	0.00328	0.00312	0.00352	0.00373	0.00397	0.0045	0.00277	0.00146	0.00174	0.00175	0.00138	0.00166	0.00187	0.00303	0.00361	0.0039
Magnesium (Mg), total	mg/L		7.26	7.66	10	13.1	14.9	18.3	17.8	17.5	15.8	10.7	6.69	6.81	6.76	5.4	6.9	9.98	14	16.2	16.9
Manganese (Mn), total	mg/L	*	0.0193	0.0153	0.0335	0.0473	0.032	0.0468	0.0559	0.0434	0.0234	0.0218	0.015	0.0107	0.0153	0.0251	0.036	0.0292	0.0863	0.055	0.0543
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	0.000683	0.000691	0.000851	0.000998	0.00107	0.00132	0.00134	0.0014	0.00148	0.00101	0.000654	0.000842	0.000756	0.000474	0.000607	0.000928	0.00115	0.00134	0.00127
Nickel (Ni), total	mg/L	*	0.000385	0.000401	0.000474	0.00064	0.00065	0.00183	0.001	0.000942	0.00086	0.00075	0.00058	0.00038	0.000364	0.000614	0.000573	0.000485	0.00119	0.00101	0.00093

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-15 09-Sep-2015	KZ-15 11-Sep-2015	KZ-15 14-Oct-2015	KZ-15 19-Nov-2015	KZ-15 02-Dec-2015	KZ-15 20-Jan-2016	KZ-15 09-Feb-2016	KZ-15 20-Mar-2016	KZ-15 20-Apr-2016	KZ-15 04-May-2016	KZ-15 15-May-2016	KZ-15 13-Jun-2016	KZ-15 26-Jul-2016	KZ-15 27-Aug-2016	KZ-15 07-Sep-2016	KZ-15 01-Oct-2016	KZ-15 15-Nov-2016	KZ-15 20-Dec-2016	KZ-15 16-Jan-2017
Phosphorus (P), total	mg/L		<0.0020	<0.0020	0.0184	0.0062	0.0023	0.0064	0.0087	0.0057	<0.010	<0.010	<0.010	0.01	0.0029	0.0068	0.0024	0.0078	0.0276	0.0079	0.0083
Potassium (K), total	mg/L		1.16	1.2	1.19	1.33	1.44	1.58	1.53	1.54	1.48	1.24	1.02	1.14	1.06	1.07	1.04	1.11	1.25	1.34	1.31
Selenium (Se), total	mg/L	**0.002**	0.000657	0.000701	0.00117	0.0013	0.00134	0.00156	0.00135	0.00142	0.00115	0.000742	0.000434	0.000485	0.000389	0.000335	0.000643	0.00131	0.00135	0.00155	0.00142
Silicon (Si), total	mg/L		2.73	2.65	2.99	3.3	3.76	4.32	4.02	3.72	4.05	3.08	2.49	2.56	2.88	2.72	2.71	3.03	3.4	4.11	3.9
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050	0.000021	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010
Sodium (Na), total	mg/L		0.889	0.909	1.03	1.21	1.32	1.53	1.5	1.46	1.39	0.95	0.81	0.78	0.842	0.709	0.834	1.02	1.18	1.38	1.34
Strontium (Sr), total	mg/L		0.136	0.142	0.172	0.219	0.216	0.273	0.259	0.26	0.243	0.166	0.115	0.142	0.137	0.113	0.121	0.177	0.214	0.243	0.236
Sulphur (S), total	mg/L		8.5	8.9	10	10.9	11.5	14	12.8	12	<15	<15	<15	<15	8.1	7.8	8.5	10.1	11.2	13.3	12.1
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000003	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000003	<0.0000020	0.000002	<0.0000020
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00051	<0.0050	<0.0050	<0.0050	<0.0050	<0.00050	0.00089	0.00148	0.00093	0.00311	0.00125	<0.0020
Uranium (U), total	mg/L	**0.015**	0.00144	0.00148	0.00234	0.00312	0.0036	0.00498	0.00495	0.00514	0.00477	0.00255	0.00134	0.00132	0.00121	0.000713	0.00124	0.0022	0.00348	0.00413	0.00422
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	*	0.00281	0.00247	0.00417	0.00576	0.00435	0.00622	0.00755	0.00485	0.0038	0.0034	0.0018	0.002	0.00165	0.00341	0.00496	0.00563	0.0125	0.00856	0.0099
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*	0.00806	0.00354	0.00128	0.00411	0.00051	0.00185	0.00083	0.00261	0.00124	0.00294	0.0032	0.00164	0.00172	0.00556	0.00199	0.00156	0.0009	0.00088	0.00127
Antimony (Sb), dissolved	mg/L		0.000028	0.000032	0.00003	0.000032	0.000031	0.000025	0.000027	0.000031	0.000033	0.000033	0.000023	0.000039	0.00003	0.000031	0.000032	0.00003	0.00003	0.000026	0.000032
Arsenic (As), dissolved	mg/L		0.000359	0.00035	0.000367	0.000344	0.000412	0.000392	0.000308	0.000341	0.0005	0.00041	0.000261	0.000336	0.000288	0.000316	0.000337	0.000458	0.000323	0.000354	0.000326
Barium (Ba), dissolved	mg/L		0.0592	0.0626	0.0632	0.0817	0.0798	0.1	0.0985	0.104	0.101	0.0641	0.0445	0.0541	0.0523	0.0446	0.0581	0.0659	0.0826	0.0918	0.0913
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.000022	0.000021	0.000022	0.000029	0.000022	0.000042	0.000035	0.000034	0.000031	0.000019	0.000013	0.0000131	0.000014	0.000021	0.000016	0.000022	0.000036	0.000048	0.000043
Calcium (Ca), dissolved	mg/L		46	46.7	54.1	62.9	65.1	83.5	75.8	76	83.4	50.2	36.6	41.3	43.1	34.4	45.1	54.9	63	78	75
Chromium (Cr), dissolved	mg/L		0.00013	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		0.000019	0.000016	0.00002	0.000023	0.000019	0.000018	0.000022	0.000025	0.000021	0.000016	0.000014	0.0000137	0.00001	0.000017	0.000016	0.000021	0.000025	0.00003	0.000034
Copper (Cu), dissolved	mg/L		0.000536	0.00054	0.000255	0.000253	0.000226	0.00025	0.000186	0.000241	0.000311	0.000492	0.000705	0.000465	0.000424	0.000962	0.000474	0.000345	0.000208	0.000187	0.000234
Iron (Fe), dissolved	mg/L	**0.35**	0.0201	0.011	0.0092	0.0076	0.0102	0.0035	0.0031	0.0028	0.0165	0.0401	0.0156	0.0138	0.0077	0.0208	0.0097	0.0127	0.0045	0.0106	0.0103
Lead (Pb), dissolved	mg/L		0.000005	0.000009	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000006	<0.0000050	0.000012	<0.0000050	<0.0000050	<0.0000050	0.000034	0.000005	<0.0000050	<0.0000050	<0.0000050	0.000033
Lithium (Li), dissolved	mg/L		0.00221	0.00211	0.00162	0.00301	0.00262	0.00362	0.00437	0.00436	0.00418	0.00242	0.00126	0.00188	0.00165	0.00106	0.00142	0.00198	0.00295	0.00366	0.00386
Magnesium (Mg), dissolved	mg/L		7.44	7.52	9.66	13.3	14.9	17.9	17	17.8	18.8	11	6.54	6.9	6.73	5.42	6.89	9.89	12.5	16.1	16.8
Manganese (Mn), dissolved	mg/L		0.012	0.0103	0.0129	0.0221	0.0191	0.0306	0.0301	0.028	0.0185	0.00842	0.00385	0.00688	0.00559	0.00608	0.00834	0.016	0.0277	0.044	0.0424
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.000672	0.000697	0.000836	0.00104	0.00116	0.00143	0.00141	0.00145	0.00157	0.00109	0.000652	0.000826	0.000702	0.000496	0.000603	0.000944	0.00118	0.00128	0.00129
Nickel (Ni), dissolved	mg/L		0.000447	0.000403	0.000378	0.000589	0.0006	0.000824	0.000859	0.000863	0.000899	0.000676	0.000552	0.000363	0.000358	0.000512	0.000386	0.000409	0.000584	0.000791	0.00088
Phosphorus (P), dissolved	mg/L		<0.0020	<0.0020	0.0041	0.0029	<0.0020	<0.0020	0.0054	0.0029	0.0035	<0.0020	0.0095	<0.0020	<0.0020	0.0044	0.003	0.0026	0.0034	0.0034	0.005
Potassium (K), dissolved	mg/L		1.25	1.32	1.15	1.37	1.35	1.6	1.48	1.57	1.81	1.26	1.02	1.18	0.957	1.05	1.15	1.12	1.13	1.28	1.35
Selenium (Se), dissolved	mg/L		0.000602	0.000598	0.000984	0.00122	0.00155	0.00151	0.00134	0.00143	0.00119	0.000765	0.000403	0.000539	0.000359	0.000346	0.000597	0.00151	0.00137	0.00157	0.00149
Silicon (Si), dissolved	mg/L		2.83	2.89	2.91	3.49	3.85	4.21	4.08	4.05	4.32	3.08	2.3	2.67	2.87	2.51	2.93	3.26	3.44	4.3	3.8
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000006	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		0.918	0.954	0.995	1.23	1.31	1.49	1.43	1.48	1.72	0.976	0.777	0.859	0.84	0.725	0.869	1.21	1.06	1.27	1.35
Strontium (Sr), dissolved	mg/L		0.148	0.149	0.167	0.218	0.221	0.281	0.259	0.257	0.302	0.171	0.114	0.13	0.127	0.109	0.142	0.184	0.196	0.269	0.238
Sulphur (S), dissolved	mg/L		8.1	8.3	9.2	10.7	12.2	12.9	12.7	11.9	11.2	7.4	4.9	7.8	7.9	7.6	8.6	11	9.7	12.8	11.2
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.00142	0.00144	0.00229	0.00321	0.00352	0.00512	0.00476	0.0051	0.00549	0.00272	0.00128	0.00141	0.00114	0.000682	0.00125	0.00222	0.00316	0.00422	0.00436
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.00227	0.00199	0.00193	0.0039	0.00226	0.0056	0.00518	0.00423	0.00329	0.00212	0.00095	0.00116	<0.00010	0.00176	0.00222	0.00213	0.00502	0.00766	0.00737
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00011	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15
			23-Feb-2017	21-Mar-2017	28-Apr-2017	16-May-2017	27-May-2017	31-May-2017	06-Jun-2017	14-Jun-2017	19-Jul-2017	10-Aug-2017	13-Sep-2017	04-Oct-2017	02-Nov-2017	05-Dec-2017	08-Jan-2018	14-Feb-2018	21-Feb-2018	01-Mar-2018	07-Mar-2018
Discharge (Flow)	L/s		79.5	85.6	105.9	1229.6			948		2584.4	1636.5	637.8	538	245.3	206.4		60.5			109.8
Total Suspended Solids	mg/L		26.9	1	<1.0	12.2	3.5	2.7	2.3	3.6	2.2	1.6	<1.0	<1.0	<1.0	<1.0	<1.1	<1.0	1	1.5	<1.0
pH (field)	pH units	**6.5 - 9**	7.38	7.3	7.62	7.93	7.86	7.69	7.71	7.76	7.9	8.01	7.98	8.01	7.56	7.81	7.41	7.38	7.8	7.77	7.6
pH (lab)	pH units	**6.5 - 9**	8.13	7.82	8.4	7.98	7.99	7.81	8.14	8.14	8.21	8.31	8.36	8.38	8.23	8.28	8.11	8.45	8.09	8.39	8.14
Specific Conductance (field)	µS/cm		536.4	475.7	476.9	156	192.2	164.1	204.6	187.9	239.3	269.1	428.7	382.4	360	616.8	586.8			411.2	407.3
Specific Conductance (lab)	µS/cm		518	527	480	167	190	162	219	189	238	310	363	376	436	455	502	536	551	567	571
Temperature (field)	C		-0.1	-0.2	0.4	1.4	1.7	6.4	6.1	5.0	6.4	6.4	5.3	4.7	-0.1	0.2	0	-0.1	-0.1	-0.1	-0.3
Dissolved Oxygen (field)	mg/L	**6.5**	11.44	12.17	11.43	12.5	12.22	8.66	11.6	10.33	11.93	10.79	10.87	10.97	11.62	9.21	9.66	11.46	10.99	10.89	10.49
Dissolved Oxygen (field)	%		89.7	95.9	91.5	103	87.7	70.3	108	80.9	96.3	101.1	98.5	98.7	90.6	72.9	77.6	90.5	75.3	74.4	71.4
ORP (field)	mV		161.5	173.4	223.9	394.1	284.9	317.2	351.2	320.8	364	162.1	93	111.3	98.9	152.7	126.8	104.2	265.4	236.9	248.2
Turbidity (internal)	NTU		5.938	0.962	2.322	1.952	1.23	1.25	0.40	1.00	0.71	0.72	0.70	0.48	0.63	0.65		1.33			
Hardness (from total)	mg/L			285	243	93.2	93.9	81.3	106	92.4	121	159	185	189	218	254	254	282	282	303	321
Hardness (from dissolved)	mg/L		288	278	251	77.9	93	79	102	91.5	123	161	188	189	229	256	259	290	278	313	318
Colour	TCU																				
Total Acidity	mg/L		3.56	7.8	1.07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	1.3	<1.0	7.2	<1.0	5.3	3.1	14.3
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, total	mg/L		246	247	236	79.3	82.1	69.1	92.3	78	102	139	169	176	199	218	237	249	264	274	271
Alkalinity, bicarbonate HCO3	mg/L		300	302	279	96.7	100	84.3	113	95.1	124	168	200	207	243	266	289	289	322	321	331
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	4.48	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.78	3.14	3.89	<0.50	<0.50	<0.50	7.67	<0.50	6.73	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	3.73	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.65	2.62	3.24	<0.50	<0.50	<0.50	6.39	<0.50	5.61	<0.50
Chloride	mg/L	**120**	0.68	0.72	0.61	0.97	<0.50	<0.50	0.52	0.59	<0.50	<0.50	0.51	0.77	0.73	<0.50	0.62	<0.50	<0.50	0.52	0.75
Fluoride	mg/L	**0.12**	0.12	0.12	0.12	0.051	0.051	0.047	0.054	0.054	0.056	0.065	0.086	0.086	0.1	0.1	0.11	**0.14**	**0.13**	**0.13**	**0.13**
Sulphate, dissolved	mg/L	*	39.6	38.7	37.1	3.82	13.4	12.6	19	19.7	22.6	27.9	31.7	30.7	35.9	37.4	38.1	42.5	41.2	42.9	42.8
Cyanide, total	mg/L	**0.005**	<0.00050	<0.00050	0.00064	0.00129	0.00081	0.00073	0.0008	0.00059	0.00054	0.00057	0.00054	<0.00050	<0.00050	<0.00050	<0.00050	0.00073	<0.00050	0.00055	0.00077
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	<0.00050	<0.00050	0.00058	0.0013	0.00084	0.00087	<0.00050	0.00062	0.00086	0.0006	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00054	<0.00050	0.00062	0.00088
Ammonia (N)	mg/L	*	0.031	0.031	0.059	0.039	0.0097	0.028	0.022	0.09	0.055	0.01	<0.0050	0.009	0.005	<0.0050	0.029	0.028	0.007	0.017	0.025
Nitrite (N)	mg/L	**0.02**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3.0**	0.255	0.248	0.203	0.0238	0.0665	0.0274	0.043	0.0237	0.0315	0.0815	0.0947	0.13	0.18	0.205	0.23	0.196	0.213	0.211	0.194
Nitrite & Nitrate, as N	mg/L		0.255	0.248	0.203	0.0238	0.0665	0.0274	0.043	0.0237	0.0315	0.0815	0.0947	0.13	0.18	0.205	0.23	0.196	0.213	0.211	0.194
Phosphorus,total-colourimetric	mg/L	**0.035**		0.005	0.0054	0.0349	0.0106	0.0072	0.0054	0.0055	0.0042	0.0043	0.0032	0.0028	0.0038	0.0044	0.004	0.0085	0.0029	0.0052	0.0045
Phosphorus, Total Dissolved	mg/L		0.0894	0.0039	0.0054	0.0236	0.0096	0.0087	0.0052	0.0036	0.004	0.0038	0.0029	0.0031	0.0034	0.0059	0.0049	0.0095	0.0049	0.0049	0.0039
Dissolved Organic Carbon	mg/L		0.89	0.58	1.3	14.1	4.52	3.33	1.79	4.98	2.7	2.02	1.46	1.17	1.37	1.66	1.73	1.13	<0.50	1.45	0.96
Aluminum (Al), total	mg/L	*		0.0068	0.0111	**0.168**	0.0366	0.0321	0.0165	0.0297	0.0166	0.014	0.00437	0.00701	0.00464	0.00457	0.00273	0.00889	0.00372	0.00665	0.00369
Antimony (Sb), total	mg/L	**0.009**		0.000029	0.000049	0.000033	0.000041	0.000034	0.000041	0.000036	0.000031	0.000051	0.000035	0.000031	0.000031	0.00003	0.000032	0.000035	0.000021	0.00003	0.000027
Arsenic (As), total	mg/L	**0.005**		0.000637	0.000583	0.00118	0.000525	0.000479	0.000431	0.000458	0.00039	0.000511	0.000648	0.000688	0.000433	0.000396	0.000406	0.000492	0.000501	0.000539	0.000543
Barium (Ba), total	mg/L			0.105	0.0924	0.0473	0.0407	0.0385	0.0466	0.0414	0.0522	0.0672	0.0721	0.0703	0.0769	0.09	0.0941	0.105	0.102	0.108	0.1
Beryllium (Be), total	mg/L			<0.000010	<0.000010	0.000015	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L			<0.0000050	<0.0000050	<0.000010	<0.000010	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	**1.5**		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*		0.00007	0.000052	0.000131	0.00004	0.00004	0.000027	0.000036	0.0000381	0.0000399	0.000038	0.000035	0.00004	0.0000463	0.0000535	0.000082	0.0000762	0.0000743	0.0000684
Calcium (Ca), total	mg/L			83.1	71.4	28.7	28.9	25.5	33	29.1	38.4	49.9	54.9	56.3	63.5	74.1	73	78.6	80.7	85.9	90.3
Chromium (Cr), total	mg/L	**0.001**		<0.00010	<0.00010	0.0003	0.00011	0.00011	<0.00010	0.00012	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), total	mg/L			0.000059	0.00006	0.000263	0.000071	0.00009	0.000044	0.000069	0.0000446	0.000046	0.000037	0.000045	0.000035	0.0000389	0.0000377	0.0000769	0.0000666	0.0000682	0.000062
Copper (Cu), total	mg/L	*		0.000221	0.000291	0.00239	0.00146	0.00142	0.000876	0.00139	0.000785	0.00052	0.000378	0.000335	0.000286	0.000263	0.000248	0.000243	0.00022	0.000245	0.000238
Iron (Fe), total	mg/L	**0.3**		0.107	0.0989	**0.612**	0.174	0.156	0.0949	0.109	0.0748	0.0765	0.0692	0.0934	0.0472	0.043	0.0528	0.0907	0.0689	0.0879	0.0589
Lead (Pb), total	mg/L	*		0.00003	0.00003	0.000425	0.000137	0.000133	0.000048	0.000107	0.0000843	0.0000502	0.00001	0.000023	0.000038	0.0000103	0.0000197	0.000025	0.0000165	0.0000244	0.0000111
Lithium (Li), total	mg/L			0.00458	0.00416	0.00144	0.00125	0.00113	0.00141	0.00107	0.00127	0.00156	0.00243	0.00218	0.00324	0.00377	0.00433	0.0051	0.00406	0.00471	0.00459
Magnesium (Mg), total	mg/L			18.9	15.8	5.22	5.25	4.25	5.79	4.79	6.19	8.46	11.7	11.7	14.5	16.8	17.4	20.8	19.4	21.5	23.3
Manganese (Mn), total	mg/L	*		0.0832	0.047	0.0847	0.026	0.0198	0.0176	0.018	0.0157	0.0196	0.0313	0.0345	0.031	0.0418	0.0473	0.0958	0.0838	0.0797	0.0802
Mercury (Hg), total	mg/L	**0.000026**		<0.0000020	<0.0000020	0.0000045	<0.0000020	<0.0000020	0.0000061	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**		0.00166	0.00136	0.000559	0.000554	0.000507	0.000622	0.000525	0.000589	0.000825	0.00109	0.00109	0.00123	0.00118	0.00116	0.00174	0.00172	0.00165	0.00145
Nickel (Ni), total	mg/L	*		0.00123	0.001	0.00192	0.0009	0.0009	0.000606	0.00083	0.000616	0.000533	0.000536	0.00057	0.00066	0.000769	0.000808	0.00127	0.00135	0.00132	0.00141

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15	KZ-15
			23-Feb-2017	21-Mar-2017	28-Apr-2017	16-May-2017	27-May-2017	31-May-2017	06-Jun-2017	14-Jun-2017	19-Jul-2017	10-Aug-2017	13-Sep-2017	04-Oct-2017	02-Nov-2017	05-Dec-2017	08-Jan-2018	14-Feb-2018	21-Feb-2018	01-Mar-2018	07-Mar-2018
Phosphorus (P), total	mg/L			0.0066	0.0096	0.0609	0.0214	0.012	0.0058	0.01	0.0083	0.0061	0.005	0.005	0.0052	0.0051	0.0033	0.0059	0.0059	0.0069	0.0065
Potassium (K), total	mg/L			1.55	1.59	1.67	1.14	1.11	1.08	0.906	0.848	0.982	1.17	1.14	1.25	1.29	1.32	1.52	1.44	1.51	1.65
Selenium (Se), total	mg/L	**0.002**		0.00157	0.00119	0.000496	0.000464	0.0004	0.000523	0.000441	0.000605	0.00112	0.00123	0.00112	0.00125	0.00139	0.00152	0.0014	0.00155	0.00159	0.00183
Silicon (Si), total	mg/L			4.5	3.85	2.36	2.09	1.9	2.17	2.17	2.64	2.91	2.77	2.75	3.71	3.7	3.7	4.45	3.86	4.2	4.33
Silver (Ag), total	mg/L	**0.00025**		<0.0000050	<0.0000050	<0.000010	<0.000010	<0.000010	<0.0000050	0.000007	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L			1.5	1.32	0.55	0.54	0.52	0.703	0.605	0.76	0.939	1.14	1.18	1.26	1.43	1.5	1.54	1.6	1.73	1.85
Strontium (Sr), total	mg/L			0.294	0.232	0.0912	0.0933	0.0823	0.107	0.0939	0.123	0.158	0.19	0.191	0.2	0.263	0.234	0.268	0.257	0.298	0.316
Sulphur (S), total	mg/L			14.4	11.7	4.1	4.9	4.3	6.2	5.7	7.9	9.4	10.2	10.5	11.6	13.1	12.7	12.3	12.9	14.4	16.9
Thallium (Tl), total	mg/L	**0.0008**		<0.0000020	<0.0000020	0.0000037	0.000002	<0.0000020	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L			<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L			0.00067	0.00078	0.0055	<0.0020	<0.0020	0.00078	0.00134	0.00136	0.00084	<0.00050	0.00058	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), total	mg/L	**0.015**		0.0056	0.00477	0.000924	0.000931	0.000655	0.00112	0.000727	0.00109	0.0017	0.00279	0.00274	0.00374	0.0038	0.00457	0.00678	0.00631	0.00602	0.00667
Vanadium (V), total	mg/L			<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	*		0.0101	0.0061	**0.0154**	0.0057	0.005	0.00364	0.00443	0.00457	0.00449	0.00326	0.00355	0.00449	0.00596	0.00644	0.0112	0.00987	0.0089	0.0101
Zirconium (Zr), total	mg/L			<0.00010	<0.00010	0.00015	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*	0.00091	0.00074	0.00086	**0.0702**	0.0157	0.0101	0.00661	0.0107	0.006	0.0043	0.00183	0.00183	0.00122	0.00117	0.00975	0.00211	0.00094	0.00081	0.00114
Antimony (Sb), dissolved	mg/L		0.000029	0.000044	0.000027	0.000027	0.000036	0.000033	0.000037	0.00003	0.000041	0.000052	0.000029	0.000031	0.000033	0.000033	0.000046	0.000033	0.000024	0.000028	0.000039
Arsenic (As), dissolved	mg/L		0.000408	0.000359	0.000373	0.000477	0.00037	0.000357	0.000347	0.000357	0.00035	0.000424	0.000542	0.000522	0.000396	0.000307	0.0003	0.000299	0.000343	0.000338	0.000359
Barium (Ba), dissolved	mg/L		0.1	0.0987	0.0949	0.0378	0.0394	0.0384	0.0465	0.0386	0.0515	0.0647	0.0725	0.07	0.0773	0.0897	0.0921	0.103	0.099	0.113	0.111
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.000052	0.000065	0.000045	0.000061	0.000029	0.000023	0.000019	0.000021	0.000027	0.0000305	0.000033	0.000031	0.000034	0.0000474	0.0000549	0.0000804	0.0000684	0.0000617	0.0000825
Calcium (Ca), dissolved	mg/L		83.9	81.7	73.1	22.9	28.5	25	31.6	28.9	38.8	50.4	56.2	56.2	67.5	74.8	75.5	81.8	78.3	89.8	90.1
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	0.00011	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		0.00003	0.00004	0.000028	0.000094	0.000039	0.000022	0.000025	0.000028	0.000019	0.0000208	0.000026	0.00003	0.000028	0.0000337	0.0000311	0.0000617	0.0000508	0.0000506	0.0000445
Copper (Cu), dissolved	mg/L		0.000204	0.000191	0.000222	0.0017	0.00129	0.00118	0.000773	0.00128	0.00067	0.000469	0.000294	0.000298	0.000269	0.000287	0.00039	0.000215	0.000213	<0.000050	0.0003
Iron (Fe), dissolved	mg/L	**0.35**	0.0076	0.0069	0.0168	0.139	0.0705	0.0607	0.0411	0.0393	0.0265	0.0292	0.0347	0.0302	0.0132	0.01	0.0079	0.0082	0.0086	0.0089	0.0099
Lead (Pb), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	0.0000424	0.000038	0.000036	0.000014	0.000014	0.000017	<0.0000050	<0.0000050	0.000006	<0.0000050	0.0000122	0.000038	<0.0000050	<0.0000050	0.0000061	0.0000209
Lithium (Li), dissolved	mg/L		0.00421	0.00439	0.00417	0.00133	0.00128	0.00098	0.00136	0.00097	0.00131	0.00157	0.00253	0.00229	0.00334	0.00382	0.00431	0.00483	0.00404	0.00492	0.00534
Magnesium (Mg), dissolved	mg/L		19	18.1	16.6	5.05	5.33	4.01	5.57	4.67	6.28	8.58	11.4	11.8	14.8	16.9	17.1	20.8	20.1	21.6	22.6
Manganese (Mn), dissolved	mg/L		0.0492	0.0623	0.0356	0.0331	0.0112	0.00693	0.0101	0.00731	0.0085	0.0144	0.0282	0.0286	0.0278	0.0373	0.0395	0.0883	0.0759	0.0672	0.0649
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	0.0000047	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000027	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.0016	0.00157	0.00137	0.000486	0.000533	0.00051	0.000592	0.000515	0.000631	0.000811	0.00109	0.00109	0.00124	0.00117	0.00117	0.00171	0.00168	0.00155	0.00165
Nickel (Ni), dissolved	mg/L		0.00105	0.00108	0.000944	0.00138	0.000851	0.000695	0.00056	0.000733	0.000477	0.000424	0.000466	0.000537	0.000642	0.00083	0.000894	0.00139	0.00121	0.00128	0.00123
Phosphorus (P), dissolved	mg/L		0.0075	<0.0020	0.0044	0.0166	0.0089	0.0063	0.0034	0.0052	0.0039	0.0069	0.0022	0.004	0.0032	0.0054	0.0035	0.0041	0.0034	0.0045	0.0043
Potassium (K), dissolved	mg/L		1.54	1.46	1.64	1.59	1.17	1.08	1.08	0.917	0.844	1	1.15	1.13	1.28	1.37	1.36	1.54	1.43	1.58	1.64
Selenium (Se), dissolved	mg/L		0.00181	0.00146	0.00134	0.000445	0.000496	0.000442	0.0005	0.000426	0.000545	0.00108	0.0012	0.00108	0.00131	0.00142	0.00158	0.00145	0.00149	0.00167	0.00174
Silicon (Si), dissolved	mg/L		4.21	3.84	4.11	2.06	2.01	1.8	1.97	2.04	2.6	2.82	3.16	2.75	3.4	3.74	3.62	4.24	3.72	4.17	4.34
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		1.66	1.5	1.43	0.543	0.561	0.455	0.659	0.591	0.786	0.952	1.11	1.18	1.32	1.49	1.53	1.59	1.63	1.77	1.81
Strontium (Sr), dissolved	mg/L		0.277	0.256	0.248	0.0849	0.0913	0.0815	0.107	0.0881	0.125	0.158	0.196	0.186	0.204	0.257	0.222	0.264	0.252	0.295	0.296
Sulphur (S), dissolved	mg/L		13.8	11.7	12.6	3.6	4.6	4.2	6	5.6	6.9	9.2	10.4	12.2	11.5	13.2	12.3	12.6	12.3	15	15.8
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000022	<0.0000020
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	0.00097	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00073	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.00558	0.00555	0.00472	0.000812	0.000946	0.000672	0.00106	0.000699	0.00101	0.00169	0.00274	0.00275	0.00373	0.00385	0.00444	0.00678	0.00641	0.0067	0.00606
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.008	0.00853	0.00588	0.00823	0.00372	0.00273	0.00273	0.0028	0.00292	0.00348	0.0027	0.00295	0.00459	0.00636	0.00808	0.0107	0.00908	0.00897	0.00955
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	0.00015	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-15	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16
			15-Mar-2018	06-Apr-1995	08-May-1995	11-Jun-1995	23-Jul-1995	15-Aug-1995	22-Aug-1995	30-Aug-1995	06-Sep-1995	13-Sep-1995	23-Aug-2002	19-Aug-2004	24-Aug-2006	14-Aug-2008	19-Aug-2010	16-Aug-2012	21-Aug-2014	30-Apr-2015	11-May-2015
Discharge (Flow)	L/s		118.6																	69.8	947.1
Total Suspended Solids	mg/L		<1.0	<4	8	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	2	<4.0	<4.0	<1.0	4.6
pH (field)	pH units	**6.5 - 9**	7.16												8.0	8.1	7.8	7.9	7.64	7.21	7.57
pH (lab)	pH units	**6.5 - 9**	8.4	7.3	7.3	7.6	7.9	7.8	7.8	7.7	7.9	7.8		8.2	8.1	8.2	8.25	8.1	8.18	8.13	7.68
Specific Conductance (field)	µS/cm		440.7												229	310	291	225	299	427.8	110.8
Specific Conductance (lab)	µS/cm		561	496	181	160	248	241	237	258	176	239	186	277	228	280	306	239	290	490	135
Temperature (field)	C		-0.3												8.3	10.5	10.1	11.2	10.5	-0.2	-0.3
Dissolved Oxygen (field)	mg/L	**6.5**	9.54												9.0	9.6		10.1		11.1	12.1
Dissolved Oxygen (field)	%		64.6												81	99		90.8		89	95
ORP (field)	mV		257.7																	368.2	236.8
Turbidity (internal)	NTU		0.88																		
Hardness (from total)	mg/L		316	283	95.5	78.9	146	132	155	130	123	137	97.4	147	120	159	147	120	145	259	70.7
Hardness (from dissolved)	mg/L		302	276	98.4	73.1	140	130	140	130	126	137	107	150	120	158	161	121	137	272	72
Colour	TCU																			6.1	165
Total Acidity	mg/L		8.2										0.9	1.1	0.9	1.4	1	<0.50	<0.50	<0.50	0.89
Acidity (pH 4.5)	mg/L		<1.0										<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		273	253	87.6	63.7	129	113	112	109	95.2	102	84	125	100	130	140	104	123	218	58.6
Alkalinity, bicarbonate HCO3	mg/L		322				157	138	137	133	116	124	102	152	122	150	170	127	150	266	71.5
Alkalinity, hydroxide OH	mg/L		<0.50				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		5.54				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		4.62				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1.0	<0.5	0.6	<0.5	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**	0.62																	<0.50	0.78
Fluoride	mg/L	**0.12**	**0.13**																	0.087	0.039
Sulphate, dissolved	mg/L	*	43	34.9	12.4	13.1	21.6	24.7	19.5	18.5	21.7	17.4	14.7	20.2	17.4	21	28	18.7	23.3	36.9	1.21
Cyanide, total	mg/L	**0.005**	0.00062	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001								<0.00050	0.00122
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	<0.00050	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001								<0.00050	0.00107
Ammonia (N)	mg/L	*	0.016	<0.005	<0.005	<0.005	<0.005	0.012	<0.005	<0.005	0.006	0.006	<0.005	0.021	<0.005	<0.005	<0.05	<0.0050	0.033	0.0131	0.0098
Nitrite (N)	mg/L	**0.02**	<0.0020	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	0.0032	
Nitrate (N)	mg/L	**3.0**	0.192	0.22	0.04	0.04	<0.02	<0.02	0.03	0.05	0.06	0.06	<0.02	<0.02	0.03	0.03	<0.02	0.023	<0.020	0.193	<0.020
Nitrite & Nitrate, as N	mg/L		0.192	0.22	0.04	0.04	<0.02	<0.02	0.03	0.05	0.06	0.06	<0.02	<0.02	0.03	0.03	<0.02	0.023	<0.020	0.196	<0.020
Phosphorus,total-colourimetric	mg/L	**0.035**	0.0039	<0.003	0.016	0.006	<0.003	<0.003	<0.003	0.005	0.004	<0.003								0.0024	0.0185
Phosphorus, Total Dissolved	mg/L		0.0037																	0.0022	0.0184
Dissolved Organic Carbon	mg/L		0.81																	0.97	10.8
Aluminum (Al), total	mg/L	*	0.00413	0.05	**0.12**	0.012	0.007	0.007	0.014	<0.006	0.009	0.009	0.02	0.004	0.007	0.009	0.005	0.00853	0.00272	0.00095	0.0943
Antimony (Sb), total	mg/L	**0.009**	0.000023															0.000022	0.000024	<0.000020	<0.000050
Arsenic (As), total	mg/L	**0.005**	0.000424	0.00005	0.0005	0.0002	<0.00005	<0.00005	0.0006	0.0001	0.00007	0.00017		<0.001	<0.001	0.0004	0.0003	0.000344	0.000392	0.000299	0.000614
Barium (Ba), total	mg/L		0.089	0.09	0.036	0.032	0.052	0.045	0.054	0.045	0.044	0.019	0.044	0.068	0.052	0.065	0.068	0.0582	0.062	0.0908	0.0339
Beryllium (Be), total	mg/L		<0.000010	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	0.000011
Bismuth (Bi), total	mg/L		<0.0000050	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002				<0.001	<0.001	<0.0000050	<0.0000050	<0.0000050	<0.000020
Boron (B), total	mg/L	**1.5**	<0.010	0.01	0.01	0.037	0.011	0.022	0.028	0.017	0.018	0.014	<0.008	<0.008	<0.008	<0.05	<0.05	<0.05	<0.02	<0.01	<0.050
Cadmium (Cd), total	mg/L	*	0.0000567	0.00001	0.00001	<0.00001	<0.00001	0.00009	0.00002	<0.00001	<0.00001	<0.00001		0.00002	0.00003	0.00012	0.00001	0.000023	0.000024	0.0000289	0.0000531
Calcium (Ca), total	mg/L		89.4	82	30	26	46	43	50	42	40	45	32	47.6	40.9	51.5	46	38.3	45.5	75.8	21.8
Chromium (Cr), total	mg/L	**0.001**	<0.00010	0.0004	**0.003**	0.0002	**0.0027**	0.0003	**0.0028**	0.001	0.0003	**0.0018**		<0.001	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00010	<0.00050
Cobalt (Co), total	mg/L		0.000051	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004		<0.0005	<0.0005	<0.0005	<0.0005	0.000016	0.000019	0.0000616	0.000154
Copper (Cu), total	mg/L	*	0.000219	0.0003	0.0022	0.0008	0.0005	0.0005	0.0008	0.0003	0.0004	0.0007		0.0005	0.0005	0.0005	0.0004	0.000485	0.000329	0.000212	0.00182
Iron (Fe), total	mg/L	**0.3**	0.0535	0.085	0.25	0.019	0.019	0.007	0.025	0.01	0.013	0.015	0.043	<0.005	0.011	0.014	0.008	0.0119	0.0093	0.0193	0.256
Lead (Pb), total	mg/L	*	0.0000121	0.0003	<0.0001	0.0003	0.0003	<0.0001	0.0002	0.0001	<0.0001	0.0006		<0.0005	<0.0005	<0.0002	<0.0002	0.000015	<0.0000050	0.0000118	0.000161
Lithium (Li), total	mg/L		0.00379												<0.002	<0.005	<0.005	0.00099	0.00116	0.00399	0.00082
Magnesium (Mg), total	mg/L		22.4	19	5	3.4	7.5	6.1	7.6	6	5.5	6.1	4.24	6.82	5.14	7.4	7.85	5.86	7.72	17.1	3.95
Manganese (Mn), total	mg/L	*	0.0629	0.0087	0.012	0.0017	0.0018	0.002	0.0036	0.0027	0.0032	0.003	<0.001	0.001	0.002	0.002	0.003	0.00192	0.00372	0.0312	0.0323
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001			<0.00001	<0.00002	<0.00002		0.000003	<0.0000020	0.0000037
Molybdenum (Mo), total	mg/L	**0.073**	0.00122	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.0005				<0.001	<0.001	0.000409	0.000537	0.000542	0.000345
Nickel (Ni), total	mg/L	*	0.00114	0.001		<0.001	<0.001	<0.001		<0.001	<0.001	0.001				<0.001	<0.001	0.000215	0.000184	0.00111	0.00101

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-15	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16
			15-Mar-2018	06-Apr-1995	08-May-1995	11-Jun-1995	23-Jul-1995	15-Aug-1995	22-Aug-1995	30-Aug-1995	06-Sep-1995	13-Sep-1995	23-Aug-2002	19-Aug-2004	24-Aug-2006	14-Aug-2008	19-Aug-2010	16-Aug-2012	21-Aug-2014	30-Apr-2015	11-May-2015
Phosphorus (P), total	mg/L		0.007	0.006	0.021	<0.004	<0.004	<0.004	0.004	<0.004	<0.004	0.004								<0.0020	0.025
Potassium (K), total	mg/L		1.62	1.4	1.2	0.9	1.2	0.98	1.1	0.96	0.91	1.1	1	1	1	1.18	1.05	1.05	1.08	1.53	1.58
Selenium (Se), total	mg/L	**0.002**	0.0018	0.0015	0.0004	<0.00005	0.00037	0.0001	0.0011	0.00005	0.00005	0.00013		<0.001	<0.001	0.0006	0.0006	0.000561	0.000558	0.00135	0.000226
Silicon (Si), total	mg/L		4.62	3.8	2.2	1.9	2.6	2.5	2.9	2.4	2.5	2.5			2.3	2.54	3.09	2.45	2.66	4.29	2.01
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001						<0.0000050	<0.0000050	<0.0000050	0.0000181
Sodium (Na), total	mg/L		1.76	1.6	0.6	0.64	0.93	0.84	0.99	0.85	0.81	0.92	0.69	0.91	0.83	1.09	0.88	0.801	0.9	1.49	0.93
Strontium (Sr), total	mg/L		0.262	0.24	0.083	0.076	0.14	0.12	0.014	0.12	0.11	0.13	0.098	0.147	0.115	0.158	0.161	0.127	0.154	0.269	0.0747
Sulphur (S), total	mg/L		15.3	11	3.4	3.8	6.5	6.7	7.7	6.8	7.1	7.1	5	7.3	6.2	8	9	<10	<15	13	<15
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020															<0.0000020	<0.0000020	<0.0000020	0.0000021
Tin (Sn), total	mg/L		<0.00020	0.005	<0.002	<0.002	0.003	<0.002	0.003	0.003	<0.002	<0.002				<0.005	<0.005	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		<0.00050	0.0041	0.0047	0.0007	0.0014	0.0015	0.0017	0.0014	0.0016	0.0014	<0.003	<0.003	<0.003	<0.005	<0.005	<0.00050	<0.00050	<0.00050	<0.0050
Uranium (U), total	mg/L	**0.015**	0.00484											0.00122	0.0008	0.0015	0.0014	0.000916	0.00136	0.00281	0.000489
Vanadium (V), total	mg/L		<0.00020	<0.0003	0.0004	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003						<0.00020	<0.00020	<0.00020	<0.00050
Zinc (Zn), total	mg/L	*	0.00797	0.005	**0.063**	0.003	0.006	0.004	0.002	<0.001	0.001	0.004	<0.005	<0.005	<0.005	<0.005	<0.005	0.00045	0.00037	0.00097	0.0032
Zirconium (Zr), total	mg/L		<0.00010	<0.0003	0.0005	0.0005	<0.0003	0.0004	<0.0003	0.0005	0.0004	<0.0003				<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	0.0001
Aluminum (Al), dissolved	mg/L	*	0.00099	0.01	**0.053**	0.007	0.007	<0.006	0.011	<0.006	0.007	0.006	<0.02	0.002	0.002	0.008	<0.003	0.00424	0.00233	0.00087	0.0444
Antimony (Sb), dissolved	mg/L		0.000037															<0.000020	0.000022	0.000031	<0.000020
Arsenic (As), dissolved	mg/L		0.000325	<0.00005	0.0005	0.0002	<0.00005	<0.00005	0.0002	0.00007	0.00007	0.00014		<0.001	<0.001	0.0005	0.0004	0.000353	0.000402	0.000301	0.000353
Barium (Ba), dissolved	mg/L		0.0997	0.086	0.036	0.03	0.05	0.045	0.049	0.046	0.046	0.049	0.049	0.067	0.053	0.064	0.072	0.0578	0.0611	0.0993	0.034
Beryllium (Be), dissolved	mg/L		<0.000010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002				<0.001	<0.001	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	0.023	0.012	0.025	0.012	0.016	0.01	0.011	0.015	0.015	<0.008	<0.008	<0.008	<0.05	<0.05	<0.05	<0.02	<0.01	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.0000673	0.00001	0.00009	<0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.00001		0.00002	0.00002	0.00013	0.00002	0.000022	0.000021	0.0000279	0.0000356
Calcium (Ca), dissolved	mg/L		85.5	81	31	24	44	42	45	42	41	45	35.1	48.8	40.8	51.2	51.1	38.7	42.2	80.3	22.2
Chromium (Cr), dissolved	mg/L		<0.00010		0.0014	0.0004	0.0003	0.0004	0.0008	0.0011	0.0004	0.0006		<0.001	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		0.0000428	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004		<0.0005	<0.0005	<0.0005	<0.0005	0.000016	0.000019	0.0000333	0.0000381
Copper (Cu), dissolved	mg/L		0.000262	0.0006		0.0008	0.0003	0.0005	0.0005	0.0004	0.0006	0.0006		0.0004	0.0005	0.0006	0.0004	0.000414	0.000335	0.000219	0.00139
Iron (Fe), dissolved	mg/L	**0.35**	0.0077	0.072	0.13	0.009	0.007	0.009	0.012	0.012	0.005	0.007	<0.005	<0.005	<0.005	0.012	0.007	0.0051	0.0073	0.0052	0.0704
Lead (Pb), dissolved	mg/L		<0.0000050	0.0005	<0.0001	0.0002	0.0003	0.0001	0.0002	<0.0001	<0.0001	0.0009		<0.0005	<0.0005	<0.0002	<0.0002	0.000005	<0.0000050	<0.0000050	0.0000196
Lithium (Li), dissolved	mg/L		0.00426												<0.002	<0.005	<0.005	0.00099	0.00106	0.004	0.00101
Magnesium (Mg), dissolved	mg/L		21.5	18	5.1	3.2	7.2	6	6.6	6.2	5.7	6.1	4.69	6.94	5.25	7.24	8.16	5.83	7.71	17.3	4.03
Manganese (Mn), dissolved	mg/L		0.0591	0.0076	0.011	0.0011	0.0013	0.0017	0.0024	0.0023	0.0026	0.0028	<0.001	<0.001	0.001	0.002	0.003	0.00122	0.00325	0.0248	0.00312
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001			<0.00001	<0.00002	<0.00002		0.0000034	<0.0000020	0.0000031
Molybdenum (Mo), dissolved	mg/L		0.00145	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004				<0.001	<0.001	0.000473	0.000517	0.000587	0.000243
Nickel (Ni), dissolved	mg/L		0.00114			<0.001	<0.001		<0.001	<0.001	<0.001	<0.001				<0.001	<0.001	0.000195	0.000192	0.00118	0.000916
Phosphorus (P), dissolved	mg/L		0.006		0.014	0.006	0.008	0.005	0.005	0.005	0.005	0.005								<0.0020	0.011
Potassium (K), dissolved	mg/L		1.61	1.4	1.3	0.87	1.1	0.96	1	0.98	0.95	1.1	<1	<1	1	1.11	1.17	1.07	1.01	1.63	1.66
Selenium (Se), dissolved	mg/L		0.00159	0.0016	0.0004	<0.00005	0.00036	<0.00005	0.00026	0.00006	<0.00005	0.00012		<0.001	<0.001	0.0008	0.0007	0.000496	0.000536	0.00142	0.000248
Silicon (Si), dissolved	mg/L		4.05	3.7	2.2	1.5	2.6	2.4	2.6	2.4	2.6	2.5			2.33	2.9	3.1	2.49	2.64	4.18	1.92
Silver (Ag), dissolved	mg/L		<0.0000050	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001						<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		1.75	1.6	0.7	0.59	0.93	0.82	0.91	0.85	0.85	0.93	0.83	0.9	0.85	0.96	1.01	0.81	0.95	1.68	0.476
Strontium (Sr), dissolved	mg/L		0.292	0.23	0.085	0.07	0.13	0.12	0.13	0.12	0.12	0.13	0.108	0.148	0.116	0.151	0.17	0.126	0.154	0.277	0.0759
Sulphur (S), dissolved	mg/L		13.3	11	3.5	3.6	6.2	6.6	6.9	6.8	7.4	7.1	5.4	7.4	6.3	9	9	<10	<15	12.2	<3.0
Thallium (Tl), dissolved	mg/L		<0.0000020															<0.0000020	<0.0000020	0.0000049	<0.0000020
Tin (Sn), dissolved	mg/L		<0.00020	0.003	0.002	<0.002	0.003	<0.002	0.004	<0.002	0.004	<0.002				<0.005	<0.005	<0.00020	0.00023	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	0.0026	0.0018	0.0005	0.0013	0.0015	0.0014	0.0013	0.0016	0.0014	<0.003	<0.003	<0.003	<0.005	<0.005	<0.00050	<0.00050	<0.00050	0.00053
Uranium (U), dissolved	mg/L		0.00543											0.00014	0.0009	0.0015	0.0017	0.000905	0.00134	0.00291	0.000448
Vanadium (V), dissolved	mg/L		<0.00020	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003						<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.00816	0.004		0.003	0.003	0.002	0.003	0.001	0.002	0.003	<0.005	<0.005	<0.005	<0.005	<0.005	0.00037	0.00055	0.00112	0.00186
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.0003	<0.0003	0.0003	0.0004	0.0005	0.0005	<0.0003	0.0003	0.0003				<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16
			12-May-2015	13-May-2015	22-Jun-2015	28-Jul-2015	22-Aug-2015	09-Sep-2015	14-Oct-2015	19-Nov-2015	02-Dec-2015	20-Jan-2016	09-Feb-2016	20-Mar-2016	20-Apr-2016	04-May-2016	15-May-2016	13-Jun-2016	26-Jul-2016	27-Aug-2016	07-Sep-2016
Discharge (Flow)	L/s		1117.1	1470.9	534	406.1	598.2	594.4	308.6	152.7	130.9	45.1	45.6		82.4	138.1		249.6	484.7	1464.3	931.5
Total Suspended Solids	mg/L				<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.1	<1.0
pH (field)	pH units	**6.5 - 9**			7.8	7.89	7.75	7.94	7.75	7.4	7.25	7.06	7.32	6.9	7.5	7.64	7.75	8.14	7.89	7.76	7.75
pH (lab)	pH units	**6.5 - 9**			8.01	8.04	8	8.17	8.09	8.1	8.03	7.88	7.99	7.77	8.08	8.1	8.13	8.22	8.17	8	8.07
Specific Conductance (field)	µS/cm				200.6	262	227.7	221.2	320.9	390.6	428.6	535.6	497.1	498.8	420.3	313.00	177.9	177.9	221	214.5	217.1
Specific Conductance (lab)	µS/cm				198	257	238	237	319	403	434	544	544	519	494	314	179	226	221	183	231
Temperature (field)	C				10.3	11.3	8.1	6.9	1.2	0	0	-0.1	0	0.6	-0.1	1.90	3.2	10.2	9	4.6	4.8
Dissolved Oxygen (field)	mg/L	**6.5**			9.76	9.25	10	10	12.3	10.1	10.9	11.1	10.6	10.08	12.99	11.08	11.9	8.79	10.21	11.29	9.37
Dissolved Oxygen (field)	%				87.1	84.6	99	96	100	80	88	88	84	81.2	102.5	93.20	103	92.7	102.3	100.7	85.3
ORP (field)	mV				72.4	106.7	200.2	169.7	297.4	160.9	137.7	327	269.3	145.9	108.3	95.60	123.5	138.7	106.2	269	101.5
Turbidity (internal)	NTU				0.23	0.01	0.02	0.875	0.03	0.1	0.3	0.122	1.312	0.108	0.122	-0.02		0.874	0.28	0.986	0.26
Hardness (from total)	mg/L				104	137	132	135	170	213	238	312	289	273	249	167	94.4	114	118	94.2	114
Hardness (from dissolved)	mg/L				113	141	125	124	167	219	239	302	291	292	308	165	93.9	115	118	88.9	120
Colour	TCU				10.6	8.3	9.4	8.4	<5.0	5	<5.0	<5.0	9.5	<5.0	<5.0	7.8	16.7	5.9		15.5	
Total Acidity	mg/L				0.95	<0.50	<0.50	<0.50	<0.50	1.37	<0.50	4.77	3.49	7.14	3.12	1.09	<0.50	<0.50	<0.50	<0.50	<0.50
Acidity (pH 4.5)	mg/L				<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L				88.4	115	101	102	137	178	195	263	259	247	237	147	82.5	101	96	68	100
Alkalinity, bicarbonate HCO3	mg/L				108	140	123	125	167	217	238	321	316	302	289	179	101	124	117	83	123
Alkalinity, hydroxide OH	mg/L				<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L				<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L				<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**			<0.50	<0.50	<0.50	<0.50	<0.50	1.1	0.54	0.78	0.64	0.72	2.3	1	0.51	0.69	<0.50	0.95	<0.50
Fluoride	mg/L	**0.12**			0.061	0.065	0.054	0.054	0.055	0.071	0.061	0.082	0.073	0.075	0.086	0.076	0.065	0.068	0.053	0.042	0.047
Sulphate, dissolved	mg/L	*			15	19.2	21.6	20	26.8	32.8	32.5	41.5	41.5	36.8	36.8	21.7	12.9	16.4	19.9	21.2	21.9
Cyanide, total	mg/L	**0.005**			0.00071	<0.00050	<0.00050	0.00078	0.00056	<0.00050	<0.00050	0.00051	<0.00050	<0.00050	<0.00050	0.00061	0.00061	0.00063	<0.00050	<0.00050	0.00058
Cyanide, Weak Acid Dissociable	mg/L	**0.005**			0.00063	0.00085	0.00051	0.00062	<0.00050	<0.00050	<0.00050	0.00072	<0.00050	0.00066	<0.00050	<0.00050	<0.00050	0.00063	0.00077	<0.00050	0.00076
Ammonia (N)	mg/L	*			0.0097	0.0114	0.008	0.0086	0.0111	<0.0050	<0.0050	<0.0050	0.0094	0.0129	0.012	0.0207	<0.0050	0.0063	0.029	0.033	0.016
Nitrite (N)	mg/L	**0.02**			<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3.0**			0.0113	0.0178	0.0271	0.0492	0.151	0.223	0.233	0.253	0.248	0.259	0.182	0.101	0.0486	0.0139	0.0087	0.0248	0.0811
Nitrite & Nitrate, as N	mg/L				0.0113	0.0178	0.0271	0.0492	0.151	0.223	0.233	0.253	0.248	0.259	0.182	0.101	0.0486	0.0139	0.0087	0.0248	0.0811
Phosphorus,total-colourimetric	mg/L	**0.035**			0.0025	<0.0020	0.0026	<0.0020	<0.0020	<0.0020	<0.0020	0.0023	<0.0020	<0.0020	0.0026	0.0025	0.0044	<0.0020	<0.0020	0.004	0.005
Phosphorus, Total Dissolved	mg/L				0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.002	0.0027	0.0027	0.0035	0.0031	0.0046	<0.0020	<0.0020	0.0046	0.0039
Dissolved Organic Carbon	mg/L				1.72	<0.50	1.3	1.5	1.38	<0.50	1.29	1.56	<0.50	0.89	1.46	2.5	3.79	1.36	2.34	3.62	2.76
Aluminum (Al), total	mg/L	*			0.01	0.00267	0.00347	0.0035	0.0214	0.00304	0.0103	0.00091	0.0047	0.00199	0.00145	0.00353	0.0096	0.00219	0.00288	0.00981	0.00362
Antimony (Sb), total	mg/L	**0.009**			0.000021	0.00002	0.000021	<0.000020	<0.000020	0.000022	<0.000020	<0.000020	0.000024	<0.000020	<0.000020	<0.000020	<0.000050	0.000022	<0.000020	<0.000020	<0.000020
Arsenic (As), total	mg/L	**0.005**			0.000255	0.000315	0.0003	0.000297	0.000301	0.000201	0.000247	0.000195	0.000209	0.00018	0.000253	0.000284	0.000292	0.000234	0.000246	0.00026	0.000212
Barium (Ba), total	mg/L				0.0497	0.0594	0.0548	0.0594	0.0618	0.0858	0.0914	0.112	0.104	0.103	0.0838	0.0609	0.0372	0.047	0.0479	0.0413	0.0491
Beryllium (Be), total	mg/L				<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L				<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000020	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	**1.5**			<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*			0.0000131	0.0000162	0.000018	0.000016	0.000013	0.000022	0.000021	0.000028	0.000034	0.00003	0.000023	0.000019	0.00002	0.000012	0.000013	0.00003	0.000015
Calcium (Ca), total	mg/L				33.4	42.6	42.4	43.1	53.4	64.1	70.9	92.3	86.1	80.5	72.8	50.6	29.8	36.8	39.1	31	37
Chromium (Cr), total	mg/L	**0.001**			<0.00010	<0.00010	0.0002	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00014	<0.00010	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), total	mg/L				0.0000164	0.0000208	0.000023	0.000026	0.000027	0.000026	0.000031	0.000031	0.000038	0.000051	0.000035	0.000034	0.000036	0.000013	0.000015	0.000032	0.00002
Copper (Cu), total	mg/L	*			0.000456	0.00037	0.000525	0.000416	0.000296	0.000246	0.000261	0.000236	0.000324	0.000184	0.000252	0.000474	0.00094	0.000476	0.00046	0.000903	0.000423
Iron (Fe), total	mg/L	**0.3**			0.015	0.0162	0.0148	0.0175	0.0187	0.0179	0.0224	0.0122	0.0305	0.0159	0.0257	0.0435	0.0677	0.0079	0.0089	0.0301	0.009
Lead (Pb), total	mg/L	*			0.0000095	<0.0000050	0.000009	0.000007	0.000019	0.000058	0.000009	<0.0000050	0.000044	<0.0000050	<0.0000050	0.000021	<0.000050	<0.0000050	<0.0000050	0.000019	0.000007
Lithium (Li), total	mg/L				0.00149	0.00161	0.00155	0.00128	0.00151	0.00302	0.00252	0.00377	0.00398	0.00419	0.00359	0.00164	0.00097	0.00142	0.00123	0.00099	0.00097
Magnesium (Mg), total	mg/L				5	7.33	6.31	6.6	8.97	12.8	14.7	19.8	17.9	17.5	16.4	9.91	4.82	5.41	4.97	4.1	5.18
Manganese (Mn), total	mg/L	*			0.00349	0.00506	0.0047	0.00578	0.00652	0.00916	0.00984	0.0121	0.0141	0.0213	0.0137	0.0094	0.00789	0.00286	0.00344	0.00651	0.00287
Mercury (Hg), total	mg/L	**0.000026**			<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**			0.000448	0.000504	0.000475	0.000401	0.000484	0.000482	0.000473	0.000403	0.000358	0.000422	0.000449	0.000493	0.000363	0.00046	0.000423	0.000274	0.000368
Nickel (Ni), total	mg/L	*			0.000365	0.000343	0.000395	0.00027	0.000331	0.000461	0.00053	0.000749	0.000733	0.000928	0.000927	0.000583	0.00047	0.000288	0.00026	0.000426	0.00025

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-16 12-May-2015	KZ-16 13-May-2015	KZ-16 22-Jun-2015	KZ-16 28-Jul-2015	KZ-16 22-Aug-2015	KZ-16 09-Sep-2015	KZ-16 14-Oct-2015	KZ-16 19-Nov-2015	KZ-16 02-Dec-2015	KZ-16 20-Jan-2016	KZ-16 09-Feb-2016	KZ-16 20-Mar-2016	KZ-16 20-Apr-2016	KZ-16 04-May-2016	KZ-16 15-May-2016	KZ-16 13-Jun-2016	KZ-16 26-Jul-2016	KZ-16 27-Aug-2016	KZ-16 07-Sep-2016
Phosphorus (P), total	mg/L				<0.0020	0.0022	0.0021	<0.0020	0.0029	0.0029	<0.0020	0.0025	0.0029	<0.0020	<0.0020	0.0032	<0.010	0.0021	0.0026	0.004	<0.0020
Potassium (K), total	mg/L				1.05	1.22	1.13	1.21	1.14	1.28	1.42	1.64	1.56	1.52	1.42	1.17	0.88	1.06	0.95	1.02	0.928
Selenium (Se), total	mg/L	**0.002**			0.000327	0.000447	0.000443	0.000463	0.000963	0.00126	0.00134	0.00179	0.00149	0.00151	0.00109	0.00071	0.000321	0.000397	0.000296	0.000267	0.000454
Silicon (Si), total	mg/L				2.14	2.78	2.97	2.53	2.88	3.55	3.62	4.38	4.11	3.74	3.68	2.93	2.15	2.31	2.63	2.3	2.34
Silver (Ag), total	mg/L	**0.00025**			<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L				0.757	1.01	0.881	0.946	1.05	1.2	1.38	1.69	1.58	1.53	1.42	0.955	0.66	0.72	0.732	0.64	0.773
Strontium (Sr), total	mg/L				0.116	0.143	0.136	0.139	0.162	0.223	0.235	0.322	0.286	0.263	0.26	0.17	0.0951	0.121	0.121	0.0989	0.106
Sulphur (S), total	mg/L				4.8	7.2	7.5	6.2	9.6	11	11.1	15.1	14	12.4	10.2	7.3	<15	5.9	6.4	7.7	6.9
Thallium (Tl), total	mg/L	**0.0008**			<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000003	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L				<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L				<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), total	mg/L	**0.015**			0.000728	0.00113	0.000971	0.001	0.00181	0.0024	0.00265	0.00345	0.00298	0.00283	0.00261	0.00175	0.000664	0.000718	0.000667	0.000389	0.000854
Vanadium (V), total	mg/L				<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00050	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	*			0.00052	0.00026	0.00056	0.00052	0.00059	0.00077	0.0008	0.00118	0.00176	0.0008	0.00071	0.00062	<0.0010	0.00039	0.00047	0.00091	0.0007
Zirconium (Zr), total	mg/L				<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*			0.00228	0.00158	0.00183	0.00546	0.00104	0.00186	<0.00050	0.00179	0.00176	0.00263	0.00083	0.00159	0.00361	0.00161	0.00189	0.0051	0.00198
Antimony (Sb), dissolved	mg/L				<0.000020	0.000021	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.00002	0.000022	0.000027	<0.000020	<0.000020	<0.000020	<0.000020	0.00002	<0.000020
Arsenic (As), dissolved	mg/L				0.00026	0.000317	0.000287	0.000274	0.000262	0.000224	0.000204	0.000165	0.00016	0.000173	0.000218	0.000238	0.000198	0.000217	0.000211	0.000221	0.000202
Barium (Ba), dissolved	mg/L				0.0493	0.0606	0.0509	0.0566	0.0605	0.0794	0.0784	0.112	0.106	0.102	0.103	0.058	0.0361	0.0493	0.046	0.0407	0.0508
Beryllium (Be), dissolved	mg/L				<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L				<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L				<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*			0.0000135	0.000015	0.000011	0.000014	0.000013	0.000022	0.000016	0.000026	0.00003	0.000033	0.000024	0.000009	0.000011	0.000009	0.000009	0.000016	0.000015
Calcium (Ca), dissolved	mg/L				36.7	44.7	39.7	39.7	52.3	65.9	72.9	88.9	86.7	88.5	90.5	50.8	29.7	36.8	38.4	28.9	39.5
Chromium (Cr), dissolved	mg/L				<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00011	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L				0.0000111	0.0000133	0.000016	0.000015	0.00002	0.000028	0.000024	0.00003	0.000018	0.000048	0.000028	0.000017	0.00001	0.0000126	0.000009	0.000018	0.000013
Copper (Cu), dissolved	mg/L				0.000512	0.000338	0.00047	0.000402	0.000217	0.000249	0.000196	0.000199	0.00029	0.000188	0.000236	0.000412	0.000723	0.000464	0.000427	0.000851	0.000427
Iron (Fe), dissolved	mg/L	**0.35**			0.0045	0.0045	0.0044	0.0045	0.0026	0.0046	0.0027	0.0037	0.0028	0.0034	0.004	0.0072	0.0115	0.0035	0.0032	0.0089	0.0044
Lead (Pb), dissolved	mg/L				<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000024	<0.0000050	<0.0000050	0.000006	0.00001	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Lithium (Li), dissolved	mg/L				0.00127	0.00138	0.00101	0.00191	0.00183	0.00288	0.00286	0.0035	0.00459	0.00413	0.00444	0.00172	0.00079	0.00154	0.00121	0.00103	0.00108
Magnesium (Mg), dissolved	mg/L				5.06	7.22	6.24	6.04	8.75	13.1	13.8	19.4	18.1	17.1	19.8	9.35	4.77	5.64	5.28	4.03	5.15
Manganese (Mn), dissolved	mg/L				0.00185	0.00284	0.00287	0.00291	0.00451	0.00829	0.00785	0.0112	0.00731	0.0207	0.0148	0.0041	0.00111	0.00214	0.00131	0.00179	0.0019
Mercury (Hg), dissolved	mg/L				<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L				0.000423	0.000527	0.000463	0.00041	0.000487	0.000445	0.000466	0.000406	0.000369	0.00041	0.000568	0.00048	0.000353	0.000495	0.000411	0.000265	0.000354
Nickel (Ni), dissolved	mg/L				0.000339	0.000359	0.000477	0.000299	0.000294	0.000511	0.000458	0.000745	0.000695	0.000923	0.000951	0.000529	0.000441	0.000273	0.000253	0.00039	0.000254
Phosphorus (P), dissolved	mg/L				<0.0020	<0.0020	<0.0020	0.0025	0.003	0.0042	<0.0020	0.0045	0.0037	<0.0020	0.0041	0.0023	0.0052	<0.0020	<0.0020	0.0024	0.0063
Potassium (K), dissolved	mg/L				1.09	1.26	1.07	1.15	1.13	1.38	1.32	1.64	1.57	1.5	1.67	1.12	0.907	1.1	0.878	1.01	1
Selenium (Se), dissolved	mg/L				0.000347	0.000431	0.000447	0.000449	0.000861	0.00123	0.00143	0.00173	0.00148	0.00161	0.00127	0.000727	0.000317	0.00038	0.000299	0.000255	0.000401
Silicon (Si), dissolved	mg/L				2.28	2.75	2.66	2.62	2.76	3.45	3.69	4.39	4.34	4.57	4.54	2.96	2.06	2.28	2.74	2.13	2.72
Silver (Ag), dissolved	mg/L				<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L				0.801	1.03	0.912	0.875	1	1.31	1.28	1.64	1.58	1.47	1.72	0.943	0.635	0.743	0.763	0.641	0.79
Strontium (Sr), dissolved	mg/L				0.123	0.152	0.127	0.127	0.167	0.23	0.226	0.32	0.288	0.277	0.32	0.167	0.0933	0.118	0.112	0.0937	0.12
Sulphur (S), dissolved	mg/L				4.5	6.9	7.2	6.8	8.9	11.3	12	14.5	14.2	12.4	12.5	7.3	3.6	5.7	6.3	7.1	7.1
Thallium (Tl), dissolved	mg/L				<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L				<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L				<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L				0.000669	0.00114	0.000896	0.000974	0.00178	0.00226	0.00248	0.00346	0.00289	0.00264	0.00336	0.00172	0.000632	0.000833	0.000647	0.00036	0.000827
Vanadium (V), dissolved	mg/L				<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L				0.00033	0.00026	0.00037	0.00059	0.00036	0.00085	0.0004	0.00114	0.00177	0.00092	0.00096	0.00046	0.00034	0.00031	<0.00010	0.00077	0.00081
Zirconium (Zr), dissolved	mg/L				<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-16 01-Oct-2016	KZ-16 02-Oct-2016	KZ-16 15-Nov-2016	KZ-16 20-Dec-2016	KZ-16 16-Jan-2017	KZ-16 23-Feb-2017	KZ-16 21-Mar-2017	KZ-16 28-Apr-2017	KZ-16 16-May-2017	KZ-16 27-May-2017	KZ-16 31-May-2017	KZ-16 06-Jun-2017	KZ-16 14-Jun-2017	KZ-16 19-Jul-2017	KZ-16 10-Aug-2017	KZ-16 13-Sep-2017	KZ-16 04-Oct-2017	KZ-16 02-Nov-2017	KZ-16 05-Dec-2017
Discharge (Flow)	L/s		485.6		218.6	127	205.4	77.4	95.1	207.7	664.6			396.9		1386.4	882.3	342.1	326.1	149.9	58.7
Total Suspended Solids	mg/L		<1.0	<1.0	<1.0	<1.0	<1.1	<1.0	<1.0	<1.0	4.9	1	<1.0	<1.0	<1.0	1.7	<1.0	<1.0	<1.0	<1.0	<1.0
pH (field)	pH units	**6.5 - 9**	7.9	7.38	7.61	7.01	7.28	7.19	7	7.54	7.83	7.69	7.57	7.46	7.66	7.78	8.13	7.87	7.93	7.46	7.39
pH (lab)	pH units	**6.5 - 9**	8.19	8.15	8.09	7.79	8.03	7.83	7.56	8.33	8	7.95	7.78	8.03	8.09	8.18	8.22	8.35	8.34	8.31	8.17
Specific Conductance (field)	µS/cm		285.9	269.6	349.2	491.8	467.4	578	489.6	472.5	158	169.4	131.9	172.6	160.8	210.3	247	415.7	376.3	406.8	630.8
Specific Conductance (lab)	µS/cm		323	297	417	510	494	556	552	474	169	169	131	178	161	211	276	353	365	443	466
Temperature (field)	C		-0.4	-0.2	-0.1	-0.2	0	-0.5	-0.1	-0.1	0.3	1.2	5.8	8.4	5.4	6.8	7.3	6.6	5	-0.3	-0.2
Dissolved Oxygen (field)	mg/L	**6.5**	12.26	13.1	11.02	11.73	11.53	10.77	11.37	11.71	12.6	11.79	8.76	10.9	10.31	11.72	10.56	10.34	10.46	11.77	9.82
Dissolved Oxygen (field)	%		95.3	104.4	88.5	94.8	95.2	83.8	90	92.6	101	83.6	70.1	107	81.6	96	101.2	97.5	95.1	91.6	76.7
ORP (field)	mV		145.3	33.4	148.6	142.8	163.9	173.8	171.6	238.1	406.8	284.7	339.0	387.4	323.1	370.4	172	98.6	111.2	114.3	155.2
Turbidity (internal)	NTU		0.12		1.726	0.330	0.424	4.496	0.430	0.982	1.994	0.33	0.41	0.25	0.74	1.53	0.15	0.13	0.00	0.19	1.342
Hardness (from total)	mg/L		158	147	270	277	265	290	300	245	85.2	80.7	64.8	90.4	78.3	106	145	178	187	222	263
Hardness (from dissolved)	mg/L		164	154	218	276	270	273	324	248	79.3	82	62.6	83.8	75.8	106	146	188	189	237	275
Colour	TCU																				
Total Acidity	mg/L		<0.50	<0.50	0.93	10.1	3.65	11.9	13.1	11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	3	3.5
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, total	mg/L		140	126	194	243	232	258	256	229	81.1	73	57.4	76.2	68.2	88.6	126	164	172	208	221
Alkalinity, bicarbonate HCO3	mg/L		170	154	236	296	283	315	312	274	98.9	89.1	70	92.9	83.2	108	154	194	205	250	270
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.36	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	3.16	2.32	2.06	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.97	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.63	1.93	1.72	<0.50
Chloride	mg/L	**120**	0.62	0.57	0.56	<0.50	0.73	0.86	0.75	0.51	0.87	0.56	0.54	0.53	0.69	<0.50	<0.50	0.56	<0.50	0.75	0.75
Fluoride	mg/L	**0.12**	0.059	0.053	0.072	0.073	0.078	0.089	0.091	0.089	0.045	0.043	0.039	0.045	0.046	0.045	0.052	0.07	0.072	0.076	0.08
Sulphate, dissolved	mg/L	*	28.5	26.9	33	42.9	40.8	45.5	42.4	36.9	7.83	11.6	9.69	14.4	13.6	19.7	26	30.7	31	35	36.6
Cyanide, total	mg/L	**0.005**	0.00068	0.00052	0.00059	<0.00050	<0.00050	<0.00050	<0.00050	0.00057	0.00111	0.00073	0.00068	0.0008	0.00063	0.00051	0.0005	0.00066	<0.00050	<0.00050	<0.00050
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	0.00078	0.00063	0.00057	<0.00050	<0.00050	<0.00050	<0.00050	0.0005	0.00103	0.00077	0.00072	0.0007	0.00057	0.00073	<0.00050	<0.00050	<0.00050	<0.00050	0.00059
Ammonia (N)	mg/L	*	0.1	0.011	0.019	0.039	0.028	0.035	0.04	0.04	0.051	0.018	0.016	0.0057	0.058	0.012	0.008	<0.0050	0.005	0.005	<0.0050
Nitrite (N)	mg/L	**0.02**	<0.0020	<0.0020	<0.0020	0.0023	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3.0**	0.175	0.178	0.272	0.301	0.283	0.311	0.313	0.249	0.026	0.0657	0.0229	0.0412	0.0252	0.0334	0.0909	0.133	0.169	0.24	0.255
Nitrite & Nitrate, as N	mg/L		0.175	0.178	0.272	0.304	0.283	0.311	0.313	0.249	0.026	0.0657	0.0229	0.0412	0.0252	0.0334	0.0909	0.133	0.169	0.24	0.255
Phosphorus,total-colourimetric	mg/L	**0.035**	0.005	0.0027	<0.0020	<0.0020	0.0026	<0.0020	0.0026	0.0039	0.0222	0.0055	0.0049	0.0036	0.0043	0.0053	0.0039	<0.0020	0.0022	0.0021	0.0024
Phosphorus, Total Dissolved	mg/L		0.0022	0.0023	<0.0020	0.003	<0.0020	<0.0020	0.0029	0.0038	0.0125	0.0058	0.0063	0.0102	0.0038	0.0045	0.0023	0.0022	<0.0020	<0.0020	0.0044
Dissolved Organic Carbon	mg/L		0.99	1.65	0.99	1.58	<0.50	0.91	0.95	1.46	9.53	4.77	3.49	1.56	4.6	2.2	2.33	1.34	1.22	1.26	1.83
Aluminum (Al), total	mg/L	*	0.00352	0.0027	0.00268	0.0018	0.00962	0.00138	0.00155	0.00186	0.0728	0.015	0.0131	0.00784	0.0138	0.00759	0.00435	0.00208	0.00161	0.00132	0.00154
Antimony (Sb), total	mg/L	**0.009**	<0.000020	<0.000020	0.000049	<0.000020	0.000105	<0.000020	0.000021	0.000038	<0.000020	0.000023	<0.000020	0.000024	0.000022	<0.000020	0.000034	<0.000020	0.000023	<0.000020	<0.000020
Arsenic (As), total	mg/L	**0.005**	0.000253	0.000306	0.000203	0.000178	0.000224	0.000167	0.000153	0.000254	0.00104	0.000244	0.000231	0.000232	0.000251	0.000247	0.00028	0.000331	0.000352	0.000192	0.00019
Barium (Ba), total	mg/L		0.0629	0.0622	0.0878	0.0981	0.0943	0.101	0.108	0.0877	0.0451	0.0352	0.0325	0.0402	0.036	0.0469	0.0615	0.0744	0.0688	0.0817	0.0924
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*	0.000015	0.000022	0.000048	0.000025	0.000057	0.000041	0.000039	0.000035	0.0000758	0.000018	0.000019	0.000014	0.000017	0.00002	0.0000207	0.000021	0.000018	0.000021	0.0000248
Calcium (Ca), total	mg/L		49.9	47.5	86.9	83.5	78.6	85.8	90.2	72.3	25.9	25.5	20.9	28.8	25.3	34.3	46.6	53.9	55.3	68	78
Chromium (Cr), total	mg/L	**0.001**	<0.00010	<0.00010	<0.00010	<0.00010	0.00022	<0.00010	<0.00010	<0.00010	0.00011	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00015	<0.00010	<0.00010	<0.00010
Cobalt (Co), total	mg/L		0.000031	0.000027	0.000036	0.000039	0.000065	0.000084	0.000093	0.000089	0.000244	0.000028	0.000021	0.000024	0.000027	0.0000214	0.000019	0.00002	0.000024	0.000019	0.0000271
Copper (Cu), total	mg/L	*	0.000301	0.000284	0.000499	0.00021	0.000883	0.000178	0.000149	0.000235	0.00179	0.00138	0.00119	0.00094	0.00129	0.000647	0.000447	0.00033	0.000312	0.000205	0.000236
Iron (Fe), total	mg/L	**0.3**	0.0207	0.0218	0.022	0.014	0.0378	0.0199	0.0279	0.0391	**0.427**	0.0326	0.0247	0.0227	0.0204	0.0161	0.0089	0.0083	0.0076	0.0076	0.0068
Lead (Pb), total	mg/L	*	0.000014	<0.0000050	0.000259	0.000007	0.00191	<0.0000050	0.000007	<0.0000050	0.000114	0.000022	0.000012	0.000013	0.000011	0.0000225	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Lithium (Li), total	mg/L		0.00152	0.00076	0.00273	0.00361	0.00374	0.00426	0.00459	0.00352	0.00106	0.00088	0.00074	0.00103	0.0008	0.00102	0.00137	0.00231	0.00193	0.00319	0.00365
Magnesium (Mg), total	mg/L		8.08	6.97	12.9	16.6	16.8	18.5	18.1	15.6	4.95	4.14	3.05	4.51	3.69	4.89	6.95	10.5	11.8	12.6	16.7
Manganese (Mn), total	mg/L	*	0.00773	0.00535	0.011	0.0149	0.0213	0.0306	0.0374	0.0358	0.0567	0.00359	0.00315	0.00331	0.0029	0.00355	0.0035	0.00632	0.00719	0.00588	0.00996
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000033	0.0000024	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	0.000456	0.000429	0.000556	0.000431	0.000491	0.000469	0.000527	0.000511	0.000306	0.000305	0.000265	0.000322	0.000275	0.000325	0.000419	0.000553	0.00054	0.000438	0.000466
Nickel (Ni), total	mg/L	*	0.000313	0.000218	0.000487	0.000675	0.00108	0.000927	0.00105	0.001	0.00115	0.00066	0.000579	0.000497	0.000583	0.000335	0.000309	0.000408	0.000448	0.000434	0.000639

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16	KZ-16
			01-Oct-2016	02-Oct-2016	15-Nov-2016	20-Dec-2016	16-Jan-2017	23-Feb-2017	21-Mar-2017	28-Apr-2017	16-May-2017	27-May-2017	31-May-2017	06-Jun-2017	14-Jun-2017	19-Jul-2017	10-Aug-2017	13-Sep-2017	04-Oct-2017	02-Nov-2017	05-Dec-2017
Phosphorus (P), total	mg/L		<0.0020	<0.0020	0.0022	0.0034	0.0048	0.0043	0.0034	0.0058	0.0231	0.0102	0.0056	0.0047	0.007	0.0117	0.0038	<0.0020	<0.0020	0.0026	0.0042
Potassium (K), total	mg/L		1.03	0.957	1.18	1.26	1.27	1.44	1.5	1.46	1.61	1.07	1.02	1.06	0.895	0.836	0.949	1.14	1.15	0.997	1.26
Selenium (Se), total	mg/L	**0.002**	0.000981	0.000921	0.00171	0.00165	0.00152	0.00178	0.00173	0.00121	0.00044	0.000359	0.000273	0.00034	0.000291	0.000451	0.000837	0.00116	0.001	0.00125	0.00136
Silicon (Si), total	mg/L		2.86	2.74	2.79	4.01	3.98	4.27	4.54	3.7	2.42	1.83	1.59	1.82	1.99	2.44	2.83	3.3	2.66	3.63	3.68
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.00001	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.000010	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L		0.939	0.842	1.51	1.4	1.46	1.6	1.54	1.38	0.55	0.51	0.432	0.617	0.564	0.748	0.929	1.14	1.26	1.13	1.47
Strontium (Sr), total	mg/L		0.163	0.149	0.213	0.271	0.248	0.29	0.323	0.24	0.0949	0.0845	0.0686	0.0876	0.0823	0.111	0.147	0.197	0.196	0.19	0.274
Sulphur (S), total	mg/L		8.7	8.3	11.7	13.5	12.2	13.6	15.8	12	4.2	4.2	3.2	4.9	4.4	7.1	8.5	10.7	11	10.2	13.2
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000023	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00483	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0020	<0.0020	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), total	mg/L	**0.015**	0.00161	0.00149	0.0027	0.00286	0.00282	0.00313	0.00307	0.00268	0.000634	0.00052	0.00028	0.000509	0.000397	0.000704	0.00127	0.00213	0.00219	0.00234	0.00251
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	*	0.00064	0.0008	0.00215	0.001	0.00552	0.00144	0.00132	0.00109	0.0029	<0.0010	0.00109	0.0006	0.00106	0.00113	0.00062	0.00062	0.00042	0.00056	0.00097
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*	0.00124	0.00159	0.00065	0.00113	0.00132	0.00114	0.00082	0.00116	0.0393	0.0138	0.0118	0.00538	0.0105	0.00497	0.00434	0.00195	0.00116	0.00099	0.0019
Antimony (Sb), dissolved	mg/L		<0.000020	<0.000020	<0.000020	0.00002	0.000022	0.000027	0.000022	0.00002	<0.000020	<0.000020	0.000021	0.000024	<0.000020	0.000024	0.000044	<0.000020	<0.000020	<0.000020	0.000026
Arsenic (As), dissolved	mg/L		0.000299	0.000326	0.000202	0.000169	0.000176	0.000122	0.000144	0.000162	0.000353	0.000223	0.000215	0.000233	0.00025	0.000231	0.000276	0.000318	0.000357	0.000206	0.000201
Barium (Ba), dissolved	mg/L		0.0626	0.0625	0.0753	0.0988	0.0913	0.104	0.095	0.0948	0.0371	0.0361	0.0309	0.0395	0.0346	0.0466	0.0614	0.0748	0.0659	0.0805	0.0949
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.000009	0.000015	0.000022	0.000024	0.000027	0.000039	0.000045	0.000032	0.0000329	0.000016	0.000015	0.000013	0.000015	0.000017	0.0000196	0.000018	0.000017	0.00002	0.0000317
Calcium (Ca), dissolved	mg/L		51.9	50	66.9	82.7	81.3	79.4	99.1	73	23.6	25.9	20.4	26.4	24.4	34.3	46.8	57.7	57.1	72.1	82.2
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		0.000015	0.000023	0.000023	0.000039	0.000053	0.000077	0.000097	0.000086	0.0000999	0.000024	0.000022	0.000018	0.000022	0.000016	0.0000152	0.000016	0.000021	0.000019	0.0000274
Copper (Cu), dissolved	mg/L		0.000288	0.000275	0.00022	0.000221	0.000239	0.000179	0.000189	0.000253	0.00146	0.00136	0.0012	0.000776	0.00127	0.000584	0.000413	0.000293	0.000289	0.000238	0.000363
Iron (Fe), dissolved	mg/L	**0.35**	0.0043	0.0116	0.0042	0.0117	0.007	0.0066	0.0095	0.0176	0.0609	0.0223	0.019	0.0114	0.013	0.006	0.0066	0.0061	0.0056	0.0064	0.0073
Lead (Pb), dissolved	mg/L		<0.0000050	<0.0000050	0.000005	0.000017	0.000033	<0.0000050	0.000006	<0.0000050	0.0000178	0.000009	0.000008	<0.0000050	0.000006	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000042
Lithium (Li), dissolved	mg/L		0.00177	0.00088	0.00241	0.00359	0.00359	0.0042	0.00401	0.00367	0.00107	0.00091	0.00072	0.00093	0.00075	0.00104	0.00138	0.00222	0.00195	0.00324	0.00388
Magnesium (Mg), dissolved	mg/L		8.4	7.08	12.4	16.8	16.3	18.1	18.7	16	4.94	4.22	2.81	4.35	3.6	4.95	7.07	10.6	11.4	13.8	17
Manganese (Mn), dissolved	mg/L		0.0045	0.00503	0.00819	0.0138	0.0174	0.0289	0.0356	0.0349	0.0234	0.00249	0.00216	0.00217	0.00182	0.00209	0.00294	0.00572	0.0063	0.00663	0.0104
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000036	0.000002	0.0000024	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000031	<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.000466	0.000464	0.00046	0.000425	0.000462	0.000489	0.000475	0.000525	0.000261	0.000296	0.000259	0.000303	0.000278	0.000327	0.000412	0.000545	0.000521	0.000451	0.000486
Nickel (Ni), dissolved	mg/L		0.00025	0.00019	0.000412	0.000669	0.000718	0.000951	0.00124	0.00101	0.000933	0.000676	0.000598	0.000441	0.000581	0.000328	0.00034	0.000344	0.000402	0.00048	0.000692
Phosphorus (P), dissolved	mg/L		<0.0020	<0.0020	0.0026	0.003	0.0061	0.0043	<0.0020	0.0047	0.0136	0.0072	0.0055	0.0039	0.0044	0.0021	0.0076	<0.0020	0.0022	0.0027	0.004
Potassium (K), dissolved	mg/L		1.07	0.982	1.16	1.28	1.3	1.41	1.49	1.54	1.53	1.1	0.991	1.06	0.881	0.842	0.966	1.14	1.08	1.14	1.39
Selenium (Se), dissolved	mg/L		0.00109	0.00109	0.00146	0.00152	0.00159	0.00166	0.0018	0.00117	0.000401	0.000365	0.00022	0.00034	0.000276	0.000418	0.000801	0.00108	0.000998	0.00116	0.00143
Silicon (Si), dissolved	mg/L		3.16	3.01	3.17	3.88	4.01	3.92	3.93	3.78	1.95	1.79	1.48	1.72	1.84	2.45	2.8	2.79	2.69	3.37	3.98
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		0.952	0.853	1.21	1.43	1.39	1.59	1.63	1.39	0.562	0.513	0.395	0.61	0.53	0.73	0.954	1.15	1.23	1.35	1.57
Strontium (Sr), dissolved	mg/L		0.176	0.161	0.212	0.276	0.269	0.282	0.284	0.254	0.0831	0.0846	0.0665	0.0907	0.0784	0.111	0.147	0.196	0.181	0.221	0.283
Sulphur (S), dissolved	mg/L		10	9.4	11.3	13.2	12.4	14.1	14.2	11.3	3.9	4	3	4.6	4.4	6.6	8.2	9.9	10.3	11.5	13.4
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00065	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.00165	0.00153	0.00214	0.00289	0.00276	0.00308	0.00286	0.00272	0.00056	0.00053	0.000263	0.000483	0.000379	0.000666	0.00128	0.00217	0.00212	0.00246	0.00264
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.0002	0.00029	0.00076	0.00095	0.00159	0.0014	0.00139	0.00107	0.00146	0.00067	0.00065	0.00062	0.00081	0.00071	0.00115	0.00045	0.00048	0.00078	0.00206
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-16	KZ-16	KZ-16	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17
			08-Jan-2018	14-Feb-2018	15-Mar-2018	03-Dec-1994	06-Apr-1995	11-Jun-1995	22-Aug-1995	13-Sep-1995	23-Aug-2002	19-Aug-2004	24-Aug-2006	14-Aug-2008	29-Apr-2015	11-May-2015	22-Jun-2015	28-Jul-2015	22-Aug-2015	09-Sep-2015	14-Oct-2015
Discharge (Flow)	L/s			49.3											44.6	856.5		227.9	375.6	490.9	391.6
Total Suspended Solids	mg/L		<1.0	<1.0	1	<4	<4	<4	<4	<4	<4	<4	<4	<4	<1.0	79.5	<1.0	1	1	<1.0	<1.0
pH (field)	pH units	**6.5 - 9**	7.37	6.94	7.06								8.1	8.5	7.64	7.64	7.8	7.97	8.03	7.91	7.75
pH (lab)	pH units	**6.5 - 9**	7.95	8.42	8.36	8	7.9	7.8	7.9	8		8.3	8.1	8.2	8.28	7.25	8.06	8.06	8.04	8.25	8.25
Specific Conductance (field)	µS/cm		620.3										288	360	411.4	109.3	275.6	334.1	308.6	297.4	363.1
Specific Conductance (lab)	µS/cm		530	701	582	400	447	276	299	261	273	384	326	330	469	126	269	323	321	319	364
Temperature (field)	C		-0.2	-0.1	-0.6								5.8	8.1	-0.1	-0.2	7.9	8.6	7.1	5.3	1
Dissolved Oxygen (field)	mg/L	**6.5**	9.38	10.21	8.97								10.0	9.1	11.7	12	9.33	8.22	9.9	9.1	11.3
Dissolved Oxygen (field)	%		74.9	80.6	60.5								85	83	94	95	78.6	72.2	96	84	91
ORP (field)	mV		139.9	127.4	269.7										315.5	208.2	70.5	56.7	165.5	222.6	293.5
Turbidity (internal)	NTU			1.422	0.88												0.21	0.17	0.27	1.375	0.46
Hardness (from total)	mg/L		267	370	328	212	261	125	180	195	152	217	180	192	249	68	144	176	159	185	193
Hardness (from dissolved)	mg/L		273	378	319	223	259	122	174	176	165	217	180	188	263	69.1	149	184	169	161	193
Colour	TCU														9.6	242	13.6	8.6	12.8	11.7	6.5
Total Acidity	mg/L		14.6	17.7	<1.0						1	0.9	1	0.6	<0.50	0.79	1.18	<0.50	<0.50	<0.50	<0.50
Acidity (pH 4.5)	mg/L		<1.0	<1.0	<1.0						<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		249	327	280	195	235	149	147	140	125	182	148	160	214	54.4	118	143	137	136	161
Alkalinity, bicarbonate HCO3	mg/L		304	382	332				179	171	152	222	181	190	261	66.3	144	174	168	166	197
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	8.48	4.42				<0.5	<0.5	<0.5	<0.5	<0.5	2.7	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.50	7.07	3.68				<0.5	<0.5	<1	<1.0	<0.5	2.2	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**	<0.50	0.6	0.61										<0.50	1.2	<0.50	<0.50	<0.50	0.61	0.6
Fluoride	mg/L	**0.12**	0.085	0.08	0.099										**0.14**	0.046	0.09	0.1	0.091	0.087	0.089
Sulphate, dissolved	mg/L	*	41.5	58.5	46.3	27.4	29.3	20	19.5	25.6	25.4	26.3	25.4	24	32.1	<0.50	25.8	26.7	31.2	31.4	31.7
Cyanide, total	mg/L	**0.005**	<0.00050	0.00066	0.00062		<0.001	<0.001	<0.001	<0.001					<0.00050	0.00152	0.00068	<0.00050	<0.00050	0.00078	<0.00050
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	<0.00050	0.0006	<0.00050		<0.001	<0.001	<0.001	<0.001					<0.00050	0.00118	0.00055	0.00065	<0.00050	0.00068	<0.00050
Ammonia (N)	mg/L	*	0.023	0.015	0.014	0.006	0.008	<0.005	<0.005	0.005	<0.005	0.021	<0.005	<0.005	0.0237	0.0069	0.0115	<0.0050	<0.0050	0.0067	0.021
Nitrite (N)	mg/L	**0.02**	<0.0020	<0.0020	<0.0020		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0023		<0.0020	<0.0020	0.0024	<0.0020	<0.0020
Nitrate (N)	mg/L	**3.0**	0.27	0.274	0.209	0.17	0.19	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.03	0.127	<0.020	0.0065	0.0269	0.0209	0.0193	0.0963
Nitrite & Nitrate, as N	mg/L		0.27	0.274	0.209	0.17	0.19	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	0.03	0.129	<0.020	0.0065	0.0269	0.0233	0.0193	0.0963
Phosphorus,total-colourimetric	mg/L	**0.035**	0.0041	0.021	0.0043	<0.003	<0.003	0.005	0.008	<0.003					0.0041	0.0349	0.003	0.003	0.0037	0.0029	0.0047
Phosphorus, Total Dissolved	mg/L		0.0028	0.0181	0.0042										0.0041	0.0369	0.0029	0.003	0.0032	0.0026	0.0026
Dissolved Organic Carbon	mg/L		1.4	1.67	<0.50										1.59	15.6	2.91	1.82	1.7	2.2	1.34
Aluminum (Al), total	mg/L	*	0.00114	0.00332	0.00242		0.009	0.026	0.048	0.049	0.03	0.005	0.004	0.01	0.00544	**0.595**	0.0267	0.0106	0.00452	0.0118	0.0272
Antimony (Sb), total	mg/L	**0.009**	0.000023	0.000039	0.000022										0.00003	0.000078	0.000053	0.000052	0.000061	0.000056	0.000044
Arsenic (As), total	mg/L	**0.005**	0.000193	0.000199	0.000206		0.00062	0.0005	0.0006	0.00035		<0.001	<0.001	0.0007	0.000572	**0.00598**	0.000637	0.000578	0.00054	0.000695	0.000982
Barium (Ba), total	mg/L		0.0989	0.133	0.0952	0.069	0.078	0.047	0.065	0.067	0.065	0.089	0.065	0.069	0.087	0.068	0.0639	0.0732	0.0689	0.0761	0.0704
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010		<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.000010	0.000042	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050		<0.002	<0.002		<0.002				<0.001	<0.0000050	<0.000020	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.04	0.023	0.025	0.027	0.024	<0.008	<0.008	<0.008	<0.05	<0.01	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*	0.000038	0.000056	0.0000338		0.00003	0.00002	0.00003	0.00001		0.00005	0.00003	**0.00029**	0.0000483	**0.000428**	0.0000416	0.0000341	0.000037	0.000048	0.00007
Calcium (Ca), total	mg/L		77.7	108	93.3	64.3	75	40	56	60	46.9	65.1	56	58.9	71.5	20.3	44.6	52.8	48.1	56.2	57.4
Chromium (Cr), total	mg/L	**0.001**	<0.00010	0.00014	<0.00010		0.0003	0.0006	**0.023**	**0.0011**		<0.001	<0.001	<0.001	<0.00010	**0.00153**	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), total	mg/L		0.0000158	0.0000137	0.0000101		<0.0004	<0.0004	<0.0004	<0.0004		<0.0005	<0.0005	<0.0005	0.0000414	0.00131	0.0000853	0.0000457	0.000041	0.000074	0.000081
Copper (Cu), total	mg/L	*	0.000257	0.000419	0.000276		0.0002	0.0011	0.001	0.0034		0.0007	0.0005	0.0006	0.000272	**0.00467**	0.000637	0.000493	0.000516	0.000659	0.000446
Iron (Fe), total	mg/L	**0.3**	0.0047	0.0093	0.0052		0.068	0.11	0.28	0.18	0.218	0.103	0.066	0.105	0.0817	**4.4**	0.189	0.116	0.124	0.211	**0.305**
Lead (Pb), total	mg/L	*	<0.0000050	0.0000407	0.0000109		0.0001	0.0007	<0.0001	0.0002		<0.0005	<0.0005	<0.0002	0.000025	0.00156	0.000103	0.0000315	0.00002	0.000058	0.000092
Lithium (Li), total	mg/L		0.00454	0.00668	0.0041								0.002	<0.005	0.00493	0.00173	0.00224	0.00301	0.0018	0.00222	0.00203
Magnesium (Mg), total	mg/L		17.7	24.2	23.1	12.4	18	6.2	9.8	11	8.54	13.3	10.5	10.9	17	4.23	7.95	10.8	9.38	10.8	12.1
Manganese (Mn), total	mg/L	*	0.00579	0.00177	0.0029	0.031	0.059	0.015	0.0052	0.023	0.061	0.043	0.03	0.031	0.0548	0.667	0.0478	0.0372	0.0411	0.0601	0.0816
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020		<0.00001	<0.00001	<0.00001	<0.00001			<0.00001		<0.0000020	0.0000035	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	0.000387	0.000271	0.000316		0.0009	0.0005	0.0005	0.0007				0.002	0.00198	0.001	0.00106	0.00135	0.0012	0.00119	0.00141
Nickel (Ni), total	mg/L	*	0.000612	0.000849	0.000706		0.002	<0.001	0.012	<0.001				<0.001	0.00112	0.00492	0.000761	0.000664	0.000644	0.000675	0.000726

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-16	KZ-16	KZ-16	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17
			08-Jan-2018	14-Feb-2018	15-Mar-2018	03-Dec-1994	06-Apr-1995	11-Jun-1995	22-Aug-1995	13-Sep-1995	23-Aug-2002	19-Aug-2004	24-Aug-2006	14-Aug-2008	29-Apr-2015	11-May-2015	22-Jun-2015	28-Jul-2015	22-Aug-2015	09-Sep-2015	14-Oct-2015
Phosphorus (P), total	mg/L		<0.0020	0.0039	0.0097		0.008	0.009	0.008	0.008					0.0052	0.156	0.0074	0.0132	0.0022	0.0048	0.0088
Potassium (K), total	mg/L		1.34	1.77	1.79	1.3	1.5	1.1	1.4	1.6	1	1	1	1.29	1.78	2.45	1.15	1.45	1.26	1.47	1.28
Selenium (Se), total	mg/L	**0.002**	0.0016	0.00172	0.00175		0.0013	<0.00005	<0.00005	0.00013		<0.001	<0.001	0.0007	0.00117	0.00034	0.00058	0.000555	0.00061	0.000903	0.00151
Silicon (Si), total	mg/L		3.87	5.19	4.52	3	3.8	2.2	3.1	3.1			2.95	2.84	4.52	2.81	2.5	3.14	3.06	3.04	3.29
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050		<0.00001	<0.00001	<0.00001	<0.00001					<0.0000050	0.0000272	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L		1.56	1.97	1.91	1.1	1.6	0.79	1.1	1.2	0.96	1.3	1.08	1.12	1.55	0.53	0.845	1.13	0.966	1.08	1.07
Strontium (Sr), total	mg/L		0.251	0.349	0.284	0.18	0.22	0.11	0.16	0.17	0.144	0.201	0.157	0.183	0.247	0.0653	0.149	0.179	0.154	0.179	0.188
Sulphur (S), total	mg/L		13.7	15.7	16.6	8.8	9.2	6.3	8.4	9.7	8.6	9.3	8.9	9	12.1	<15	8	9.7	9.8	9.9	11.1
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	<0.0000020	<0.0000020										<0.0000020	0.0000111	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020			<0.002	<0.002	<0.002					<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		<0.00050	<0.00050	<0.00050	<0.003	0.0023	0.0019	0.003	0.0038	<0.003	<0.003	<0.003	<0.005	<0.00050	0.0242	0.00124	0.00051	<0.00050	0.00085	0.00052
Uranium (U), total	mg/L	**0.015**	0.00301	0.00391	0.00276							0.00356	0.0024	0.0027	0.00589	0.000794	0.00183	0.00245	0.00226	0.00241	0.0033
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020		<0.0003	<0.0003	<0.0003	<0.0003					<0.00020	0.00193	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	*	0.00193	0.0028	0.00295		0.011	0.008	0.008	0.005	<0.005	<0.005	<0.005	0.007	0.00586	**0.0427**	0.00545	0.00345	0.0041	0.00754	0.00989
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	<0.00010		<0.0003	<0.0003	0.0004	0.0014					<0.00010	0.00034	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*	0.00225	0.00198	0.00109		0.01	0.016	0.0007	0.015	<0.02	0.001	0.001	0.004	0.00093	**0.0585**	0.00214	0.00127	0.00188	0.00334	0.00141
Antimony (Sb), dissolved	mg/L		0.000037	0.000033	0.000024										0.000038	0.000034	0.000055	0.000055	0.000056	0.000054	0.000047
Arsenic (As), dissolved	mg/L		0.000182	0.000186	0.000199		0.00037	0.0005	0.0004	0.00031		<0.001	<0.001	0.0007	0.000471	0.000492	0.000455	0.000423	0.000485	0.000439	0.000564
Barium (Ba), dissolved	mg/L		0.0969	0.136	0.102	0.07	0.075	0.045	0.061	0.062	0.068	0.085	0.067	0.069	0.0904	0.0364	0.0644	0.0732	0.07	0.0696	0.0709
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010		<0.0001	<0.0001	<0.0001	<0.0001				<0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050		<0.002	<0.002	<0.002	<0.002				<0.001	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.008		0.026	0.019	0.026	<0.008	<0.008	<0.008	<0.05	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.0000561	0.0000483	0.0000358		0.00002	<0.00001	0.00002	0.00001		0.00003	0.00003	**0.00075**	0.0000372	0.0000643	0.0000244	0.0000233	0.000025	0.000028	0.000034
Calcium (Ca), dissolved	mg/L		79.6	108	90.4	68.2	74	39	54	55	50.7	64.9	55.8	57.8	76.2	20.9	46.2	55.4	51.1	50.2	58.4
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010		0.0003	0.0005	0.0006	0.0011		<0.001	<0.001	<0.001	<0.00010	0.00012	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		0.0000152	0.0000064	0.0000086		<0.0004	<0.0004	<0.0004	<0.0004		<0.0005	<0.0005	<0.0005	0.0000116	0.0000513	0.0000197	0.0000143	0.000025	0.000024	0.000031
Copper (Cu), dissolved	mg/L		0.000442	0.000472	0.000293		0.0002	0.0011	0.0006	0.0034		0.0004	0.0004	0.0004	0.000229	0.00184	0.000505	0.000406	0.000574	0.000426	0.00024
Iron (Fe), dissolved	mg/L	**0.35**	0.0034	0.002	0.0017		0.006	0.035	0.018	0.082	0.047	<0.005	0.031	0.049	0.0088	0.213	0.0306	0.0198	0.039	0.0486	0.0219
Lead (Pb), dissolved	mg/L		0.0000222	0.0000279	0.0000061		0.0001	0.0004	<0.0001	0.0002		<0.0005	<0.0005	<0.0002	<0.0000050	0.000023	0.0000081	<0.0000050	<0.0000050	0.000009	<0.0000050
Lithium (Li), dissolved	mg/L		0.00426	0.00646	0.00454								0.003	<0.005	0.00469	0.00124	0.00245	0.0028	0.0021	0.00227	0.00223
Magnesium (Mg), dissolved	mg/L		18	26.3	22.6	12.8	18	5.9	9.4	9.4	9.23	13.3	10.7	10.7	17.7	4.09	8.2	11	10	8.76	11.4
Manganese (Mn), dissolved	mg/L		0.00581	0.000505	0.00277	0.015	0.037	0.0051	0.016	0.018	0.031	0.033	0.023	0.024	0.0284	0.0121	0.0158	0.0168	0.0273	0.0258	0.0362
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020		<0.00001	<0.00001	<0.00001	<0.00001			<0.00001		<0.0000020	0.0000049	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.000394	0.000287	0.000374		0.0007	0.0006	0.0004	0.0008				0.002	0.00221	0.000622	0.00108	0.00138	0.00134	0.00116	0.00146
Nickel (Ni), dissolved	mg/L		0.000631	0.000935	0.000711			<0.001	<0.001	0.001				<0.001	0.00108	0.00175	0.000524	0.000639	0.000772	0.000507	0.000563
Phosphorus (P), dissolved	mg/L		0.0024	0.0032	0.011			0.01	0.011	0.014					<0.0020	0.0166	<0.0020	<0.0020	<0.0020	<0.0020	0.0031
Potassium (K), dissolved	mg/L		1.38	1.95	1.81	1.3	1.5	1.1	1.3	1.5	1	1	<1	1.22	1.88	2.24	1.2	1.51	1.32	1.23	1.23
Selenium (Se), dissolved	mg/L		0.00164	0.00173	0.00166		0.00085	<0.00005	<0.00005	0.00013		<0.001	<0.001	0.0008	0.0012	0.000273	0.000705	0.000526	0.000668	0.000826	0.00137
Silicon (Si), dissolved	mg/L		3.68	4.88	4.24	3.43	3.8	2.1	2.9	2.8			2.97	3.32	4.47	2.04	2.84	3.13	3.09	2.97	3.2
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050		<0.00001	<0.00001	<0.00001						<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		1.7	2.21	1.93	1.09	1.6	0.79	1.1	1.1	1.11	1.33	1.08	1.05	2.54	0.445	0.887	1.2	1.06	0.878	1.01
Strontium (Sr), dissolved	mg/L		0.25	0.376	0.303	0.185	0.21	0.11	0.16	0.16	0.154	0.196	0.16	0.174	0.254	0.0677	0.151	0.189	0.167	0.158	0.177
Sulphur (S), dissolved	mg/L		13.2	16.9	15.6	8.89	9.1	6.1	8.2	9	9.5	9.3	8.9	10	11.5	<3.0	8.8	9.4	10.3	9	9.8
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020										0.000003	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020		<0.002	<0.002		<0.002					<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.003	0.0023	0.0013	0.0016	0.0019	<0.003	<0.003	<0.003	<0.005	<0.00050	0.00069	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.00296	0.00407	0.00281							0.00068	0.0024	0.0027	0.00616	0.000573	0.00178	0.0026	0.00233	0.00223	0.00307
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020		<0.0003	<0.0003	<0.0003	<0.0003					<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.00383	0.00463	0.00303		0.01	0.007	0.003	0.005	<0.005	<0.005	<0.005	<0.005	0.00532	0.00749	0.00289	0.00218	0.0028	0.00426	0.0045
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010		<0.0003		<0.0003	<0.0003					<0.00010	0.00015	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17
			19-Nov-2015	02-Dec-2015	20-Jan-2016	09-Feb-2016	20-Mar-2016	20-Apr-2016	04-May-2016	15-May-2016	13-Jun-2016	26-Jul-2016	27-Aug-2016	07-Sep-2016	01-Oct-2016	15-Nov-2016	20-Dec-2016	16-Jan-2017	23-Feb-2017	21-Mar-2017	28-Apr-2017
Discharge (Flow)	L/s		116.7	210.3	49.4	47.1		21.1			280.4	319.6	1080.3	559.4	295.1	39	39.8	46.4	2.1	9.5	
Total Suspended Solids	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2.1	2.9	<1.0	<1.0	5.6	<1.0	<1.0	<1.1	<1.1	<1.1	<1.1	<1.0	<1.0
pH (field)	pH units	**6.5 - 9**	7.73	7.46	7.19	7.18	7.13	7.64	7.59	7.72	7.75	7.63	7.77	7.47	7.69	7.51	7.06	7	6.97	7.12	7.31
pH (lab)	pH units	**6.5 - 9**	8.26	8.08	8.17	8.11	7.95	8.16	8.15	8.37	8.31	8.27	8.14	7.96	8.06	8.03	7.93	8.14	8.06	7.74	8.23
Specific Conductance (field)	µS/cm		405.5	410	466.9	471.1	476.7		338.2	361.7	242.7	328.3	331.9	261.6	250.1	317	460.8	470.7	568.4	491.1	498.7
Specific Conductance (lab)	µS/cm		399	416	471	501	499	452	321	355	302	326	282	291	288	372	482	488	544	552	512
Temperature (field)	C		0.2	0.3	0.1	0.2	0.9	0.8	1	5.2	8.6	8.5	5.7	6.5	4.6	1.3	0.5	-0.2	-0.2	-0.3	0.2
Dissolved Oxygen (field)	mg/L	**6.5**	11.1	9.6	10	9	9.08	12.71	10.37	9.3	7.14	8.15	9.67	**5.23**	8.22	9.3	10.85	9.48	10	10.46	10.71
Dissolved Oxygen (field)	%		88	79	80	72	74	102.6	84.9	85	70.2	80.8	88.6	50	73.4	75.4	90.1	77.9	78.9	83	85.3
ORP (field)	mV		106.8	153.7	332.4	285.7	126	106.4	124.4	122.9	164.2	95.9	277.4	107.5	119.5	151.5	162.4	176.9	183.5	192.6	256.8
Turbidity (internal)	NTU		0.38	0.34	0.376	0.922	0.048	0.552	1.44		0.324	0.8	3.87	0.15	-0.08	0.572	0.642	0.62	3.03	0.74	1.124
Hardness (from total)	mg/L		213	221	274	263	273	255	165	206	160	174	152	151	141	195	264	266	289	284	261
Hardness (from dissolved)	mg/L		212	223	275	262	262	264	164	206	155	175	147	154	148	175	252	262	289	269	278
Colour	TCU		5.1	5.6	<5.0	8	<5.0	5.7	22.9	<5.0	6.9		16								
Total Acidity	mg/L		<0.50	<0.50	<0.50	1.09	5.07	1.46	0.51	<0.50	<0.50	<0.50	<0.50	0.53	<0.50	1.25	5.23	3.15	5.04	9.7	11.3
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		177	187	223	241	237	215	148	170	132	146	118	128	123	168	226	232	256	258	250
Alkalinity, bicarbonate HCO3	mg/L		216	228	272	294	289	262	181	201	158	178	144	157	150	205	275	283	312	315	305
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.8	1.92	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.33	1.6	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**	0.66	0.61	1.3	0.85	0.71	0.55	1.1	0.77	<0.50	<0.50	1.1	0.95	0.58	0.58	0.63	0.93	<0.50	0.72	0.72
Fluoride	mg/L	**0.12**	0.11	0.096	0.11	0.09	0.092	0.12	0.1	0.12	0.087	0.098	0.082	0.099	0.1	0.088	0.071	0.069	0.074	0.069	0.073
Sulphate, dissolved	mg/L	*	34.7	31.6	33.7	38.6	35	33.2	20.8	27.8	28.9	32.3	26.6	26.8	25.1	32	41.1	37.8	42	41.8	40
Cyanide, total	mg/L	**0.005**	<0.00050	<0.00050	0.00061	<0.00050	<0.00050	<0.00050	0.0005	<0.00050	0.00064	<0.00050	<0.00050	0.00067	0.00056	0.00069	0.00059	<0.00050	<0.00050	<0.00050	0.00053
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	<0.00050	<0.00050	0.00073	<0.00050	0.00053	<0.00050	<0.00050	0.0005	0.00071	0.00054	<0.00050	0.0007	0.00072	0.00066	<0.00050	<0.00050	<0.00050	<0.00050	0.00062
Ammonia (N)	mg/L	*	<0.0050	0.012	0.0078	<0.0050	0.01	0.0166	0.0102	0.0112	0.011	0.014	0.028	0.018	0.29	0.024	0.023	0.016	0.036	0.031	0.038
Nitrite (N)	mg/L	**0.02**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3.0**	0.156	0.164	0.204	0.228	0.225	0.148	0.0702	0.0517	0.0149	0.0227	0.0189	0.0913	0.158	0.26	0.3	0.274	0.313	0.322	0.291
Nitrite & Nitrate, as N	mg/L		0.156	0.164	0.204	0.228	0.225	0.148	0.0702	0.0517	0.0149	0.0227	0.0189	0.0913	0.158	0.26	0.3	0.274	0.313	0.322	0.291
Phosphorus,total-colourimetric	mg/L	**0.035**	0.003	0.0038	0.0033	0.0028	0.0023	0.0049	0.0083	0.0047	0.0037	0.0046	0.0096	0.0047	0.0036	<0.0020	0.0033	<0.0020	0.0039	0.0038	<0.0020
Phosphorus, Total Dissolved	mg/L		0.0028	0.0041	0.0028	0.0028	0.0027	0.0054	0.0101	0.0038	0.0039	0.004	0.0096	0.0054	0.0027	<0.0020	0.0034	<0.0020	0.002	0.0035	<0.0020
Dissolved Organic Carbon	mg/L		1.58	1.87	1.15	0.91	0.52	1.6	4.16	3.08	1.47	2.6	4.79	1.58	1.19	1.51	2.29	0.62	<0.50	1.68	0.73
Aluminum (Al), total	mg/L	*	0.0189	0.014	0.00537	0.00838	0.00829	0.0049	0.0181	0.0075	0.0073	0.0077	0.0612	0.00233	0.00137	0.00272	0.00179	0.00217	0.00662	0.00114	0.0035
Antimony (Sb), total	mg/L	**0.009**	0.000043	0.000051	0.000029	0.000037	0.000032	<0.000050	<0.000050	0.000058	0.00006	0.000056	0.000079	0.000043	0.000033	0.000025	0.000024	0.000029	0.000023	0.000028	0.000082
Arsenic (As), total	mg/L	**0.005**	0.000719	0.000761	0.00075	0.00085	0.000628	0.000711	0.000998	0.000657	0.000689	0.00054	0.000805	0.000239	0.000236	0.000271	0.000218	0.000221	0.000272	0.00022	0.000273
Barium (Ba), total	mg/L		0.077	0.0914	0.0934	0.0978	0.101	0.082	0.0619	0.0721	0.0689	0.0686	0.0628	0.0521	0.0543	0.0641	0.093	0.0897	0.106	0.11	0.1
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.00001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000020	<0.000020	<0.000020	<0.000020	<0.000010	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050	<0.050	<0.050	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*	0.000057	0.00005	0.000053	0.000056	0.000044	0.000112	0.000052	0.000031	0.000041	0.000035	0.000053	0.000016	0.000013	0.00002	0.000022	0.000035	0.000049	0.00003	0.000025
Calcium (Ca), total	mg/L		62.2	64.5	77.6	76.8	80.3	73.8	48.5	61.5	49.8	53	47	45.2	43.4	59.6	80	79.3	87.2	84.9	77.9
Chromium (Cr), total	mg/L	**0.001**	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00010	0.00018	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), total	mg/L		0.000075	0.000057	0.000062	0.000059	0.000048	0.000033	0.00006	0.000034	0.00003	0.000028	0.00009	0.000011	0.000007	0.000006	0.000006	0.000007	0.000017	0.000005	0.000011
Copper (Cu), total	mg/L	*	0.00043	0.00033	0.000343	0.000352	0.000284	0.00055	0.00088	0.00061	0.00068	0.00079	0.00158	0.000611	0.000384	0.000337	0.000238	0.000321	0.000261	0.000225	0.0003
Iron (Fe), total	mg/L	**0.3**	0.159	0.141	0.149	0.185	0.126	0.109	0.3	0.122	0.124	0.0941	0.234	0.0053	0.0037	0.02	0.0067	0.0047	0.017	0.0033	0.0231
Lead (Pb), total	mg/L	*	0.000115	0.000036	0.000044	0.000064	0.000041	<0.000050	0.000115	<0.000050	<0.000050	0.000032	0.000669	0.000007	0.000035	0.000014	0.000006	0.000103	0.000017	<0.0000050	<0.000020
Lithium (Li), total	mg/L		0.00327	0.0033	0.00287	0.00369	0.00411	0.00432	0.00322	0.00341	0.00219	0.00325	0.00241	0.00211	0.0022	0.00236	0.00313	0.00324	0.00355	0.00358	0.00334
Magnesium (Mg), total	mg/L		14	14.5	19.6	17.2	17.6	17.1	10.6	12.6	8.72	10	8.31	9.11	7.86	11.3	15.6	16.5	17.4	17.5	16.1
Manganese (Mn), total	mg/L	*	0.069	0.0556	0.07	0.0576	0.0478	0.0336	0.0489	0.0221	0.0235	0.0254	0.0453	0.00147	0.000661	0.00247	0.000982	0.00103	0.00292	0.00113	0.00273
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	0.00149	0.00173	0.00147	0.00127	0.00131	0.00183	0.00149	0.00179	0.00119	0.00142	0.0011	0.00133	0.00121	0.000904	0.000669	0.000551	0.000558	0.000662	0.00055
Nickel (Ni), total	mg/L	*	0.000788	0.000786	0.000991	0.000905	0.00092	0.00097	0.00101	0.00078	0.00056	0.00059	0.00092	0.000411	0.000317	0.000372	0.000523	0.000505	0.000618	0.000618	0.00058

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17
			19-Nov-2015	02-Dec-2015	20-Jan-2016	09-Feb-2016	20-Mar-2016	20-Apr-2016	04-May-2016	15-May-2016	13-Jun-2016	26-Jul-2016	27-Aug-2016	07-Sep-2016	01-Oct-2016	15-Nov-2016	20-Dec-2016	16-Jan-2017	23-Feb-2017	21-Mar-2017	28-Apr-2017
Phosphorus (P), total	mg/L		0.0099	0.0035	0.0064	0.0103	0.0075	<0.010	0.011	<0.010	<0.010	<0.0050	0.0109	0.0025	0.0066	0.0034	0.0057	0.0046	0.0045	0.0033	0.0092
Potassium (K), total	mg/L		1.4	1.44	1.75	1.49	1.59	1.57	1.38	1.48	1.22	1.17	1.16	1.08	1.09	1.16	1.25	1.27	1.41	1.45	1.35
Selenium (Se), total	mg/L	**0.002**	0.00133	0.00142	0.00147	0.00136	0.00141	0.00122	0.000756	0.000841	0.000671	0.000541	0.000544	0.000546	0.000711	0.00134	0.00154	0.00157	0.00171	0.00159	0.00134
Silicon (Si), total	mg/L		3.67	3.79	4.09	4.07	3.75	4.15	3.1	3.41	2.84	3.43	3.43	2.98	2.91	3.15	3.66	3.84	4	4.23	3.8
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.000010	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010
Sodium (Na), total	mg/L		1.23	1.27	1.68	1.46	1.54	1.45	0.92	1.29	0.86	1.06	0.89	0.944	0.88	1.07	1.31	1.39	1.51	1.44	1.52
Strontium (Sr), total	mg/L		0.216	0.208	0.289	0.265	0.26	0.239	0.161	0.189	0.168	0.17	0.151	0.133	0.146	0.189	0.26	0.246	0.293	0.32	0.253
Sulphur (S), total	mg/L		11.1	11.1	14.4	12.8	12.1	<15	<15	<15	<15	10.6	9.2	8.6	7.8	11.1	12.5	12.8	13.5	14.6	12.2
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000003	<0.0000020	<0.0000020	0.000004	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00062
Titanium (Ti), total	mg/L		0.00096	<0.00050	<0.00050	<0.00050	0.00051	<0.0050	<0.0050	<0.0050	<0.0050	<0.0020	0.0029	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0020
Uranium (U), total	mg/L	**0.015**	0.00412	0.00491	0.0055	0.00507	0.00517	0.00557	0.00315	0.00387	0.00205	0.00226	0.00148	0.00187	0.0017	0.00246	0.00306	0.00293	0.00337	0.0035	0.00316
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	*	0.0082	0.00724	0.00798	0.00602	0.00512	0.0047	0.0064	0.004	0.004	0.0036	0.0079	0.00127	0.00103	0.00115	0.00131	0.00262	0.00288	0.00248	0.0016
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00011	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*	0.00182	0.0006	0.00185	0.00088	0.00315	0.0012	0.00341	0.00157	0.00182	0.00156	0.00488	0.00088	0.00082	0.00069	0.00073	0.00126	0.00101	0.00253	0.00067
Antimony (Sb), dissolved	mg/L		0.000039	0.000039	0.000031	0.000029	0.000029	0.000041	0.000039	0.000047	0.000064	0.000054	0.000062	0.000045	0.000036	0.000027	0.000026	0.000029	0.000021	0.000037	0.000022
Arsenic (As), dissolved	mg/L		0.000447	0.000553	0.000413	0.000307	0.000333	0.000507	0.000619	0.000588	0.000518	0.000411	0.000441	0.000241	0.000271	0.000219	0.000218	0.000207	0.000217	0.000182	0.00018
Barium (Ba), dissolved	mg/L		0.0778	0.076	0.0973	0.0992	0.102	0.0843	0.0603	0.0701	0.064	0.0661	0.0572	0.0559	0.0547	0.0649	0.094	0.0895	0.103	0.103	0.104
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	0.000006	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.000036	0.00003	0.00004	0.000032	0.000037	0.000035	0.000031	0.000022	0.0000213	0.000018	0.000022	0.000018	0.000011	0.000015	0.000023	0.000024	0.000029	0.000034	0.000032
Calcium (Ca), dissolved	mg/L		62.2	65.6	80	77	75.6	76	47.7	62	48	53.2	44.4	47.1	45.8	52.4	75.6	78.8	86.8	78.6	84.9
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		0.000022	0.000021	0.000015	0.000011	0.00002	0.000017	0.000023	0.000013	0.0000161	0.000006	0.000018	0.000006	0.000009	0.000006	<0.0000050	0.000006	0.000006	<0.0000050	0.000007
Copper (Cu), dissolved	mg/L		0.000278	0.000228	0.000278	0.000245	0.000216	0.000287	0.000567	0.00047	0.000504	0.000459	0.00105	0.000606	0.000342	0.000245	0.000285	0.000309	0.00022	0.000263	0.000238
Iron (Fe), dissolved	mg/L	**0.35**	0.0094	0.0183	0.0036	0.0026	0.0032	0.0216	0.092	0.0304	0.0339	0.0116	0.0298	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0011
Lead (Pb), dissolved	mg/L		<0.0000050	<0.0000050	0.000006	<0.0000050	0.000005	<0.0000050	0.000027	0.000007	<0.0000050	<0.0000050	0.000072	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000005	<0.0000050	0.000006	0.000005
Lithium (Li), dissolved	mg/L		0.00311	0.00306	0.00374	0.00394	0.00393	0.00418	0.00291	0.00302	0.0023	0.00272	0.0017	0.00256	0.00225	0.00213	0.00306	0.00317	0.00335	0.00328	0.00341
Magnesium (Mg), dissolved	mg/L		13.8	14.5	18.2	17	17.8	18	10.9	12.4	8.48	10.2	8.68	8.77	8.31	10.6	15.3	15.9	17.6	17.6	16
Manganese (Mn), dissolved	mg/L		0.0317	0.03	0.0302	0.0195	0.0249	0.022	0.0209	0.01	0.0144	0.0054	0.0111	0.000293	0.000328	0.00011	<0.000050	0.000269	0.00068	0.000178	0.00201
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.00165	0.00174	0.00173	0.00135	0.00141	0.00192	0.00149	0.00172	0.00121	0.0014	0.00106	0.00138	0.00121	0.000914	0.000686	0.00057	0.000558	0.000597	0.000513
Nickel (Ni), dissolved	mg/L		0.000702	0.000674	0.000813	0.000733	0.000826	0.000829	0.000783	0.000711	0.00049	0.000484	0.000756	0.000379	0.000285	0.000325	0.00049	0.000508	0.000562	0.000605	0.000578
Phosphorus (P), dissolved	mg/L		0.0033	<0.0020	<0.0020	0.0033	0.0024	0.01	0.0058	0.0033	<0.0020	<0.0020	0.0035	0.0046	<0.0020	0.0057	0.0042	0.0032	0.0042	<0.0020	0.0037
Potassium (K), dissolved	mg/L		1.4	1.35	1.62	1.5	1.63	1.63	1.41	1.56	1.25	1.17	1.14	1.17	1.14	1.1	1.24	1.28	1.45	1.37	1.39
Selenium (Se), dissolved	mg/L		0.00134	0.00159	0.00144	0.00132	0.0013	0.00126	0.000782	0.000866	0.000705	0.00049	0.000533	0.000493	0.000772	0.00115	0.00144	0.00152	0.00176	0.00146	0.00132
Silicon (Si), dissolved	mg/L		3.52	4.03	4.24	4.04	3.79	4.43	2.98	3.27	2.7	3.57	3.05	3.19	3.33	2.89	3.8	3.64	4.12	4.04	3.88
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		1.23	1.22	1.54	1.46	1.52	1.55	0.929	1.27	0.915	1.03	0.919	0.934	0.897	1.03	1.28	1.35	1.55	1.49	1.43
Strontium (Sr), dissolved	mg/L		0.217	0.211	0.271	0.257	0.272	0.263	0.162	0.191	0.153	0.164	0.143	0.148	0.154	0.174	0.257	0.246	0.288	0.273	0.274
Sulphur (S), dissolved	mg/L		11.1	11.6	12.7	12.7	11.6	12.1	7.5	8.9	10	10.3	8.5	8.1	8.8	9.8	12.6	11.9	14.3	12.7	12
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.0041	0.00426	0.0057	0.00501	0.00509	0.00567	0.00307	0.00375	0.00194	0.00225	0.00159	0.00196	0.00173	0.00242	0.00308	0.00305	0.00338	0.00342	0.00324
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.00606	0.00375	0.00576	0.00405	0.00393	0.00364	0.00357	0.00239	0.00239	0.00095	0.00315	0.00093	0.0004	0.00087	0.00121	0.00199	0.00268	0.00238	0.00175
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18
			16-May-2017	27-May-2017	31-May-2017	06-Jun-2017	14-Jun-2017	19-Jul-2017	10-Aug-2017	13-Sep-2017	04-Oct-2017	02-Nov-2017	05-Dec-2017	08-Jan-2018	14-Feb-2018	15-Mar-2018	07-Apr-1995	11-Jun-1995	22-Aug-1995	13-Sep-1995	27-Aug-2016
Discharge (Flow)	L/s		565			551.1		1198	754.2	295.7	211.9	95.4									44.1
Total Suspended Solids	mg/L		6.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.9	1.3	1.1	<4	<4	<4	<4	1.3
pH (field)	pH units	**6.5 - 9**	8.09	7.32	7.15	7.18	7.10	7.26	7.96	7.8	7.45	7.37	7.45	7.44	7.14	7.02					7.51
pH (lab)	pH units	**6.5 - 9**	7.97	7.93	7.81	8.28	8.12	8.25	8.18	8.31	8.23	8.18	8.18	8.09	8.42	8.43	8.1	7.8	7.9	8.1	8.04
Specific Conductance (field)	µS/cm		174.9	261.9	242.3	210.1	272.6	235.7	229	358.4	340.9	331.7	572.9	620.8		444.7					397.6
Specific Conductance (lab)	µS/cm		187	240	240	320	221	250	263	322	339	370	425	525	572	591	354	275	279	274	339
Temperature (field)	C		0.3	0.9	1.1	3	2.00	5.7	4.8	5.7	4.2	2.1	1	0.1	0.1	-0.2					4
Dissolved Oxygen (field)	mg/L	**6.5**	12.5	8.6	7.02	9.1	7.15	7.24	**4.84**	7.83	7.58	9.32	7.88	9.11	9.84	8.66					10.81
Dissolved Oxygen (field)	%		100	60.5	49.4	78	51.5	57.9	43.9	72.3	67.5	77.6	63.8	73.6	78.3	58.8					97.1
ORP (field)	mV		401.2	302.1	345.5	392.3	325.5	376	173.5	95.8	130.9	121.7	143.5	128.3	119.7	261.2					209.4
Turbidity (internal)	NTU		0.534	0.48	0.05	0.26	0.54	0.16	0.38	0.10	0.10	0.06	0.428		1.214	0.968					1.698
Hardness (from total)	mg/L		91.5	122	123	180	116	127	134	164	165	181	240	272	337	336	211	173	193	202	187
Hardness (from dissolved)	mg/L		85.2	131	116	173	105	122	133	160	169	181	241	282	305	325	209	158	187	202	186
Colour	TCU																				12.3
Total Acidity	mg/L		<0.50	3.81	3.1	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	2.4	<1.0	8.6	1.9	<1.0					1.13
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0					<0.50
Alkalinity, total	mg/L		88.8	108	108	149	98.4	110	118	149	154	168	198	249	256	289	192	149	167	164	161
Alkalinity, bicarbonate HCO3	mg/L		108	132	132	181	120	134	143	177	188	205	241	304	297	340			204	200	196
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50			<0.5	<0.5	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.96	<0.50	<0.50	<0.50	<0.50	7.52	5.95			<0.5	<0.5	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.63	<0.50	<0.50	<0.50	<0.50	6.27	4.96			<0.5	<0.5	<0.50
Chloride	mg/L	**120**	0.93	0.51	<0.50	<0.50	0.61	<0.50	<0.50	0.52	0.58	0.72	0.8	<0.50	<0.50	0.58					0.72
Fluoride	mg/L	**0.12**	0.049	0.083	0.085	0.074	0.081	0.079	0.075	0.094	0.084	0.082	0.081	0.072	0.073	0.08					0.061
Sulphate, dissolved	mg/L	*	11.9	15.7	16.7	22.1	15.6	22.8	22.9	27.6	29.4	32	34.9	38.4	50.2	47.4	16.0	13.8	14.4	13.7	17.9
Cyanide, total	mg/L	**0.005**	0.00103	0.00059	0.0006	0.00066	<0.00050	<0.00050	0.00059	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00052	0.00062	<0.001	<0.001	<0.001	<0.001	<0.00050
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	0.00103	0.00078	0.00063	0.00053	<0.00050	0.00172	<0.00050	<0.00050	<0.00050	0.0005	0.00059	<0.00050	<0.00050	0.00052	<0.001	<0.001	<0.001	<0.001	<0.00050
Ammonia (N)	mg/L	*	0.036	0.0085	0.012	0.018	0.065	0.0084	0.032	<0.0050	0.013	<0.0050	<0.0050	<0.0050	0.027	0.01	0.018	<0.005	<0.005	<0.005	0.014
Nitrite (N)	mg/L	**0.02**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.005	<0.005	<0.005	<0.005	<0.0020
Nitrate (N)	mg/L	**3.0**	0.0318	0.101	0.0932	0.141	0.073	0.0752	0.101	0.125	0.181	0.23	0.257	0.288	0.304	0.212	0.21	0.09	<0.02	0.06	0.0415
Nitrite & Nitrate, as N	mg/L		0.0318	0.101	0.0932	0.141	0.073	0.0752	0.101	0.125	0.181	0.23	0.257	0.288	0.304	0.212	0.21	0.09	<0.02	0.06	0.0415
Phosphorus,total-colourimetric	mg/L	**0.035**	0.011	0.0027	0.0021	0.0031	0.0038	0.0024	0.0055	0.0025	0.0117	0.003	0.0034	0.0038	0.0116	0.0026	<0.003	**0.036**	**0.036**	0.025	0.0206
Phosphorus, Total Dissolved	mg/L		0.0105	0.0031	<0.0020	0.0037	0.0035	0.0023	0.0046	<0.0020	<0.0020	0.002	0.0041	0.003	0.0125	0.0026					0.0206
Dissolved Organic Carbon	mg/L		8.17	2.05	2.45	1.44	3.14	1.2	1.57	1.36	1.02	1.14	2.08	1.71	1.07	<0.50					3.14
Aluminum (Al), total	mg/L	*	0.0795	0.00541	0.00425	0.00224	0.00394	0.00155	0.00187	0.00098	0.00115	0.00131	0.00266	0.00645	0.00454	0.00164	0.011	0.041	0.019	0.013	0.0113
Antimony (Sb), total	mg/L	**0.009**	<0.000020	0.000029	0.00003	0.000034	0.000023	0.000023	0.000047	0.000033	0.000031	0.000027	0.000023	0.000027	0.000025	<0.000020					0.000025
Arsenic (As), total	mg/L	**0.005**	0.000615	0.000179	0.000169	0.00021	0.000182	0.000192	0.000208	0.000249	0.000241	0.000201	0.000224	0.00028	0.000239	0.000226	0.0011	0.0005	0.0006	0.00025	0.000468
Barium (Ba), total	mg/L		0.0456	0.0487	0.0506	0.0619	0.0472	0.0515	0.053	0.0649	0.0638	0.0658	0.0831	0.0961	0.114	0.102	0.048	0.041	0.041	0.042	0.045
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.0001	<0.0001	<0.0001	<0.000010
Bismuth (Bi), total	mg/L		<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.002	<0.002	<0.002	<0.002	<0.0000050
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.014	0.017	0.01	0.014	<0.010
Cadmium (Cd), total	mg/L	*	0.0000643	0.000017	0.000016	0.000023	0.000015	0.0000171	0.000017	0.000023	0.00002	0.00002	0.0000306	0.0000317	0.0000391	0.0000346	0.00003	0.00002	0.00017	0.00002	0.000072
Calcium (Ca), total	mg/L		27.4	37.6	37	51.6	34.8	38.8	41.5	49.3	48.7	54.3	71.8	81.6	103	97.5	55	46	51	53	49.6
Chromium (Cr), total	mg/L	**0.001**	0.00014	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0004	0.0004	**0.0017**	0.0008	<0.00010
Cobalt (Co), total	mg/L		0.000158	0.000021	0.000015	0.000009	0.000014	0.0000086	0.0000086	0.000006	0.000008	<0.0000050	0.0000108	0.0000189	0.0000176	0.0000068	<0.0004	<0.0004	<0.0004	<0.0004	0.000021
Copper (Cu), total	mg/L	*	0.00193	0.00165	0.00136	0.000632	0.00123	0.000671	0.00056	0.000376	0.000382	0.000285	0.0003	0.000353	0.000329	0.000281	<0.0002	0.0006	0.0008	0.0002	0.000325
Iron (Fe), total	mg/L	**0.3**	0.193	0.0066	0.0034	0.002	0.0035	0.0029	0.0027	0.0012	0.0015	0.0026	0.0069	0.0291	0.0192	0.0054	0.012	0.033	0.015	0.009	0.0174
Lead (Pb), total	mg/L	*	0.000172	0.000043	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000086	0.0000162	0.0000309	0.0000186	0.0000108	0.0005	0.0004	0.0012	0.0002	0.000132
Lithium (Li), total	mg/L		0.00137	0.0024	0.0021	0.00253	0.00203	0.00226	0.00219	0.00287	0.00213	0.00267	0.00313	0.00383	0.00381	0.00331					0.00172
Magnesium (Mg), total	mg/L		5.57	7.89	7.46	12.4	7.02	7.39	7.41	9.87	10.5	11.1	14.7	16.6	19.3	22.6	18	14	16	17	15.4
Manganese (Mn), total	mg/L	*	0.035	0.0007	0.000311	0.0014	0.000283	0.00124	0.00029	0.0026	0.000682	0.00127	0.00248	0.00494	0.00335	0.00182	0.0002	0.001	0.0005	0.0004	0.00648
Mercury (Hg), total	mg/L	**0.000026**	0.000003	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.00001	<0.00001	<0.00001	<0.00001	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	0.000328	0.000491	0.000505	0.000712	0.000486	0.000587	0.000653	0.00104	0.00079	0.000798	0.000904	0.000561	0.000662	0.0004	0.0007	<0.0004	<0.0004	0.0004	0.00107
Nickel (Ni), total	mg/L	*	0.00118	0.000614	0.000551	0.000534	0.000523	0.000386	0.000355	0.000425	0.000369	0.000373	0.000473	0.000553	0.000664	0.000569	<0.001	<0.001	0.001	<0.001	0.000584

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-17	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18
			16-May-2017	27-May-2017	31-May-2017	06-Jun-2017	14-Jun-2017	19-Jul-2017	10-Aug-2017	13-Sep-2017	04-Oct-2017	02-Nov-2017	05-Dec-2017	08-Jan-2018	14-Feb-2018	15-Mar-2018	07-Apr-1995	11-Jun-1995	22-Aug-1995	13-Sep-1995	27-Aug-2016
Phosphorus (P), total	mg/L		0.0318	0.006	0.0043	0.0054	0.0035	0.0037	0.0038	0.0021	0.0022	0.0029	0.004	0.0026	0.0048	0.0041	0.075	0.050	0.043	0.045	0.0243
Potassium (K), total	mg/L		1.54	1.1	1.06	1.23	1.06	1.07	1.1	1.2	1.18	1.13	1.26	1.31	1.46	1.69	0.69	0.59	0.53	0.57	0.545
Selenium (Se), total	mg/L	**0.002**	0.000451	0.000629	0.000596	0.00077	0.000477	0.00052	0.0007	0.000946	0.000968	0.00112	0.00123	0.00154	0.00169	0.00181	0.0011	<0.00005	0.00006	0.00012	0.000729
Silicon (Si), total	mg/L		2.47	2.71	2.54	2.97	2.43	2.87	3.06	3.14	2.65	3.17	3.35	3.56	4.46	4.5	2.9	2.8	2.8	2.8	3.28
Silver (Ag), total	mg/L	**0.00025**	<0.000010	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.00001	<0.00001	<0.00001	<0.00001	<0.0000050
Sodium (Na), total	mg/L		0.61	0.827	0.768	1.2	0.768	0.874	0.907	1.11	1.16	1.11	1.36	1.5	1.58	1.87	0.9	0.82	0.81	0.82	0.8
Strontium (Sr), total	mg/L		0.106	0.127	0.124	0.188	0.114	0.129	0.136	0.166	0.174	0.178	0.25	0.251	0.306	0.271	0.16	0.13	0.15	0.15	0.167
Sulphur (S), total	mg/L		4.7	6.1	5.7	9.4	5.4	7	7.8	8.9	10	10.7	12.2	12.9	14.8	16.5	5	3.9	4.7	4.7	6.2
Thallium (Tl), total	mg/L	**0.0008**	0.0000022	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020					<0.0000020
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.003	0.005	0.003	0.003	<0.00020
Titanium (Ti), total	mg/L		0.0033	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0018	0.0018	0.0015	0.0017	<0.00050
Uranium (U), total	mg/L	**0.015**	0.000666	0.000979	0.00098	0.00184	0.000812	0.000981	0.00107	0.00189	0.00199	0.00229	0.00289	0.00331	0.00387	0.00318					0.00166
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.0003	<0.0003	<0.0003	<0.0003	<0.00020
Zinc (Zn), total	mg/L	*	0.0047	0.00105	0.00086	0.00201	0.00081	0.00097	0.00076	0.00149	0.00095	0.00108	0.00158	0.00163	0.00202	0.00306	0.007	0.009	0.004	0.004	0.00376
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0003	0.0013	<0.0003	0.0003	<0.00010
Aluminum (Al), dissolved	mg/L	*	0.0304	0.00415	0.00454	0.00234	0.00534	0.002	0.00188	0.00113	0.00092	0.001	0.0009	0.00116	0.001	0.00104	0.016	0.018	0.022	0.011	0.00725
Antimony (Sb), dissolved	mg/L		<0.000020	0.00003	0.000029	0.000032	0.000027	0.000031	0.000049	0.000027	0.00003	0.000024	0.000027	0.00003	0.000025	0.000028					0.000029
Arsenic (As), dissolved	mg/L		0.000351	0.000199	0.000168	0.000209	0.000192	0.000207	0.000216	0.000234	0.00022	0.000229	0.000224	0.00022	0.000222	0.000229	0.00035	0.0004	0.0006	0.00023	0.000493
Barium (Ba), dissolved	mg/L		0.0394	0.0511	0.0475	0.066	0.0428	0.052	0.0538	0.0666	0.065	0.0636	0.0843	0.102	0.115	0.109	0.048	0.038	0.041	0.043	0.0435
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.0001	<0.0001	<0.0001	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.002	<0.002	<0.002	<0.002	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.065	0.016	0.011	0.015	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.0000372	0.000016	0.000015	0.000022	0.000014	0.000016	0.0000143	0.000019	0.000019	0.000016	0.0000273	0.0000288	0.0000363	0.0000484	0.00003	<0.00001	0.00013	0.00002	0.000023
Calcium (Ca), dissolved	mg/L		24.8	38.7	34.8	51.6	31.7	37.8	41.5	48.5	51.7	54.3	72.4	84.3	91	94.8	54	42	50	53	48.1
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0004	0.0003	0.0018	0.0006	<0.00010
Cobalt (Co), dissolved	mg/L		0.0000735	0.000017	0.000014	0.000011	0.000015	0.000011	0.0000067	0.000006	0.000006	0.000005	0.0000064	0.0000069	0.0000067	0.0000078	<0.0004	<0.0004	<0.0004	<0.0004	0.000014
Copper (Cu), dissolved	mg/L		0.00148	0.00147	0.00137	0.000584	0.00139	0.000633	0.00058	0.000383	0.000324	0.000297	0.000326	0.000313	0.000331	0.000594	<0.0002	0.0004	0.0009	0.0003	0.000306
Iron (Fe), dissolved	mg/L	**0.35**	0.0454	0.0032	0.0033	0.0032	0.0051	0.002	0.0023	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.005	0.011	0.017	0.005	0.0089
Lead (Pb), dissolved	mg/L		0.0000156	<0.0000050	<0.0000050	0.000008	<0.0000050	0.000006	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000135	<0.0000050	0.0000093	0.0000154	0.0004	<0.0001	0.0005	0.0001	0.000041
Lithium (Li), dissolved	mg/L		0.00128	0.00228	0.00201	0.00248	0.00192	0.00228	0.0021	0.0027	0.00232	0.00247	0.00316	0.00373	0.00348	0.00383					0.00158
Magnesium (Mg), dissolved	mg/L		5.64	8.26	7.02	10.8	6.23	6.85	7.19	9.42	9.59	11.1	14.7	17.3	18.9	21.4	18	13	15	17	16
Manganese (Mn), dissolved	mg/L		0.0177	0.000418	0.000248	0.00117	0.000221	0.000505	0.000223	0.000421	0.000807	0.000092	0.000127	0.000083	0.000121	0.000586	<0.0002	0.0002	0.0005	0.003	0.00411
Mercury (Hg), dissolved	mg/L		0.0000033	<0.0000020	0.0000021	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.00001	<0.00001	<0.00001	<0.00001	<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.000285	0.000495	0.000473	0.000753	0.000476	0.000603	0.000626	0.00083	0.000834	0.000743	0.000894	0.000548	0.00068	0.000466	0.0006	<0.0004	<0.0004	0.0006	0.00104
Nickel (Ni), dissolved	mg/L		0.00088	0.000571	0.000581	0.000541	0.000562	0.000381	0.000415	0.000363	0.000371	0.000361	0.000478	0.00055	0.000669	0.000604	<0.001	<0.001	0.002	<0.001	0.000568
Phosphorus (P), dissolved	mg/L		0.0146	0.0046	0.0042	0.0035	0.0034	0.0038	0.0044	<0.0020	<0.0020	<0.0020	0.0042	<0.0020	0.0033	0.0053	0.075	0.045	0.044	0.043	0.0183
Potassium (K), dissolved	mg/L		1.5	1.05	1.04	1.15	1.05	1.04	1.12	1.19	1.07	1.08	1.4	1.33	1.47	1.65	0.67	0.51	0.52	0.59	0.506
Selenium (Se), dissolved	mg/L		0.000422	0.00055	0.000509	0.000759	0.00044	0.000503	0.000692	0.000978	0.00103	0.00105	0.0013	0.00161	0.00156	0.00172	0.00027	<0.00005	0.00008	0.0001	0.000712
Silicon (Si), dissolved	mg/L		2.14	2.5	2.4	2.99	2.29	2.91	2.96	3.3	2.84	3.19	3.41	3.76	4.1	4.25	2.9	2.5	2.8	2.9	2.98
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.00001	<0.00001	<0.00001	<0.00001	<0.0000050
Sodium (Na), dissolved	mg/L		0.629	0.8	0.713	1.08	0.682	0.846	0.91	1.07	1.09	1.13	1.41	1.53	1.59	1.9	0.81	0.73	0.83	0.84	0.839
Strontium (Sr), dissolved	mg/L		0.0948	0.129	0.117	0.168	0.107	0.128	0.138	0.169	0.16	0.18	0.254	0.259	0.294	0.323	0.16	0.12	0.15	0.15	0.162
Sulphur (S), dissolved	mg/L		4.4	6.1	5.4	7.7	5	6.8	7.6	9.4	9	10.1	16	13.7	13.7	14.7	4.9	3.6	4.7	4.8	6
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020					<0.0000020
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.004	0.005	0.002	0.003	<0.00020
Titanium (Ti), dissolved	mg/L		0.00055	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0015	0.0013	0.0014	0.0016	<0.00050
Uranium (U), dissolved	mg/L		0.000619	0.00104	0.000876	0.00177	0.000701	0.000894	0.00109	0.00193	0.00203	0.00252	0.00297	0.00345	0.00419	0.00336					0.00165
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.0003	<0.0003	<0.0003	<0.0003	<0.00020
Zinc (Zn), dissolved	mg/L		0.00196	0.00097	0.0007	0.00197	0.00083	0.00106	0.00068	0.00088	0.00091	0.00067	0.00187	0.00132	0.00349	0.00407	0.006	0.004	0.003	0.003	0.00095
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0003	0.0005	<0.0003	0.0004	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18
			07-Sep-2016	04-Oct-2016	16-Nov-2016	20-Dec-2016	16-Jan-2017	23-Feb-2017	21-Mar-2017	29-Apr-2017	17-May-2017	27-May-2017	01-Jun-2017	07-Jun-2017	13-Jun-2017	19-Jul-2017	10-Aug-2017	14-Sep-2017	05-Oct-2017	03-Nov-2017	05-Dec-2017
Discharge (Flow)	L/s		57.2	80.8	34.5	22.7	18.6	13.1	13.3	10.6	139.4			20.7			141.8	53.4	38.4	27.6	15
Total Suspended Solids	mg/L		<1.0	1.4	1.3	2.1	4.9	2.8	2	1.5	2	1.3	<1.0	2.3	<1.0	2.7	<1.0	<1.0	<1.0	<1.0	<1.0
pH (field)	pH units	**6.5 - 9**	7.4	7.47	7.29	7.14	6.94	6.87	6.97	7.24	7.5	7.38	7.25	7.84	7.26	7.6	7.56	7.36	7.44	7.06	7.26
pH (lab)	pH units	**6.5 - 9**	8.06	8.03	8.1	7.96	8.12	7.98	7.8	8.17	7.55	7.8	7.89	8.23	8.15	8.3	8.32	8.37	8.34	8.23	8.24
Specific Conductance (field)	µS/cm		327.8	308.2	334.7	387.4	390.4	425.9	382	414	67.6	168.3	299.8	322.9	199.9	278.5	283.2	424.7	379.8	355.4	537.6
Specific Conductance (lab)	µS/cm		350	349	382	397	402	414	419	418	70.6	168	294	331	199	278	324	356	364	393	400
Temperature (field)	C		3.8	0.4	0.2	-0.1	-0.1	-0.3	-0.1	0.5	0.8	2.1	2.6	2.3	2.9	4.7	4.9	1.8	1.2	0	0
Dissolved Oxygen (field)	mg/L	**6.5**	9.45	10.87		12.09	12.04	10.83	11.44	11.84	11.6	11.7	8.15	11.5	10.68	11.8	11.07	12.01	10.95	12.36	9.67
Dissolved Oxygen (field)	%		84.6	87.9		99.8	100.3	85.9	92	96.4	95	85.4	59.9	98	79.1	91.6	100.9	100.7	91.3	98.8	76.9
ORP (field)	mV		72.5	108	67.7	85.5	93.3	103.2	110.2	175.9	382.6	248.5	267.0	357	292.3	291.8	105.6	24.7	52.3	50.2	75.7
Turbidity (internal)	NTU		0.52	1.218	1.378	0.330	0.636	3.278	0.326	1.256	0.610	0.76	0.34	0.23	0.88	0.64	1.19	0.23	-0.03	0.30	0.2
Hardness (from total)	mg/L		184	184	202	214	212	225	225	209	43.2	86.1	151	174	107	147	170	192	184	186	232
Hardness (from dissolved)	mg/L		190	182	208	211	214	216	246	222	40.4	86.4	152	171	102	147	172	184	179	200	233
Colour	TCU																				
Total Acidity	mg/L		<0.50	<0.50	0.55	3.08	1.09	4.04	4.66	8.6	<0.50	2.9	3.38	0.51	0.66	<0.50	<1.0	<1.0	<1.0	2.1	<1.0
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, total	mg/L		168	159	186	198	201	200	205	212	35.7	79.1	141	162	93.2	126	149	174	182	190	198
Alkalinity, bicarbonate HCO3	mg/L		205	194	227	241	245	244	251	259	43.5	96.4	172	197	114	152	180	205	216	231	241
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.71	0.95	4.04	2.99	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.59	0.79	3.37	2.49	<0.50	<0.50
Chloride	mg/L	**120**	1	0.91	<0.50	0.61	0.74	0.52	0.56	0.74	1.8	0.7	<0.50	0.62	0.76	<0.50	<0.50	0.7	0.79	0.72	0.8
Fluoride	mg/L	**0.12**	0.059	0.059	0.066	0.07	0.07	0.078	0.084	0.089	0.027	0.042	0.055	0.061	0.052	0.051	0.051	0.065	0.067	0.071	0.074
Sulphate, dissolved	mg/L	*	22.1	25.8	23.5	23.9	22	21.4	22.1	22.9	<5.0	1.1	15.4	17.3	4.33	22.2	28.5	25.5	25.1	24	23.9
Cyanide, total	mg/L	**0.005**	0.0007	<0.00050	0.00071	0.00075	<0.00050	<0.00050	<0.00050	<0.00050	0.00168	0.00091	0.00072	0.00084	0.00085	0.00062	0.0006	<0.00050	<0.00050	<0.00050	<0.00050
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	0.00071	<0.00050	0.00073	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00135	0.00094	0.00072	0.00057	0.00071	0.0015	<0.00050	0.00052	<0.00050	<0.00050	<0.00050
Ammonia (N)	mg/L	*	0.013	0.0085	0.011	0.019	0.017	0.027	0.019	0.03	0.048	0.0073	0.021	0.02	0.06	0.015	0.023	<0.0050	0.011	<0.0050	<0.0050
Nitrite (N)	mg/L	**0.02**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3.0**	0.0601	0.133	0.186	0.221	0.232	0.246	0.251	0.245	<0.020	0.0492	0.0973	0.106	0.0257	0.0168	0.0395	0.117	0.144	0.195	0.218
Nitrite & Nitrate, as N	mg/L		0.0601	0.133	0.186	0.221	0.232	0.246	0.251	0.245	<0.020	0.0492	0.0973	0.106	0.0257	0.0168	0.0395	0.117	0.144	0.195	0.218
Phosphorus,total-colourimetric	mg/L	**0.035**	0.0223	0.0284	0.032	**0.0484**	**0.0597**	**0.0587**	**0.063**	**0.0759**	**0.041**	0.0272	**0.0355**	**0.0431**	0.0235	0.0088	0.0087	0.0213	0.0294	**0.0358**	**0.0488**
Phosphorus, Total Dissolved	mg/L		0.0194	0.0175	0.0302	0.0471	0.0544	0.0585	0.0629	0.0781	0.0349	0.0266	0.0345	0.0418	0.0218	0.008	0.0098	0.0222	0.0282	0.037	0.0487
Dissolved Organic Carbon	mg/L		2.1	1.84	0.77	1.67	0.7	<0.50	<0.50	1.1	24.6	8.19	2.99	2.78	12.7	3.7	2.18	1.52	1.34	0.89	1.68
Aluminum (Al), total	mg/L	*	0.0108	0.0115	0.01	0.0169	0.0297	0.0183	0.0141	0.0158	**0.301**	0.0646	0.0207	0.0237	0.0618	0.0217	0.0124	0.00736	0.0067	0.00621	0.0131
Antimony (Sb), total	mg/L	**0.009**	0.000021	<0.000020	0.000031	0.000034	0.000055	0.000041	0.000038	0.000076	<0.000020	0.000026	0.000031	0.000039	0.000038	<0.000020	0.000032	0.000027	0.000033	0.000031	0.000109
Arsenic (As), total	mg/L	**0.005**	0.00034	0.000291	0.00053	0.000792	0.000732	0.000993	0.00115	0.00113	0.000312	0.000362	0.000597	0.000718	0.000462	0.000244	0.000232	0.000424	0.000531	0.000574	0.000783
Barium (Ba), total	mg/L		0.0411	0.0381	0.0506	0.0515	0.0547	0.0594	0.0627	0.0606	0.0154	0.0231	0.0404	0.045	0.028	0.0339	0.0396	0.044	0.0457	0.0485	0.0553
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.00001	<0.000010	<0.000010	0.000025	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.000010	<0.0000050	<0.000010	<0.000010	<0.000010	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*	0.000024	0.000018	0.000034	0.000048	0.000062	0.000066	0.000059	0.000054	0.0000585	0.000035	0.000033	0.000036	0.000033	0.0000229	0.0000183	0.000025	0.000027	0.000033	0.0000488
Calcium (Ca), total	mg/L		47.2	47.9	53	57	55.1	59.8	59.9	55.5	11.2	22.3	39.4	44.9	28.4	38.1	44.9	49.7	47.2	49.8	60.8
Chromium (Cr), total	mg/L	**0.001**	<0.00010	<0.00010	<0.00010	0.00016	0.0002	0.00018	0.00016	0.00022	0.0004	0.00017	0.00013	0.00011	0.00022	<0.00010	<0.00010	<0.00010	0.0001	<0.00010	0.00021
Cobalt (Co), total	mg/L		0.000013	0.000016	0.000016	0.00003	0.000046	0.000054	0.000054	0.000062	0.000133	0.000053	0.000034	0.000048	0.00004	0.0000188	0.0000076	0.000009	0.000015	0.000014	0.0000255
Copper (Cu), total	mg/L	*	0.000182	0.000172	0.000154	0.000172	0.00033	0.00101	0.000108	0.00021	0.00166	0.0008	0.00042	0.000386	0.00131	0.000345	0.000156	0.000161	0.000168	0.000089	0.000203
Iron (Fe), total	mg/L	**0.3**	0.0108	0.0138	0.0225	0.0436	0.114	0.111	0.136	0.149	0.137	0.04	0.0319	0.0441	0.0476	0.0136	0.0043	0.0052	0.0092	0.0183	0.0433
Lead (Pb), total	mg/L	*	0.000006	0.000009	0.000012	0.000056	0.000488	0.000147	0.000031	0.000025	0.000036	0.000021	<0.000020	0.00003	0.000013	0.0000071	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000333
Lithium (Li), total	mg/L		0.00144	0.001	0.00152	0.00186	0.0021	0.00243	0.00256	0.0024	0.00058	0.00084	0.00162	0.00174	0.0009	0.00094	0.00092	0.00126	0.00121	0.00162	0.00201
Magnesium (Mg), total	mg/L		16	15.5	17	17.5	18.1	18.3	18.4	17	3.7	7.38	12.8	15	8.91	12.6	14.1	16.4	16.2	15	19.5
Manganese (Mn), total	mg/L	*	0.00342	0.00338	0.00629	0.0109	0.0197	0.0198	0.0254	0.0282	0.00598	0.00524	0.00875	0.0113	0.00377	0.00154	0.00165	0.00344	0.00549	0.00631	0.0123
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000107	0.0000036	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	0.000991	0.000879	0.00137	0.00153	0.00158	0.00183	0.00189	0.00178	0.00027	0.000662	0.00114	0.00138	0.000741	0.00066	0.00073	0.00114	0.00132	0.00142	0.00167
Nickel (Ni), total	mg/L	*	0.000373	0.000319	0.000371	0.000349	0.0004	0.00056	0.000463	0.00051	0.00265	0.0014	0.00077	0.000651	0.00179	0.000636	0.000367	0.000363	0.000396	0.000296	0.0004

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-18 07-Sep-2016	KZ-18 04-Oct-2016	KZ-18 16-Nov-2016	KZ-18 20-Dec-2016	KZ-18 16-Jan-2017	KZ-18 23-Feb-2017	KZ-18 21-Mar-2017	KZ-18 29-Apr-2017	KZ-18 17-May-2017	KZ-18 27-May-2017	KZ-18 01-Jun-2017	KZ-18 07-Jun-2017	KZ-18 13-Jun-2017	KZ-18 19-Jul-2017	KZ-18 10-Aug-2017	KZ-18 14-Sep-2017	KZ-18 05-Oct-2017	KZ-18 03-Nov-2017	KZ-18 05-Dec-2017
Phosphorus (P), total	mg/L		0.0116	0.0078	0.0342	0.043	0.062	0.0692	0.0731	0.0809	0.0475	0.0315	0.0365	0.0386	0.0231	0.0119	0.0111	0.0191	0.0292	0.0326	0.0548
Potassium (K), total	mg/L		0.497	0.434	0.528	0.604	0.6	0.66	0.752	0.84	1	0.77	0.77	0.684	0.472	0.342	0.354	0.547	0.53	0.468	0.633
Selenium (Se), total	mg/L	**0.002**	0.000996	0.00115	0.00134	0.00134	0.00131	0.00141	0.00143	0.00113	0.000223	0.000474	0.00087	0.000984	0.000543	0.00055	0.0009	0.00103	0.00111	0.00142	0.0014
Silicon (Si), total	mg/L		2.9	2.94	3.32	3.4	3.37	3.53	3.58	3.34	1.82	2.18	2.78	2.88	2.88	2.87	2.83	2.84	2.66	3.47	3.33
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.000010	<0.0000050	<0.000010	<0.000010	<0.000010	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L		0.781	0.751	0.805	0.886	0.86	0.94	0.933	0.88	0.26	0.41	0.68	0.812	0.56	0.676	0.748	0.85	0.845	0.725	0.996
Strontium (Sr), total	mg/L		0.145	0.159	0.173	0.186	0.179	0.183	0.216	0.182	0.0397	0.0738	0.129	0.149	0.0915	0.128	0.15	0.169	0.16	0.145	0.207
Sulphur (S), total	mg/L		7.2	8.7	7.8	8.1	6.7	7.4	8.2	6.4	<3.0	<3.0	4.9	5.5	3.6	7.3	9.4	8.1	7.7	6.4	8.2
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	<0.0000020	<0.0000020	0.000004	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000025	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00078
Titanium (Ti), total	mg/L		<0.00050	0.0006	<0.00050	<0.00050	<0.0020	<0.0020	0.00055	<0.0020	0.0024	<0.0020	<0.0020	0.00084	0.00086	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00051
Uranium (U), total	mg/L	**0.015**	0.00192	0.00174	0.00254	0.00274	0.00294	0.00316	0.00322	0.00326	0.000335	0.000781	0.00183	0.00231	0.000727	0.00108	0.0013	0.00206	0.00222	0.00254	0.00288
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	*	0.00133	0.00102	0.00115	0.0016	0.0029	0.0023	0.00229	0.002	0.0045	0.0017	0.0016	0.00172	0.00166	0.00093	0.0006	0.00082	0.00091	0.00089	0.00184
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00027	0.00011	<0.00010	<0.00010	0.00019	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*	0.00694	0.00632	0.00344	0.00269	0.00371	0.0252	0.00188	0.00289	**0.26**	**0.0573**	0.0167	0.013	**0.0542**	0.0176	0.012	0.0066	0.00494	0.0038	0.00315
Antimony (Sb), dissolved	mg/L		0.000023	<0.000020	0.000031	0.000029	0.000045	0.000031	0.000058	0.000031	<0.000020	0.00003	0.000037	0.000034	0.00004	0.000025	0.000034	0.000027	0.000028	0.000122	0.000042
Arsenic (As), dissolved	mg/L		0.000352	0.000298	0.000562	0.000698	0.000796	0.00101	0.00103	0.00115	0.000258	0.000364	0.0006	0.000688	0.00045	0.000262	0.000227	0.000373	0.000485	0.000631	0.000781
Barium (Ba), dissolved	mg/L		0.0448	0.0374	0.0502	0.0532	0.0527	0.0547	0.0575	0.0592	0.0138	0.0232	0.0419	0.046	0.0268	0.0346	0.0395	0.0455	0.0457	0.0494	0.0564
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000023	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.000021	0.000016	0.00003	0.000037	0.000043	0.000051	0.000058	0.000055	0.0000419	0.000032	0.000033	0.000033	0.000032	0.00002	0.0000177	0.000026	0.000028	0.000032	0.0000447
Calcium (Ca), dissolved	mg/L		50.1	48.2	53.7	55.8	54.9	56.7	66.6	58.3	10.1	22.3	39.7	43	26.8	38	45.5	50.1	46.7	51.9	60.2
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	0.00014	0.00016	0.00013	0.00014	0.00015	0.00036	0.00013	0.00013	0.00011	0.00022	<0.00010	0.00012	<0.00010	<0.00010	0.00013	0.00016
Cobalt (Co), dissolved	mg/L		0.000006	0.000008	0.000011	0.000017	0.000022	0.000033	0.000048	0.00005	0.000113	0.000039	0.000031	0.000034	0.000036	0.000013	0.0000054	0.000006	0.000012	0.000015	0.0000197
Copper (Cu), dissolved	mg/L		0.000178	0.00009	0.000137	0.000101	0.000164	0.000058	0.000087	0.000152	0.00151	0.00073	0.000386	0.000332	0.00127	0.000348	0.000145	0.000128	0.000132	0.000129	0.000154
Iron (Fe), dissolved	mg/L	**0.35**	0.0047	0.0025	0.0082	0.0213	0.0256	0.0441	0.0668	0.0875	0.0971	0.0273	0.0197	0.0256	0.039	0.0067	0.0042	0.0039	0.0069	0.0143	0.0217
Lead (Pb), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000378	<0.0000050	0.000005	<0.0000050	0.0000122	0.000007	<0.0000050	<0.0000050	0.000006	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000124
Lithium (Li), dissolved	mg/L		0.00138	0.00066	0.00164	0.00177	0.00199	0.00206	0.00239	0.00264	0.00059	0.0009	0.00141	0.00167	0.0009	0.001	0.00091	0.00136	0.00131	0.00173	0.00199
Magnesium (Mg), dissolved	mg/L		15.8	15	17.9	17.5	18.6	18	19.2	18.6	3.69	7.44	12.9	15.5	8.62	12.7	14.1	14.2	15.1	17.1	20
Manganese (Mn), dissolved	mg/L		0.00205	0.00185	0.00483	0.00898	0.0116	0.0167	0.0226	0.0271	0.00392	0.00406	0.00831	0.0116	0.0032	0.00133	0.00154	0.00284	0.00465	0.0069	0.00994
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000116	0.0000038	<0.0000020	<0.0000020	0.0000025	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.000969	0.000857	0.0013	0.00149	0.00157	0.00168	0.00181	0.00184	0.000236	0.000659	0.0012	0.00134	0.000717	0.000665	0.000725	0.00118	0.00131	0.00149	0.00172
Nickel (Ni), dissolved	mg/L		0.000349	0.0003	0.000298	0.000318	0.000355	0.000326	0.000364	0.000496	0.00244	0.00123	0.000784	0.000697	0.00172	0.000612	0.000386	0.000303	0.000345	0.000349	0.00035
Phosphorus (P), dissolved	mg/L		0.012	0.0062	0.0338	0.0459	0.0478	0.057	0.0627	0.0827	0.0367	0.0262	0.0341	0.0399	0.0199	0.0099	0.0106	0.0171	0.0235	0.0388	0.0508
Potassium (K), dissolved	mg/L		0.55	0.423	0.562	0.572	0.619	0.661	0.753	0.891	0.978	0.781	0.798	0.74	0.47	0.35	0.363	0.476	0.475	0.565	0.662
Selenium (Se), dissolved	mg/L		0.000962	0.0011	0.00132	0.00129	0.00137	0.00142	0.0015	0.00133	0.000214	0.000501	0.000883	0.00101	0.000525	0.000593	0.0009	0.00112	0.0011	0.00133	0.00146
Silicon (Si), dissolved	mg/L		3.23	2.81	3.23	3.29	3.2	3.11	3.28	3.65	1.63	2.07	2.77	2.87	2.61	2.88	2.79	3.01	2.71	3.29	3.37
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000095	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		0.776	0.737	0.855	0.834	0.885	0.974	0.981	0.974	0.267	0.411	0.664	0.836	0.528	0.73	0.735	0.724	0.816	0.881	1.03
Strontium (Sr), dissolved	mg/L		0.169	0.15	0.179	0.184	0.177	0.185	0.194	0.196	0.0356	0.0743	0.134	0.151	0.0897	0.132	0.152	0.152	0.146	0.172	0.212
Sulphur (S), dissolved	mg/L		6.2	8.4	8	7.1	7	7	7.5	7.5	<3.0	<3.0	5	5.8	3.3	7.2	9.1	7	7	7.8	8.7
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00167	0.00065	<0.00050	<0.00050	0.00062	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.00193	0.00171	0.00238	0.00275	0.00294	0.00303	0.00312	0.00316	0.000295	0.000751	0.00187	0.00221	0.000712	0.00107	0.00129	0.00202	0.00226	0.00268	0.00294
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.00092	0.00074	0.00092	0.00117	0.00207	0.00271	0.00196	0.00208	0.0035	0.00161	0.00152	0.00136	0.00145	0.0011	0.00095	0.00071	0.00078	0.00108	0.00178
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0003	0.00012	<0.00010	<0.00010	0.00018	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21
			09-Jan-2018	14-Feb-2018	21-Feb-2018	01-Mar-2018	07-Mar-2018	15-Mar-2018	05-Apr-1995	08-May-1995	11-Jun-1995	23-Jul-1995	15-Aug-1995	22-Aug-1995	30-Aug-1995	06-Sep-1995	13-Sep-1995	23-Aug-2002	19-Aug-2004	23-Aug-2006	14-Aug-2008
Discharge (Flow)	L/s		13.8	16.5				18.8													
Total Suspended Solids	mg/L		<1.1	1.1	9.5	2.4	<1.0	1.8	<4	28	<4	<4	<4	<4	<4	<4	<4	7	<4	<4	5
pH (field)	pH units	6.5 - 9	7.47	7.28	6.96	6.96	6.95	6.94												7.9	8.1
pH (lab)	pH units	6.5 - 9	8.1	8.46	8.1	8.37	8.09	8.36	7.3	7.3	7.7	8	7.8	7.9	7.7	8.3	8.1		8.1	8.1	8.3
Specific Conductance (field)	µS/cm		480.9			307	314.6	351.2												341	460
Specific Conductance (lab)	µS/cm		408	422	429	428	424	421	638	186	291	449	451	407	452	392	323	325	473	419	430
Temperature (field)	C		0	-0.2	0.1	0	-0.1	-0.1												7.3	10.0
Dissolved Oxygen (field)	mg/L	6.5	10.61	11.37	10.85	10.79	11.05	9.8												9.8	10.7
Dissolved Oxygen (field)	%		85.1	90.3	74.5	73.8	75.4	66.9												86	111
ORP (field)	mV		59.3	53.3	185	181.8	192.6	190													
Turbidity (internal)	NTU			1.354				1.598													
Hardness (from total)	mg/L		224	213	224	210	226	216	378	107	174	284	255	264	240	229	279	193	276	240	261
Hardness (from dissolved)	mg/L		211	226	217	214	234	228	387	28	156	279	255	252	235	231	284	205	274	240	253
Colour	TCU																				
Total Acidity	mg/L		5.3	<1.0	1.1	<1.0	12.3	<1.0										1.5	2.6	2.1	<0.5
Acidity (pH 4.5)	mg/L		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0										<0.5	<0.5	<0.5	<0.5
Alkalinity, total	mg/L		202	204	210	211	211	209	356	94.6	137	241	225	212	200	179	202	149	233	210	200
Alkalinity, bicarbonate HCO3	mg/L		247	236	256	251	258	249				294	274	258	244	218	246	182	284	256	240
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Alkalinity, carbonate CO3	mg/L		<0.50	6.62	<0.50	3.23	<0.50	3.08				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	4.2
Alkalinity, PP carbonate CO3	mg/L		<0.50	5.52	<0.50	2.69	<0.50	2.57				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<1.0	<0.5	3.5
Chloride	mg/L	120	<0.50	<0.50	<0.50	<0.50	0.63	<0.50													
Fluoride	mg/L	0.12	0.077	0.084	0.084	0.09	0.091	0.087													
Sulphate, dissolved	mg/L	*	23.7	25.1	23.6	23.1	22.3	23.1	38.6	13	26.3	40.2	43.9	41	34.6	35.1	38.5	34	29	34.9	37
Cyanide, total	mg/L	0.005	<0.00050	0.00056	<0.00050	0.00055	0.0007	0.0006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001				
Cyanide, Weak Acid Dissociable	mg/L	0.005	<0.00050	0.00058	<0.00050	0.00075	0.00069	<0.00050	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001				
Ammonia (N)	mg/L	*	<0.0050	0.013	0.007	0.009	0.021	0.014	0.099	0.008	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	<0.005	<0.005	0.015	0.006	<0.005
Nitrite (N)	mg/L	0.02	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrate (N)	mg/L	3.0	0.242	0.239	0.249	0.249	0.244	0.244	0.24	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrite & Nitrate, as N	mg/L		0.242	0.239	0.249	0.249	0.244	0.244	0.24	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Phosphorus,total-colourimetric	mg/L	0.035	0.0507	0.0671	0.0886	0.0674	0.0646	0.0648	0.005	0.094	0.017	0.006	0.007	0.012	0.013	0.008	0.009				
Phosphorus, Total Dissolved	mg/L		0.0495	0.0704	0.084	0.0654	0.0654	0.0621													
Dissolved Organic Carbon	mg/L		2.06	<0.50	<0.50	0.75	<0.50	<0.50													
Aluminum (Al), total	mg/L	*	0.00723	0.0159	0.0205	0.00738	0.00917	0.0227	0.01	0.28	0.056	0.012	<0.006	0.01	0.012	0.02	0.014	0.03	0.008	0.009	0.054
Antimony (Sb), total	mg/L	0.009	0.000131	0.000042	0.000031	0.00004	0.000039	0.000029													
Arsenic (As), total	mg/L	0.005	0.000858	0.00107	0.00107	0.0011	0.00108	0.00119	0.0014	0.01	0.002	0.00072	0.0011	0.0012	0.0011	0.0011	0.0012		0.003	0.003	0.0039
Barium (Ba), total	mg/L		0.057	0.0599	0.0579	0.0595	0.0568	0.051	0.069	0.045	0.043	0.06	0.051	0.017	0.048	0.047	0.051	0.047	0.069	0.057	0.064
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002				<0.001
Boron (B), total	mg/L	1.5	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.083	0.013	0.11	0.021	0.018	0.017	0.045	0.026	0.019	<0.008	<0.008	<0.008	<0.05
Cadmium (Cd), total	mg/L	*	0.0000484	0.0000525	0.0000972	0.000047	0.000048	0.0000487	0.00001	0.00001	<0.00001	<0.00001	<0.00001	0.00003	<0.00001	0.00001	<0.00001		0.00001	0.00001	0.00036
Calcium (Ca), total	mg/L		57.8	53.9	57.9	52	60.2	51.9	92	28	45	71	64	66	60	57	69	47.9	69.4	61.5	67.1
Chromium (Cr), total	mg/L	0.001	0.00019	0.00015	0.00023	0.00018	0.00015	0.00021	0.0003	0.0011	0.0006	0.0012	0.0022	0.0005	0.0005	0.0004	0.0002		<0.001	<0.001	<0.001
Cobalt (Co), total	mg/L		0.0000246	0.0000419	0.0000518	0.0000406	0.000046	0.0000728	<0.0004	0.0008	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004		<0.0005	<0.0005	<0.0005
Copper (Cu), total	mg/L	*	0.000177	0.000121	0.000192	0.000088	0.000072	0.000158	0.0003	0.002	0.0016	0.0005	0.0004	0.0007	0.0006	0.0007	0.0007		0.0004	0.0006	0.0008
Iron (Fe), total	mg/L	0.3	0.037	0.0749	0.102	0.0587	0.0863	0.179	0.51	2.7	0.42	0.36	0.36	0.44	0.51	0.43	0.43	0.561	0.46	0.508	0.916
Lead (Pb), total	mg/L	*	0.000014	0.0000168	0.0000308	0.0000079	0.00001	0.0000257	0.0007	<0.0001	0.032	0.0001	<0.0001	<0.0001	<0.0001	0.0006	<0.0001		<0.0005	<0.0005	0.0003
Lithium (Li), total	mg/L		0.00248	0.00236	0.00181	0.00228	0.00215	0.00183												0.004	<0.005
Magnesium (Mg), total	mg/L		19.5	19.1	19.4	19.5	18.4	21	36	8.9	15	26	23	24	22	21	26	17.8	24.9	21	22.6
Manganese (Mn), total	mg/L	*	0.0132	0.0167	0.0188	0.0181	0.02	0.0249	0.16	0.3	0.036	0.035	0.026	0.035	0.056	0.051	0.036	0.074	0.046	0.052	0.109
Mercury (Hg), total	mg/L	0.000026	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001			<0.00001	<0.00002
Molybdenum (Mo), total	mg/L	0.073	0.00166	0.0018	0.00183	0.00201	0.00175	0.00168	<0.0004	<0.0004	<0.0004	<0.0004	0.0007	<0.0004	<0.0004	0.0007	0.0008				0.002
Nickel (Ni), total	mg/L	*	0.000334	0.000347	0.000455	0.00038	0.000357	0.000498	0.002	0.006	0.003	0.004	0.002	0.002	0.003	0.003	0.002				0.003

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-18	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21
			09-Jan-2018	14-Feb-2018	21-Feb-2018	01-Mar-2018	07-Mar-2018	15-Mar-2018	05-Apr-1995	08-May-1995	11-Jun-1995	23-Jul-1995	15-Aug-1995	22-Aug-1995	30-Aug-1995	06-Sep-1995	13-Sep-1995	23-Aug-2002	19-Aug-2004	23-Aug-2006	14-Aug-2008
Phosphorus (P), total	mg/L		0.058	0.0685	0.0754	0.0686	0.0672	0.084	0.015	0.10	0.025	0.014	0.016	0.015	0.017	0.018	0.015				
Potassium (K), total	mg/L		0.656	0.71	0.753	0.704	0.685	0.772	2.6	1.8	1.2	1.7	1.4	1.4	1.2	1.2	1.5	<1	2	2	1.56
Selenium (Se), total	mg/L	**0.002**	0.00146	0.0014	0.0015	0.0014	0.00168	0.00164	0.00022	0.0001	<0.00005	0.00043	0.0001	<0.00005	0.00009	0.00012	0.0002		<0.001	<0.001	0.0005
Silicon (Si), total	mg/L		3.4	3.57	3.02	3.33	3.37	3.73	6.7	2.9	3.5	4.3	3.7	3.9	3.9	4.4	4.2			4.14	4
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.00001	<0.00001	0.00008	<0.00001	<0.00001	<0.00001	<0.00001	0.00002	<0.00001				
Sodium (Na), total	mg/L		1.01	0.939	1.11	1.02	0.954	1.06	3.2	0.7	1.3	1.9	1.6	1.7	1.5	1.4	1.6	1.19	1.93	1.44	1.53
Strontium (Sr), total	mg/L		0.183	0.184	0.183	0.205	0.187	0.195	0.25	0.073	0.12	0.2	0.17	0.18	0.16	0.16	0.18	0.14	0.207	0.165	0.192
Sulphur (S), total	mg/L		7.6	7.2	7.4	7.6	7.9	8.2	12	4.2	8.2	13	13	15	14	13	14	11.6	10.7	11.6	13
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020													
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.008	<0.002	0.005	0.007	0.005	0.004	0.007	0.003	0.004				<0.005
Titanium (Ti), total	mg/L		<0.00050	0.0009	0.00091	<0.00050	<0.00050	0.00135	0.0028	0.011	0.003	0.002	0.002	0.0018	0.002	0.0024	0.002	<0.003	<0.003	<0.003	0.005
Uranium (U), total	mg/L	**0.015**	0.00317	0.00323	0.0032	0.00318	0.00346	0.0028											0.00235	0.0024	0.0029
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.0003	0.0007	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003				
Zinc (Zn), total	mg/L	*	0.00165	0.0018	0.00262	0.0017	0.00181	0.00247	0.003	**0.046**	0.007	0.002	0.002	0.002	0.001	0.004	0.001	<0.005	<0.005	<0.005	0.006
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0006	0.0006	0.0007	0.0004	0.0004	0.0006	0.0005	0.0007	0.0014				<0.0005
Aluminum (Al), dissolved	mg/L	*	0.00289	0.00237	0.00238	0.00247	0.00218	0.00342	<0.006	<0.006	0.019	<0.0063	<0.006	0.007	<0.006	0.012	0.014	<0.02	<0.001	0.005	0.003
Antimony (Sb), dissolved	mg/L		0.000041	0.000037	0.000042	0.000041	0.000044	0.000048													
Arsenic (As), dissolved	mg/L		0.000887	0.000964	0.000985	0.00108	0.00109	0.00102	0.00021	0.0002	0.0012	0.00018	<0.00005	0.0005	0.00042	0.00055	0.00052		0.002	0.002	0.002
Barium (Ba), dissolved	mg/L		0.0552	0.0614	0.0567	0.0615	0.0615	0.0566	0.072	0.0039	0.041	0.057	0.049	0.049	0.044	0.046	0.054	0.047	0.062	0.057	0.06
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001				<0.0001
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002				<0.001
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.015		0.031	0.019	0.015	0.019	0.014	0.015	0.02	<0.008	<0.008	<0.008	<0.05
Cadmium (Cd), dissolved	mg/L	*	0.0000442	0.0000484	0.0000484	0.0000504	0.0000571	0.0000557	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001	0.00002	0.00003
Calcium (Ca), dissolved	mg/L		53.9	57.7	55.5	53.8	59.5	58.6	94	4.8	41	69	64	63	58	58	71	50.9	68.8	61.4	65.6
Chromium (Cr), dissolved	mg/L		0.00017	0.00015	0.00015	0.00015	0.00018	0.00016	0.0003	<0.0002	0.0004	0.0002	0.0003	0.0003	0.0003	0.0006	0.0003		<0.001	<0.001	<0.001
Cobalt (Co), dissolved	mg/L		0.0000253	0.0000336	0.0000353	0.00004	0.0000393	0.0000436	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004		<0.0005	<0.0005	<0.0005
Copper (Cu), dissolved	mg/L		0.000144	0.000103	0.000122	<0.000050	0.000112	0.000444	0.0004	0.0007	0.0017	0.0006	0.0004	0.0008	0.0005	0.0006	0.0006		0.0003	0.0006	0.0004
Iron (Fe), dissolved	mg/L	**0.35**	0.0247	0.0433	0.0429	0.0452	0.0632	0.0643	0.009	<0.005	0.22	0.019	0.029	0.034	0.1	0.15	0.085	0.232	0.015	0.304	0.095
Lead (Pb), dissolved	mg/L		0.0000147	<0.0000050	0.0000075	0.0000168	0.0000146	0.0000178	0.0007	<0.0001	0.002	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0005	<0.0005	<0.0002
Lithium (Li), dissolved	mg/L		0.00221	0.00226	0.00186	0.00229	0.00256	0.00213												0.004	<0.005
Magnesium (Mg), dissolved	mg/L		18.6	19.9	19	19.3	20.8	19.9	37	3.9	13	26	23	23	22	21	26	19	24.9	21.3	21.7
Manganese (Mn), dissolved	mg/L		0.0118	0.0158	0.0152	0.0177	0.0199	0.0197	0.16	<0.0002	0.015	0.008	0.017	0.023	0.037	0.035	0.03	0.034	0.032	0.048	0.034
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001		<0.00001			<0.00001	<0.00002
Molybdenum (Mo), dissolved	mg/L		0.00164	0.00187	0.00184	0.00184	0.002	0.00182	<0.0004	0.0031	<0.0004	0.0005	<0.0004	0.0004	0.0006	0.0008	0.0013				0.002
Nickel (Ni), dissolved	mg/L		0.000317	0.000335	0.000315	0.000369	0.000389	0.000332	0.002	<0.001	0.003	0.002	0.002	0.002	0.002	0.003	0.002				0.002
Phosphorus (P), dissolved	mg/L		0.0499	0.0631	0.0652	0.0636	0.0693	0.0656	0.011	0.009	0.018	0.017	0.011	0.012	0.013	0.02	0.016				
Potassium (K), dissolved	mg/L		0.666	0.766	0.72	0.73	0.776	0.763	2.7	1.6	1.3	1.6	1.4	1.4	1.2	1.2	1.6	<1	2	2	1.48
Selenium (Se), dissolved	mg/L		0.00134	0.00144	0.00138	0.00142	0.00159	0.00147	0.00025	0.0001	<0.00005	0.00038	0.0001	0.00008	0.00009	0.00011	0.00019		<0.001	<0.001	0.0005
Silicon (Si), dissolved	mg/L		3.12	3.41	3.09	3.24	3.62	3.37	6.9	1.9	3.3	4.3	3.7	3.7	3.7	4.4	4.5			4.18	4.54
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001				
Sodium (Na), dissolved	mg/L		1.01	0.97	1.03	1.01	1.09	1.15	3.3	0.7	1.1	1.9	1.6	1.6	1.5	1.4	1.7	1.18	1.96	1.52	1.44
Strontium (Sr), dissolved	mg/L		0.176	0.19	0.18	0.191	0.197	0.204	0.26	0.03	0.11	0.2	0.17	0.18	0.16	0.16	0.19	0.15	0.201	0.165	0.186
Sulphur (S), dissolved	mg/L		7.3	7.4	7.3	7.3	8.7	7.9	12	4.2	6.6	13	13	15	13	13	14	12.4	10.4	12.3	15
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020													
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.007	<0.002	0.005	0.006	0.005	0.004	0.004	0.005	0.004				<0.005
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0023	<0.0003	0.0014	0.0018	0.002	0.0017	0.0018	0.002	0.002	<0.003	<0.003	<0.003	<0.005
Uranium (U), dissolved	mg/L		0.00323	0.00339	0.00328	0.00347	0.00326	0.00302											0.00123	0.0025	0.0029
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003				
Zinc (Zn), dissolved	mg/L		0.0015	0.00188	0.00169	0.00172	0.00225	0.00274		<0.001	0.006	0.003	0.003	0.001	0.001	0.003	<0.001	<0.005	<0.005	<0.005	<0.005
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0003	<0.0003	<0.0003	0.0003	0.0007	0.0006	0.0005	0.0006	0.0016				<0.0005

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21
			19-Aug-2010	16-Aug-2012	21-Aug-2014	29-Apr-2015	11-May-2015	23-Jun-2015	28-Jul-2015	23-Aug-2015	09-Sep-2015	15-Oct-2015	19-Nov-2015	01-Dec-2015	19-Jan-2016	09-Feb-2016	20-Mar-2016	19-Apr-2016	04-May-2016	15-May-2016	13-Jun-2016
Discharge (Flow)	L/s					153.6	1916	948	809.8	1541.5	1149.6	855.8	377.6	224	171.4	160.6	116	357.4	433.2		269.5
Total Suspended Solids	mg/L		1	<4.0	<4.0	3.8	21.3	1.7	2	2.4	1.3	3.3	<1.0	2.7	<1.0	1.2	1.2	3.2	2.8	2.7	1.3
pH (field)	pH units	**6.5 - 9**	7.6	7.8	7.69	7.39	7.76	7.9	8.01	7.82	7.93	7.74	8.21	7.4	6.99	7.13	6.98	7.45	7.42	7.94	8.04
pH (lab)	pH units	**6.5 - 9**	8.34	8.22	8.28	8.38	7.78	8.19	8.21	8.04	8.25	8.29	8.43	8.05	8.02	8.01	7.85	8.14	8.09	8.39	8.39
Specific Conductance (field)	µS/cm		526	402	490	500.9	141.4	360.4	411.1	345.6	378.1	470.7	538.1	540.2	563.7	580.8	609.6	364	354.1	400.3	354.9
Specific Conductance (lab)	µS/cm		552	415	471	572	173	369	407	368	405	462	534	546	620	624	639	437	356	394	445
Temperature (field)	C		10.8	10.0	9.7	-0.3	-0.3	10.2	11.8	6.2	4.5	0	0	0	0	0	0.5	0.5	0.8	10.6	12
Dissolved Oxygen (field)	mg/L	**6.5**		10.9		12.8	12.2	10.31	9.53	10.5	11.4	13.2	12.4	10.8	11.1	12.9	10.35	12.84	11.85	10.5	9.48
Dissolved Oxygen (field)	%			94.5		101	94	91.7	88.2	97	101	103	97	87	88	101	82.4	98.3	95	108	101.6
ORP (field)	mV					176.5	158.5	51.7	106.1	344.9	98.8	287.2	138.7	113.8	255	201.2	107.4	67	51.4	72.4	146
Turbidity (internal)	NTU							1.4	1.95	2.33	1.82	4.23	1.18	3		1.626	2.756	3.206	3.10		2.006
Hardness (from total)	mg/L		293	221	258	306	92.9	212	231	201	223	240	286	303	359	338	340	205	193	216	236
Hardness (from dissolved)	mg/L		308	226	239	325	95.3	191	237	208	222	253	295	293	363	331	341	267	189	216	238
Colour	TCU					75.3	182	60.5	57.7	82.6	52.9	23.4	14.2	29	17.1	28.6	<5.0	31.4	46.4	19.6	16.6
Total Acidity	mg/L		4.8	0.53	0.73	2.9	0.66	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	4.47	4.41	8.85	0.53	2	<0.50	<0.50
Acidity (pH 4.5)	mg/L		<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		260	185	213	267	75.9	160	183	160	177	207	243	254	315	312	320	199	164	190	213
Alkalinity, bicarbonate HCO3	mg/L		310	225	260	317	92.6	195	223	196	216	253	283	310	384	380	391	243	200	225	251
Alkalinity, hydroxide OH	mg/L		<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		3.3	<0.50	<0.50	4.38	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	6.62	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	3.55	4.61
Alkalinity, PP carbonate CO3	mg/L		2.7	<0.50	<0.50	3.65	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	5.52	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.96	3.84
Chloride	mg/L	**120**				1.2	1.3	<0.50	0.76	<0.50	0.77	0.7	0.67	0.72	0.6	1.2	0.77	0.63	1.2	0.78	0.87
Fluoride	mg/L	**0.12**				**0.2**	0.065	**0.17**	**0.17**	**0.14**	**0.15**	**0.15**	**0.19**	**0.16**	**0.2**	**0.2**	**0.21**	**0.18**	**0.17**	**0.19**	**0.18**
Sulphate, dissolved	mg/L	*	50	37	33.6	46.6	9.95	35.5	37.7	35.7	38	41.9	42.8	45.5	39.4	40.9	40.2	38.5	27.2	38.9	35.5
Cyanide, total	mg/L	**0.005**				0.00059	0.00117	0.00052	0.00105	<0.00050	0.00098	<0.00050	<0.00050	<0.00050	0.00065	<0.00050	0.00059	0.00066	0.00075	0.00062	0.00069
Cyanide, Weak Acid Dissociable	mg/L	**0.005**				0.00057	0.00121	0.00056	0.00126	<0.00050	0.0009	<0.00050	<0.00050	<0.00050	0.00061	<0.00050	0.0008	<0.00050	0.0007	<0.00050	0.00063
Ammonia (N)	mg/L	*	0.14	0.008	0.034	0.0181	0.0074	<0.0050	0.0053	0.006	0.0087	0.0191	0.0585	0.0653	0.0955	0.0712	0.0592	0.0172	0.0147	<0.0050	0.011
Nitrite (N)	mg/L	**0.02**	<0.005	<0.0050	<0.0050	0.0025		<0.0020	<0.0020	0.0025	<0.0020	<0.0020	0.0026	0.0025	<0.0020	<0.0020	<0.0020	0.0055	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3.0**	<0.02	<0.020	<0.020	0.0599	<0.020	<0.0020	0.0025	<0.0020	<0.0020	0.0253	0.0855	0.105	0.185	0.189	0.23	0.0615	0.0496	<0.0020	0.0073
Nitrite & Nitrate, as N	mg/L		<0.02	<0.020	<0.020	0.0624	<0.020	<0.0020	0.0025	0.0036	<0.0020	0.0253	0.0881	0.108	0.185	0.189	0.23	0.067	0.0496	<0.0020	0.0073
Phosphorus,total-colourimetric	mg/L	**0.035**				0.0254	0.0318	0.0126	0.0116	0.0128	0.0085	0.0133	0.0064	0.01	0.0066	0.0065	0.0058	0.0245	0.0203	0.0193	0.0151
Phosphorus, Total Dissolved	mg/L					0.0262	0.0325	0.0104	0.0124	0.0115	0.0086	0.0049	0.0043	0.0095	0.007	0.007	0.0063	0.0254	0.021	0.016	0.005
Dissolved Organic Carbon	mg/L					4.42	11.2	7.12	7.2	10	6.9	4.74	2.9	3.26	2.38	1.43	1.86	6.21	5.75	5.45	3.86
Aluminum (Al), total	mg/L	*	0.006	0.0127	0.00747	0.0082	**0.142**	0.0264	0.0415	0.027	0.0124	0.0149	0.00329	0.00082	0.0072	0.0136	0.00784	0.0086	0.0103	0.0083	0.004
Antimony (Sb), total	mg/L	**0.009**		0.000133	0.000081	<0.000050	0.000068	0.000174	0.000152	0.000173	0.000147	0.000079	0.000057	0.000049	0.000028	0.000035	0.00003	0.000071	0.000098	0.000105	0.000086
Arsenic (As), total	mg/L	**0.005**	0.0017	0.00307	0.00297	0.00305	**0.00961**	0.00236	0.00291	0.00215	0.00219	0.0028	0.00086	0.00114	0.00372	**0.00751**	0.00434	0.00339	0.00373	0.00298	0.00212
Barium (Ba), total	mg/L		0.07	0.06	0.0623	0.0681	0.0463	0.0551	0.0612	0.0482	0.0552	0.0603	0.0697	0.0706	0.09	0.0929	0.0888	0.0544	0.0504	0.0532	0.062
Beryllium (Be), total	mg/L		<0.0001	<0.000010	<0.000010	<0.000010	0.000022	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.00001	<0.000010	<0.000010
Bismuth (Bi), total	mg/L		<0.001	<0.0000050	<0.0000050	<0.000020	<0.000020	<0.000020	<0.0000050	<0.000020	<0.0000050	<0.000020	<0.0000050	<0.0000050	0.000005	<0.0000050	<0.0000050	<0.000020	<0.000020	<0.000020	<0.000020
Boron (B), total	mg/L	**1.5**	<0.05	<0.05	<0.02	<0.05	<0.050	<0.050	<0.010	<0.050	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd), total	mg/L	*	<0.00001	0.00002	0.00001	0.0000136	0.0000575	0.0000149	0.0000168	0.000025	0.000018	0.000013	0.000011	0.000007	0.00002	0.000023	0.000014	0.000021	0.000019	0.000011	0.000005
Calcium (Ca), total	mg/L		70.2	55.9	63.2	73.9	23.8	54.3	56.4	48.6	54.4	58.7	70.4	74.2	88.7	84.3	84.4	50.7	48.1	54.6	59.6
Chromium (Cr), total	mg/L	**0.001**	<0.001	0.00012	0.00012	<0.00050	0.00058	<0.00050	0.00018	<0.00050	0.00012	<0.00050	<0.00010	<0.00010	0.0001	0.00013	<0.00010	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co), total	mg/L		<0.0005	0.000097	0.000088	0.000203	0.000612	0.000093	0.000109	0.000118	0.000106	0.000116	0.000071	0.00006	0.000318	0.000316	0.000276	0.000185	0.000149	0.000074	0.000052
Copper (Cu), total	mg/L	*	0.0003	0.000559	0.000414	0.00054	0.0015	0.00108	0.000678	0.0012	0.000688	0.00077	0.000258	0.000217	0.000272	0.000299	0.000204	0.00046	0.00079	0.0007	0.00073
Iron (Fe), total	mg/L	**0.3**	0.29	**0.484**	**0.526**	**1.25**	**3.71**	**0.443**	**0.488**	**0.386**	**0.338**	**0.581**	0.125	0.0965	**1.32**	**2.07**	**1.47**	**0.83**	**0.811**	**0.62**	**0.363**
Lead (Pb), total	mg/L	*	<0.0002	0.000025	0.000026	<0.000050	0.000225	<0.000050	0.0000412	<0.000050	0.000018	<0.000050	0.000005	<0.0000050	0.000049	0.000069	0.000024	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li), total	mg/L		0.007	0.00395	0.00483	0.00729	0.00166	0.00262	0.00385	0.00325	0.00338	0.00444	0.00714	0.00686	0.00983	0.00924	0.0107	0.00445	0.00415	0.00471	0.00573
Magnesium (Mg), total	mg/L		28.6	19.8	24.2	29.6	8.13	18.6	22	19.4	21.1	22.7	26.7	28.7	33.5	30.9	31.4	19.1	17.7	19.4	21.3
Manganese (Mn), total	mg/L	*	0.03	0.0553	0.0385	0.19	0.378	0.0418	0.051	0.0562	0.0572	0.0906	0.0757	0.0804	0.232	0.261	0.185	0.11	0.11	0.0333	0.0224
Mercury (Hg), total	mg/L	**0.000026**	<0.00002		0.0000039	<0.0000020	0.0000023	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	0.002	0.0017	0.00172	0.00148	0.000888	0.00184	0.00177	0.0014	0.00144	0.00156	0.00147	0.00161	0.00156	0.00156	0.00166	0.00158	0.00193	0.00207	0.00182
Nickel (Ni), total	mg/L	*	0.002	0.00311	0.00212	0.00232	0.00381	0.00312	0.00318	0.00338	0.00294	0.00204	0.0017	0.0018	0.00259	0.00264	0.00256	0.00235	0.00276	0.00239	0.00191

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21
			19-Aug-2010	16-Aug-2012	21-Aug-2014	29-Apr-2015	11-May-2015	23-Jun-2015	28-Jul-2015	23-Aug-2015	09-Sep-2015	15-Oct-2015	19-Nov-2015	01-Dec-2015	19-Jan-2016	09-Feb-2016	20-Mar-2016	19-Apr-2016	04-May-2016	15-May-2016	13-Jun-2016
Phosphorus (P), total	mg/L					0.033	0.102	0.026	0.0389	0.02	0.0103	0.018	0.0084	0.0057	0.0228	0.0497	0.0291	0.028	0.017	0.017	0.014
Potassium (K), total	mg/L		1.68	1.35	1.68	2.49	2.05	1.18	1.33	0.86	1.19	1.55	2.04	2.06	2.62	2.44	2.34	1.81	1.52	1.62	1.55
Selenium (Se), total	mg/L	**0.002**	0.0003	0.000378	0.000368	0.000243	0.000215	0.000566	0.000549	0.000489	0.000747	0.000683	0.000744	0.0008	0.000637	0.000544	0.000512	0.000307	0.000343	0.000344	0.000327
Silicon (Si), total	mg/L		4.32	4.23	3.87	6.07	2.94	3.05	4.2	4.07	4.35	4.33	5.85	6.48	7.29	6.89	6.71	4.63	3.92	3.49	3.8
Silver (Ag), total	mg/L	**0.00025**		<0.0000050	<0.0000050	0.0000078	0.0000089	0.000018	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010
Sodium (Na), total	mg/L		1.82	1.32	1.71	2.09	0.77	1.12	1.46	1.17	1.23	1.51	1.94	1.98	2.62	2.5	2.59	1.3	1.19	1.53	1.52
Strontium (Sr), total	mg/L		0.231	0.17	0.192	0.226	0.0729	0.156	0.182	0.153	0.164	0.183	0.233	0.251	0.303	0.271	0.28	0.164	0.153	0.178	0.206
Sulphur (S), total	mg/L		18	15	16	15	<15	<15	14.4	<15	13.7	<15	15.2	16.5	14.4	14	13.3	<15	<15	<15	<15
Thallium (Tl), total	mg/L	**0.0008**		<0.0000020	<0.0000020	0.000002	0.0000024	0.0000035	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000003	<0.0000020
Tin (Sn), total	mg/L		<0.005	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		<0.005	0.0007	<0.00050	<0.0050	0.006	<0.0050	0.00113	<0.0050	0.00053	<0.0050	<0.00050	<0.00050	0.00056	0.00072	0.00057	<0.0050	<0.0050	<0.0050	<0.0050
Uranium (U), total	mg/L	**0.015**	0.0029	0.00236	0.00254	0.00296	0.000758	0.00268	0.00283	0.00208	0.00262	0.00323	0.00315	0.00336	0.00333	0.00307	0.00316	0.00237	0.00214	0.00251	0.00237
Vanadium (V), total	mg/L			<0.00020	<0.00020	<0.00050	0.00062	<0.00050	0.00025	<0.00050	0.00036	0.00095	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00050
Zinc (Zn), total	mg/L	*	<0.005	0.0022	0.00229	0.0018	0.0059	0.0021	0.00282	0.0037	0.0028	0.0019	0.00121	0.00041	0.00225	0.00246	0.00137	0.0019	0.002	0.0012	<0.0010
Zirconium (Zr), total	mg/L		<0.0005	<0.00010	0.00011	0.00033	0.00045	0.00012	0.00013	0.00015	0.00014	0.00015	0.00014	0.00018	0.00035	0.00039	0.00036	0.00014	0.00019	0.00012	0.00012
Aluminum (Al), dissolved	mg/L	*	0.009	0.00819	0.00145	0.00106	0.00619	0.00591	0.00537	0.00868	0.0105	0.00179	0.00144	0.00067	0.00121	0.00071	0.002	0.00234	0.00256	0.0013	0.00096
Antimony (Sb), dissolved	mg/L			0.000123	0.000064	0.000045	0.000048	0.000174	0.000139	0.000179	0.000132	0.000084	0.000058	0.000043	0.000026	0.000029	0.000029	0.00009	0.000089	0.000097	0.000081
Arsenic (As), dissolved	mg/L		0.0014	0.00212	0.00154	0.00148	0.00099	0.00172	0.00191	0.00173	0.0017	0.00141	0.000595	0.00105	0.000606	0.000694	0.000374	0.00183	0.00172	0.00148	0.00131
Barium (Ba), dissolved	mg/L		0.074	0.0599	0.0616	0.0724	0.0302	0.0564	0.0617	0.0497	0.0534	0.0608	0.0711	0.0693	0.0897	0.0849	0.0842	0.0644	0.0482	0.0507	0.0564
Beryllium (Be), dissolved	mg/L		<0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.001	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000007	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.05	<0.05	<0.02	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	<0.00001	0.000012	0.000006	0.000009	0.000013	0.0000082	0.0000085	0.000012	0.000011	0.000007	0.000012	0.000007	0.000014	0.00001	0.000009	0.000016	0.00001	0.000005	<0.0000050
Calcium (Ca), dissolved	mg/L		75.8	58.6	57.4	78.3	24.4	48.4	58.9	51.2	53.1	62.8	71.2	72.5	90.1	82.1	84.6	65.5	47.4	54.4	60.4
Chromium (Cr), dissolved	mg/L		<0.001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00012	0.00012	0.00016	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		<0.0005	0.000072	0.000057	0.0000592	0.0000575	0.0000546	0.0000539	0.000069	0.000081	0.00008	0.000061	0.000052	0.000131	0.000143	0.000189	0.000158	0.000078	0.000037	0.0000289
Copper (Cu), dissolved	mg/L		0.0004	0.000479	0.000277	0.000262	0.000693	0.000607	0.000564	0.000896	0.000627	0.000265	0.000326	0.00022	0.000191	0.000194	0.000163	0.000391	0.000431	0.00042	0.000415
Iron (Fe), dissolved	mg/L	**0.35**	0.068	0.233	0.0952	0.0981	0.252	0.182	0.157	0.167	0.164	0.0784	0.0278	0.0802	0.0091	0.084	0.0068	0.316	0.282	0.15	0.0747
Lead (Pb), dissolved	mg/L		<0.0002	0.000007	<0.0000050	<0.0000050	0.0000068	0.0000054	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000018	<0.0000050	0.000005	<0.0000050	<0.0000050	0.000007	0.000006	<0.0000050	<0.0000050
Lithium (Li), dissolved	mg/L		0.007	0.00405	0.00491	0.00787	0.00182	0.00355	0.00392	0.00264	0.00335	0.00447	0.00695	0.0071	0.00955	0.00941	0.0109	0.0056	0.00399	0.0043	0.00547
Magnesium (Mg), dissolved	mg/L		28.8	19.4	23.1	31.4	8.36	17.1	21.9	19.4	21.8	23.2	28.6	27.2	33.6	30.5	31.4	25.1	17.2	19.5	21.1
Manganese (Mn), dissolved	mg/L		0.03	0.0422	0.0242	0.139	0.0303	0.0177	0.0166	0.0232	0.0423	0.0658	0.0737	0.074	0.164	0.153	0.143	0.113	0.0671	0.0083	0.0031
Mercury (Hg), dissolved	mg/L		<0.00002		0.0000023	<0.0000020	0.0000021	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.002	0.00167	0.00177	0.00157	0.000686	0.00187	0.00171	0.00138	0.00144	0.00167	0.00149	0.00156	0.00171	0.0017	0.00167	0.00176	0.0018	0.00202	0.00176
Nickel (Ni), dissolved	mg/L		0.002	0.00284	0.00192	0.00284	0.00249	0.00267	0.00302	0.00327	0.00296	0.00185	0.00183	0.00172	0.00229	0.00213	0.00233	0.00278	0.0025	0.00202	0.00179
Phosphorus (P), dissolved	mg/L					0.005	0.0142	0.01	0.0057	0.0069	0.0057	0.0047	0.0035	0.0044	<0.0020	0.0095	0.0033	0.0169	0.0095	0.0059	0.0029
Potassium (K), dissolved	mg/L		1.79	1.34	1.55	2.69	2.16	1.22	1.36	1	1.27	1.65	2.19	1.91	2.67	2.39	2.34	2.5	1.53	1.63	1.57
Selenium (Se), dissolved	mg/L		0.0003	0.000569	0.000338	0.000311	0.000155	0.000575	0.000525	0.000557	0.000624	0.000716	0.0007	0.000783	0.000555	0.000567	0.000493	0.000361	0.000335	0.00034	0.000347
Silicon (Si), dissolved	mg/L		4.56	4.33	3.89	6.6	2.58	3.87	4.17	4.59	4.68	4.44	6.17	6.15	7.11	7.23	6.76	5.38	3.71	3.21	3.62
Silver (Ag), dissolved	mg/L			<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		2.04	1.29	1.62	2.5	0.633	1.09	1.42	1.22	1.27	1.49	2.02	1.85	2.7	2.41	2.43	1.86	1.17	1.52	1.6
Strontium (Sr), dissolved	mg/L		0.247	0.173	0.189	0.265	0.0759	0.155	0.186	0.152	0.177	0.194	0.248	0.225	0.299	0.276	0.278	0.22	0.149	0.17	0.18
Sulphur (S), dissolved	mg/L		17	15	<15	16.7	4	11.9	13.3	11.9	13.1	14.2	15.7	15.2	14.3	14.5	13.3	14.3	9.3	11	11.9
Thallium (Tl), dissolved	mg/L			<0.0000020	<0.0000020	0.0000028	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L		<0.005	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.005	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.0034	0.00237	0.00262	0.00314	0.000635	0.00275	0.00299	0.00217	0.00272	0.0033	0.0033	0.00318	0.00338	0.00329	0.00306	0.00281	0.00216	0.00244	0.00253
Vanadium (V), dissolved	mg/L			<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00037	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		<0.005	0.00134	0.00048	0.00079	0.00213	0.0009	0.00094	0.00195	0.00208	0.0005	0.00148	0.00048	0.00114	0.0008	0.00084	0.00134	0.00087	0.00029	0.00033
Zirconium (Zr), dissolved	mg/L		<0.0005	0.00012	<0.00010	0.00014	<0.00010	<0.00010	<0.00010	0.00013	0.00011	<0.00010	0.00013	0.00016	0.00018	0.00026	0.00018	0.00013	<0.00010	<0.00010	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21
			25-Jul-2016	26-Aug-2016	06-Sep-2016	30-Sep-2016	15-Nov-2016	19-Dec-2016	16-Jan-2017	22-Feb-2017	20-Mar-2017	28-Apr-2017	16-May-2017	26-May-2017	31-May-2017	06-Jun-2017	14-Jun-2017	19-Jul-2017	09-Aug-2017	13-Sep-2017	04-Oct-2017
Discharge (Flow)	L/s		1040.2	1872.1	1268.2	1039.4	399.1	223.2	211	125		156.3	1615.5			867.9			1618.2	665.1	639.2
Total Suspended Solids	mg/L		7.1	81.5	2.5	1.9	1.8	2.3	9.4	6.2	3.6	9.8	10.5	3.5	1.9	1.6	6.9	21.7	3.6	1.4	3.7
pH (field)	pH units	**6.5 - 9**	7.57	7.87	7.69	7.66	7.54	7.31	6.96	6.84	7.35	7.28	7.86	7.85	7.78	7.75	7.74	7.72	7.63	7.9	7.9
pH (lab)	pH units	**6.5 - 9**	8.19	8.18	8.18	8.22	8.1	7.64	7.92	7.88	7.72	8.34	8.06	8.04	8.01	8.25	8.25	8.26	8.34	8.43	8.42
Specific Conductance (field)	µS/cm		378.2	455.3	386.4	388.3	430.4	441.6	581.2	654.7	619.7	607.9	198.8	255.1	247.7	293.2	256.2	276.8	332.7	540	488.4
Specific Conductance (lab)	µS/cm		375	389	418	439	537	609	618	644	727	610	214	255	271	300	256	277	382	462	483
Temperature (field)	C		9.8	8.3	7.4	1.1	-0.4	0	-0.1	-0.2	-0.1	-0.1	2.1	5.7	9.1	8	4.9	6.7	10.7	5	3.8
Dissolved Oxygen (field)	mg/L	**6.5**	10.13	9.58	10.89	12.65	9.88	9.22	11.65	10.07	10.59	9.44	12.4	10.27	8.59	11.3	10.44	11.47	9.96	11.28	11.79
Dissolved Oxygen (field)	%		101.8	93.1	104.6	100.5	75.2	74.3	94.6	77.7	83.5	73.4	103	81.9	74.5	109	81.7	93.9	102	100.4	102.5
ORP (field)	mV		104.5	288	104	84.5	154.4	142.2	122.1	130.7	134.4	216.9	391	267.4	310.5	364.6	294.9	344.7	128.7	85.4	72.8
Turbidity (internal)	NTU		5.56	11.664	1.49	1.72	4.448	3.938	4.69	7.084	4.374	19.92	4.482	3.17	2.14	1.32	3.16	6.69	1.97	3.27	5.75
Hardness (from total)	mg/L		225	209	224	228	279	336	336	344	376	307	115	132	140	158	134	146	203	253	255
Hardness (from dissolved)	mg/L		223	219	233	227	279	328	333	356	379	323	104	130	138	152	128	148	206	249	249
Colour	TCU			42.4																	
Total Acidity	mg/L		<0.50	<0.50	<0.50	<0.50	2.22	14	11.5	15.1	17.1	14.6	<0.50	0.92	0.93	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0
Alkalinity, total	mg/L		168	169	188	195	258	301	305	318	335	279	97.4	114	122	134	113	123	174	217	227
Alkalinity, bicarbonate HCO3	mg/L		205	207	229	237	315	367	372	387	409	333	119	139	148	163	138	150	206	254	266
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	3.74	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.58	5.7	5.74
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	3.12	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.15	4.75	4.78
Chloride	mg/L	**120**	1	0.97	1.3	0.59	0.81	1.7	1.8	1.1	13	1.1	1.1	0.67	0.63	0.7	0.67	0.63	0.56	0.8	0.89
Fluoride	mg/L	**0.12**	**0.16**	**0.13**	**0.13**	**0.14**	**0.18**	**0.19**	**0.2**	**0.23**	**0.23**	**0.24**	0.12	0.11	0.11	0.12	0.11	0.098	0.12	**0.16**	**0.17**
Sulphate, dissolved	mg/L	*	40.3	32.4	41.2	42	40.7	43.7	39	42.5	48.4	69.7	19.1	21.4	22.2	25.5	22.1	24.4	36.4	45	44.8
Cyanide, total	mg/L	**0.005**	0.00054	<0.00050	0.00084	0.00076	0.00071	0.00083	<0.00050	<0.00050	<0.00050	0.00076	0.00115	0.00083	0.0008	0.001	0.00075	0.00096	0.00083	0.00056	0.00057
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	<0.00050	<0.00050	0.00103	0.00077	0.00066	<0.00050	<0.00050	<0.00050	<0.00050	0.00078	0.00115	0.00085	0.00083	0.00083	0.00065	0.00102	0.00054	<0.00050	<0.00050
Ammonia (N)	mg/L	*	0.04	0.039	0.026	0.052	0.086	0.13	0.15	0.14	0.14	0.1	0.059	0.017	0.024	0.022	0.12	0.025	0.023	<0.0050	0.022
Nitrite (N)	mg/L	**0.02**	0.0031	<0.0020	<0.0020	<0.0020	0.003	0.0021	<0.0020	<0.0020	0.0022	0.0029	0.0022	0.0021	0.0024	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021
Nitrate (N)	mg/L	**3.0**	0.0041	0.0044	0.0108	0.0122	0.107	0.148	0.197	0.203	0.218	0.137	<0.0020	0.02	<0.0020	<0.0020	0.0039	<0.0020	<0.0020	<0.0020	0.01
Nitrite & Nitrate, as N	mg/L		0.0072	0.0044	0.0108	0.0122	0.11	0.15	0.197	0.203	0.22	0.14	0.0021	0.0221	0.0027	<0.0020	0.0039	<0.0020	<0.0020	<0.0020	0.0121
Phosphorus,total-colourimetric	mg/L	**0.035**	0.0288	**0.194**	0.0171	0.0148	0.0132	0.0185	0.032	0.0253	0.0229	**0.0804**	**0.055**	0.0267	0.0165	0.0184	0.0278	**0.0358**	0.013	0.0111	0.0144
Phosphorus, Total Dissolved	mg/L		0.0297	0.191	0.0186	0.0109	0.0102	0.0198	0.0323	0.025	0.0222	0.0844	0.0462	0.0216	0.0169	0.0153	0.0121	0.0356	0.0098	0.0046	0.0151
Dissolved Organic Carbon	mg/L		10.3	11.1	7.13	4.86	3.27	3.17	1.78	1.7	3.02	6.46	14.5	8.34	6.55	6.47	10.5	12	6.6	4.6	4.39
Aluminum (Al), total	mg/L	*	0.0387	**0.538**	0.0208	0.0128	0.00548	0.00736	0.0258	0.00623	0.00597	0.0218	**0.131**	0.0328	0.0185	0.0171	0.0694	**0.271**	0.03	0.00788	0.00991
Antimony (Sb), total	mg/L	**0.009**	0.000222	0.000262	0.000143	0.000091	0.000044	0.000028	0.000252	0.000036	0.000043	0.000104	0.00015	0.000108	0.000089	0.000118	0.000148	0.000205	0.00014	0.000095	0.00009
Arsenic (As), total	mg/L	**0.005**	0.0043	**0.0331**	0.00242	0.0022	0.00217	0.00215	0.00258	0.00272	0.00261	**0.00916**	**0.0054**	0.00256	0.00237	0.00224	0.00284	0.00278	0.0023	0.00248	0.0033
Barium (Ba), total	mg/L		0.0575	0.14	0.0566	0.0581	0.0762	0.0872	0.0848	0.0869	0.0907	0.0814	0.046	0.0419	0.0415	0.0443	0.0426	0.0529	0.0602	0.0639	0.0616
Beryllium (Be), total	mg/L		<0.000010	0.000045	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000013	<0.000010	0.000011	<0.000010	<0.000010	0.000014	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L		<0.000010	0.000013	<0.0000050	<0.000010	<0.0000050	<0.0000050	0.000006	<0.0000050	<0.0000050	<0.000010	<0.000010	<0.000010	<0.000010	<0.0000050	<0.000010	<0.000010	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	**1.5**	0.017	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*	0.000028	0.0002	0.000015	0.00001	0.000018	0.000018	0.000187	0.000025	0.00002	0.000028	0.0000567	0.000021	0.000013	0.000013	0.000029	0.0000577	0.0000156	0.000011	0.000015
Calcium (Ca), total	mg/L		54.7	54.7	55	57.4	70.2	85	82.5	81.9	94.2	71.8	28.8	32.8	35.2	39.3	33.8	36.2	51.9	63	61
Chromium (Cr), total	mg/L	**0.001**	0.00018	**0.0018**	0.00012	0.00013	<0.00010	0.0001	0.00041	<0.00010	<0.00010	0.00018	0.00041	0.00018	0.00015	0.00013	0.00027	0.00092	0.00017	<0.00010	0.00012
Cobalt (Co), total	mg/L		0.000203	0.00271	0.000137	0.000089	0.000143	0.000223	0.000248	0.000302	0.000338	0.000328	0.000373	0.000133	0.000085	0.000087	0.000233	0.000429	0.000125	0.000105	0.000142
Copper (Cu), total	mg/L	*	0.00125	0.0031	0.00066	0.0006	0.000281	0.000205	0.00335	0.000232	0.000233	0.00046	0.00137	0.001	0.0009	0.000703	0.00136	0.002	0.000665	0.00034	0.000367
Iron (Fe), total	mg/L	**0.3**	**0.955**	**9.98**	**0.448**	**0.429**	**0.573**	**0.59**	**0.804**	**0.743**	**0.88**	**3.3**	**1.27**	**0.551**	**0.421**	**0.385**	**0.594**	**1.02**	**0.38**	**0.452**	**0.728**
Lead (Pb), total	mg/L	*	0.000051	0.000841	0.000041	0.000023	0.000017	0.000043	0.00487	0.000086	0.000273	0.000047	0.000178	0.000061	0.000034	0.00003	0.000107	0.000336	0.0000554	0.000014	0.000021
Lithium (Li), total	mg/L		0.00386	0.0041	0.00393	0.00338	0.00689	0.0093	0.00979	0.011	0.0123	0.00733	0.00234	0.0024	0.00285	0.0028	0.0019	0.00223	0.00302	0.00491	0.00404
Magnesium (Mg), total	mg/L		21.4	17.7	21.1	20.5	25.2	30.1	31.6	33.8	34.3	31.1	10.4	12.1	12.6	14.4	12.1	13.5	17.9	23.1	24.8
Manganese (Mn), total	mg/L	*	0.122	**1.84**	0.0729	0.0724	0.151	0.238	0.238	0.267	0.322	0.307	0.193	0.0586	0.0365	0.0355	0.0753	0.0835	0.0625	0.0789	0.115
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	0.0000021	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000003	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	0.00157	0.00171	0.00139	0.0014	0.00149	0.00149	0.0016	0.00171	0.00188	0.00182	0.00161	0.00148	0.00145	0.00163	0.00125	0.000983	0.0014	0.00173	0.00166
Nickel (Ni), total	mg/L	*	0.00412	0.0113	0.0028	0.00208	0.0021	0.00235	0.00273	0.00255	0.00272	0.0034	0.00448	0.00313	0.00268	0.00274	0.00381	0.00481	0.00274	0.00222	0.00238

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21
			25-Jul-2016	26-Aug-2016	06-Sep-2016	30-Sep-2016	15-Nov-2016	19-Dec-2016	16-Jan-2017	22-Feb-2017	20-Mar-2017	28-Apr-2017	16-May-2017	26-May-2017	31-May-2017	06-Jun-2017	14-Jun-2017	19-Jul-2017	09-Aug-2017	13-Sep-2017	04-Oct-2017
Phosphorus (P), total	mg/L		0.0295	0.251	0.0105	0.0156	0.0172	0.0161	0.0346	0.0299	0.0222	0.0898	0.0691	0.0287	0.0201	0.0175	0.0351	0.069	0.0157	0.011	0.0189
Potassium (K), total	mg/L		0.83	1.11	1.13	1.34	1.91	2.09	2.27	2.41	2.47	2.84	1.82	1.5	1.45	1.37	0.93	0.63	1.2	1.58	1.5
Selenium (Se), total	mg/L	**0.002**	0.0006	0.000836	0.00065	0.000811	0.000733	0.000697	0.000593	0.000566	0.000519	0.000399	0.000361	0.000385	0.000404	0.00041	0.000415	0.000526	0.000848	0.000713	0.000661
Silicon (Si), total	mg/L		5.08	5.34	4.22	4.26	5.97	6.6	6.93	7.12	7.68	6.02	2.91	2.87	2.78	2.91	3.29	4.09	4.3	4.15	3.86
Silver (Ag), total	mg/L	**0.00025**	<0.000010	0.000016	<0.0000050	<0.000010	<0.0000050	<0.0000050	0.000025	<0.0000050	<0.0000050	<0.000010	<0.000010	<0.000010	<0.000010	<0.0000050	<0.000010	<0.000010	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L		1.49	1.14	1.2	1.18	1.78	2.31	2.76	2.89	6.47	2.13	0.67	0.79	0.91	1.09	0.84	0.8	1.06	1.48	1.64
Strontium (Sr), total	mg/L		0.158	0.18	0.156	0.177	0.218	0.267	0.257	0.291	0.33	0.236	0.0902	0.102	0.112	0.121	0.106	0.105	0.157	0.194	0.197
Sulphur (S), total	mg/L		13.4	10.6	13.2	12.9	14.5	13.1	13.4	15.5	16.9	21.5	6.9	7.2	7.8	8.7	7.3	8	12.8	13.8	15.4
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	0.00001	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000031	<0.0000020	<0.0000020	<0.0000020	0.000002	0.0000036	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		<0.0020	0.0212	0.00076	<0.0020	<0.00050	<0.00050	0.00085	<0.00050	<0.00050	<0.0020	0.0052	<0.0020	<0.0020	0.0006	0.0031	0.0088	0.00157	<0.00050	0.00056
Uranium (U), total	mg/L	**0.015**	0.00224	0.00252	0.00253	0.00276	0.00308	0.00293	0.00302	0.00299	0.00305	0.004	0.00129	0.00144	0.0015	0.00188	0.00135	0.00151	0.00235	0.00329	0.00333
Vanadium (V), total	mg/L		0.00022	0.0022	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00021	<0.00020	0.00025	<0.00020	<0.00020	0.00039	0.00099	0.00025	<0.00020	<0.00020
Zinc (Zn), total	mg/L	*	0.0038	0.0317	0.00694	0.002	0.00146	0.00145	0.0153	0.00244	0.00334	0.0028	0.0055	0.0019	0.0012	0.00167	0.0041	0.0083	0.0021	0.00111	0.00136
Zirconium (Zr), total	mg/L		0.00019	0.00106	0.00011	0.00011	0.0002	0.00019	0.00031	0.00031	0.00042	0.00038	0.0002	0.00013	<0.00010	<0.00010	0.00017	0.00022	0.00012	0.00014	0.00015
Aluminum (Al), dissolved	mg/L	*	0.00713	0.00349	0.00422	0.00238	0.00121	0.00119	0.00137	0.00089	0.00137	0.00132	0.0153	0.0123	0.00867	0.00599	0.00977	0.0145	0.00628	0.0029	0.0017
Antimony (Sb), dissolved	mg/L		0.000216	0.000134	0.000137	0.000098	0.000044	0.000034	0.000045	0.000028	0.000039	0.000069	0.000108	0.000099	0.000086	0.000109	0.000131	0.000169	0.000129	0.00009	0.000087
Arsenic (As), dissolved	mg/L		0.00192	0.00169	0.00153	0.00141	0.000707	0.000676	0.000651	0.000614	0.000535	0.0013	0.00248	0.00168	0.0017	0.0017	0.00151	0.00135	0.00185	0.00164	0.0014
Barium (Ba), dissolved	mg/L		0.0516	0.0529	0.056	0.0565	0.0748	0.0832	0.081	0.0811	0.0867	0.0727	0.0329	0.0381	0.0412	0.0444	0.0367	0.0444	0.0588	0.0647	0.0619
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.000009	0.000006	<0.0000050	<0.0000050	0.00001	0.000021	0.000016	0.000012	0.000017	0.000019	0.000023	0.00001	0.000008	0.000006	0.00001	0.000012	0.0000078	0.000008	0.000008
Calcium (Ca), dissolved	mg/L		54.9	54.2	58.8	58.1	69.8	82.4	82.2	88.8	95.5	76.2	23.6	32.5	35.5	37.1	32.2	37.2	52.7	61.3	60.8
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00012	<0.00010	<0.00010	<0.00010	<0.00010	0.0001	0.00012	0.00011	<0.00010	0.00013	0.00012	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		0.000063	0.000021	0.00002	0.000061	0.000104	0.000206	0.000205	0.000268	0.000339	0.000287	0.000208	0.000081	0.000062	0.000066	0.000081	0.000078	0.0000737	0.00009	0.000099
Copper (Cu), dissolved	mg/L		0.000898	0.000792	0.000581	0.000367	0.000397	0.000266	0.000419	0.000148	0.000224	0.000293	0.000933	0.000817	0.000734	0.000627	0.000974	0.000946	0.000542	0.000316	0.000287
Iron (Fe), dissolved	mg/L	**0.35**	0.185	0.156	0.107	0.0432	0.0235	0.076	0.0785	0.0555	0.0632	0.299	**0.366**	0.287	0.273	0.244	0.19	0.165	0.2	0.115	0.0899
Lead (Pb), dissolved	mg/L		<0.0000050	0.000011	<0.0000050	<0.0000050	0.000005	0.000031	0.000044	<0.0000050	0.000016	<0.0000050	0.0000214	0.000017	0.00001	0.000009	0.000013	0.000022	0.0000051	<0.0000050	0.000007
Lithium (Li), dissolved	mg/L		0.00378	0.00342	0.00355	0.00376	0.00659	0.00893	0.00983	0.0102	0.0121	0.00773	0.00186	0.00238	0.00253	0.00264	0.00184	0.00223	0.00308	0.00533	0.00428
Magnesium (Mg), dissolved	mg/L		20.8	20.3	21	20	25.4	29.7	31.1	32.6	34	32.2	10.9	11.8	12	14.4	11.6	13.3	18.1	23.2	23.5
Manganese (Mn), dissolved	mg/L		0.0327	0.00195	0.00208	0.0549	0.124	0.232	0.223	0.25	0.303	0.288	0.144	0.0318	0.0241	0.026	0.0292	0.0247	0.0462	0.0744	0.0876
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000026	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.00154	0.00135	0.00136	0.00142	0.0015	0.00148	0.00155	0.0016	0.00182	0.00184	0.00139	0.00142	0.00139	0.00158	0.0012	0.00102	0.00143	0.00175	0.00174
Nickel (Ni), dissolved	mg/L		0.00356	0.00296	0.0025	0.00193	0.00208	0.00227	0.00228	0.00239	0.00265	0.0031	0.00381	0.00289	0.00264	0.00259	0.00315	0.00276	0.00239	0.0021	0.00196
Phosphorus (P), dissolved	mg/L		0.0049	0.0082	0.0082	0.0056	0.0056	0.0062	0.0055	0.0053	0.0044	0.0171	0.0323	0.016	0.0121	0.0102	0.0119	0.0118	0.0101	0.005	<0.0020
Potassium (K), dissolved	mg/L		0.805	1.03	1.26	1.34	1.97	2.11	2.22	2.36	2.44	2.94	1.88	1.45	1.43	1.4	0.889	0.603	1.23	1.58	1.38
Selenium (Se), dissolved	mg/L		0.000565	0.000414	0.000632	0.00091	0.0007	0.000653	0.000585	0.000577	0.000481	0.000424	0.000283	0.000356	0.000322	0.000414	0.000428	0.000571	0.00091	0.000699	0.000636
Silicon (Si), dissolved	mg/L		5.27	4.12	4.66	4.6	5.32	6.8	6.44	6.8	6.56	6.28	2.51	2.76	2.75	2.52	3.04	4.16	4.18	4.36	3.76
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		1.34	1.27	1.22	1.16	1.82	2.35	2.5	2.84	7.95	2.12	0.707	0.775	0.844	1.06	0.786	0.832	1.07	1.48	1.53
Strontium (Sr), dissolved	mg/L		0.159	0.162	0.179	0.194	0.219	0.268	0.25	0.282	0.286	0.243	0.0858	0.0976	0.11	0.121	0.0976	0.116	0.161	0.208	0.182
Sulphur (S), dissolved	mg/L		13.2	11.8	12.7	14.1	13.3	13.7	12.6	15	14.6	24.3	7.3	6.8	7.2	8.2	6.7	7.4	12.4	14.2	14.5
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0006	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.00221	0.00231	0.00261	0.00279	0.00286	0.00306	0.00311	0.00292	0.00308	0.00392	0.00109	0.00139	0.00145	0.00181	0.00125	0.0014	0.00233	0.00329	0.00345
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.00145	0.00089	0.00161	0.00043	0.00125	0.00197	0.00252	0.00184	0.00383	0.00203	0.00215	0.00073	0.00053	0.00057	0.00151	0.00268	0.00088	0.00067	0.00054
Zirconium (Zr), dissolved	mg/L		0.00011	0.00013	0.00011	0.0001	0.00014	0.0002	0.00026	0.00027	0.00033	0.00023	0.00013	0.00012	0.00011	<0.00010	0.00012	0.00013	0.00011	0.00013	0.00012

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22
			02-Nov-2017	04-Dec-2017	07-Jan-2018	13-Feb-2018	14-Feb-2018	15-Mar-2018	07-Apr-1995	11-Jun-1995	22-Aug-1995	13-Sep-1995	29-Apr-2015	11-May-2015	23-Jun-2015	28-Jul-2015	23-Aug-2015	09-Sep-2015	14-Oct-2015	18-Nov-2015	01-Dec-2015
Discharge (Flow)	L/s		392.5	155.1	91.4		89.9	290.2					337.4	3993.8	1768	1521.0	2703.3	2504.8	1402	730.4	596.3
Total Suspended Solids	mg/L		<1.0	1.6	2.3	<1.0		3.5	<4	<4	<4	<4	1.5	16.5	<1.0	1.4	3.5	1.3	1	<1.0	1.5
pH (field)	pH units	**6.5 - 9**	7.36	7.11	7.08	6.81		6.93					7.52	7.71	7.97	8.06	7.95	8.03	7.84	7.79	7.68
pH (lab)	pH units	**6.5 - 9**	8.21	7.99	8.1	8.43		8.38	7.2	7.3	8.4	7.7	8.36	7.81	8.24	8.19	8.1	8.25	8.32	8.41	8.08
Specific Conductance (field)	µS/cm		366.1	772.1	875.7			478.7					486.9	146	308.2	371.8	327.2	327	417.2	475.1	498.9
Specific Conductance (lab)	µS/cm		541	600	762	807		631	195	85	96	89	558	176	317	362	338	343	409	492	506
Temperature (field)	C		-0.4	-0.2	-0.2	-0.1		-0.4					-0.2	-0.3	9.4	11.5	6	3.4	1.5	0	0
Dissolved Oxygen (field)	mg/L	**6.5**	11.47	8.04	8.91	11.02		9.13					13	12.4	10.49	9.47	10.6	11.7	12.5	10.4	11.1
Dissolved Oxygen (field)	%		87.4	63.2	70.2	85.4		61.7					102	96	91.3	86.9	98	101	101	82	88
ORP (field)	mV		79.6	121.8	125.6	91.2		204.9					145.9	150.7	66.7	98.1	307.1	98.7	307.6	153.3	98.6
Turbidity (internal)	NTU		2.57	2.38		3.188		6.252							0.64	0.98	2.03	0.76	1.53	-0.05	1.6
Hardness (from total)	mg/L		277	349	416	430		379	106	30.1	55.9	63.8	300	98	165	204	185	193	220	264	273
Hardness (from dissolved)	mg/L		290	361	398	432		357	105	41.9	54.7	63.4	323	102	177	210	187	192	218	265	268
Colour	TCU												44.5	180	28.6	32.2	47.9	30	13.7	9.7	18.3
Total Acidity	mg/L		5	7.5	18.1	16.2		<1.0					1.66	0.57	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Acidity (pH 4.5)	mg/L		<1.0	<1.0	<1.0	<1.0		<1.0					<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		252	293	389	390		312	94.6	39.5	47.5	48.3	261	77.8	139	165	148	153	182	223	230
Alkalinity, bicarbonate HCO3	mg/L		307	357	474	451		368			55.5	58.9	311	94.9	170	201	180	187	218	261	281
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50		<0.50			<0.5	<0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	12.2		6.31			1.2	<0.5	3.95	<0.50	<0.50	<0.50	<0.50	<0.50	1.99	5.44	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	10.2		5.26			1	<0.5	3.29	<0.50	<0.50	<0.50	<0.50	<0.50	1.66	4.53	<0.50
Chloride	mg/L	**120**	0.87	1.3	0.56	<0.50		1.1					0.75	0.87	<0.50	0.5	<0.50	0.62	0.67	0.63	<0.50
Fluoride	mg/L	**0.12**	**0.19**	**0.2**	**0.27**	**0.29**		**0.22**					**0.16**	0.059	0.12	0.12	0.1	0.11	0.11	**0.14**	0.12
Sulphate, dissolved	mg/L	*	52	43.7	50.2	62.4		43.9	13.2	7.1	9.1	11.8	45.7	9.12	28.4	32.7	32.3	32.8	35.6	40.4	40.3
Cyanide, total	mg/L	**0.005**	0.00059	0.0006	<0.00050	0.00066		0.00073	<0.001	<0.001	<0.001	<0.001	0.00051	0.00122	<0.00050	0.00085	<0.00050	0.00091	<0.00050	<0.00050	0.0005
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	<0.00050	<0.00050	<0.00050	0.00067		0.00059	<0.001	<0.001	<0.001	<0.001	0.00053	0.00119	0.00056	0.00091	<0.00050	0.00087	<0.00050	<0.00050	<0.00050
Ammonia (N)	mg/L	*	0.056	0.097	0.22	0.17		0.099	0.09	0.018	0.006	<0.005	0.0273	0.0053	<0.0050	<0.0050	0.0092	<0.0050	0.0095	0.0338	0.0438
Nitrite (N)	mg/L	**0.02**	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.005	<0.005	<0.005	<0.005	0.0025		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3.0**	0.0916	0.125	0.214	0.273		0.166	0.02	<0.02	<0.02	<0.02	0.12	<0.020	<0.0020	0.0033	0.0179	0.0192	0.0772	0.103	0.152
Nitrite & Nitrate, as N	mg/L		0.0916	0.125	0.214	0.273		0.166	<0.02	<0.02	<0.02	<0.02	0.123	<0.020	<0.0020	0.0033	0.0179	0.0192	0.0772	0.103	0.152
Phosphorus,total-colourimetric	mg/L	**0.035**	0.012	0.0099	0.0131	0.0149		0.0249	<0.003	0.01	0.007	<0.003	0.014	**0.0508**	0.0052	0.0058	0.0072	0.0048	0.0049	0.0026	0.008
Phosphorus, Total Dissolved	mg/L		0.0078	0.0113	0.0069	0.0181		0.0283					0.0159	0.0169	0.006	0.009	0.0071	0.0046	0.003	0.0035	0.0082
Dissolved Organic Carbon	mg/L		4.05	3.11	2.67	2.33		4.51					3.27	12.4	4.96	3.04	6.2	4.5	2.88	2.2	1.91
Aluminum (Al), total	mg/L	*	0.00254	0.0075	0.00401	0.0028		0.0136	0.007	<0.006	0.012	0.013	0.0028	**0.151**	0.0123	0.017	0.0214	0.0088	0.0102	0.00714	0.00074
Antimony (Sb), total	mg/L	**0.009**	0.000076	0.000033	0.000032	0.000034		0.000081					0.000038	0.000066	0.000092	0.000091	0.000115	0.000082	0.000052	0.000047	0.00004
Arsenic (As), total	mg/L	**0.005**	0.00119	0.00162	0.00171	0.00093		0.00448	0.00016	<0.00005	0.0001	0.00007	0.00212	**0.00551**	0.00124	0.00167	0.00141	0.00128	0.00137	0.00113	0.000953
Barium (Ba), total	mg/L		0.0652	0.0835	0.0927	0.103		0.07	0.049	0.011	0.029	0.024	0.0793	0.0455	0.0564	0.0666	0.0541	0.0592	0.0625	0.0735	0.0759
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010		<0.000010	<0.0001	<0.0001	<0.0001	<0.0001	<0.000010	0.000014	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.0000050	<0.002	<0.002	<0.002	<0.002	<0.0000050	<0.000020	<0.000020	<0.0000050	<0.000020	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.010		<0.010	0.016	0.062	0.029	0.007	<0.01	<0.050	<0.050	<0.010	<0.050	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*	0.00001	0.0000184	0.0000326	0.0000238		0.0000868	<0.00001	<0.00001	**0.00011**	<0.00001	0.0000255	0.0000631	0.0000148	0.0000268	0.000027	0.00002	0.000016	0.000017	0.000011
Calcium (Ca), total	mg/L		67	86.8	104	103		92.2	26	6.6	13	15	78.2	26.1	45	54.3	48.6	52	59.7	70.2	71.3
Chromium (Cr), total	mg/L	**0.001**	<0.00010	<0.00010	<0.00010	<0.00010		0.00016	0.0004	0.0002	0.0004	0.0009	<0.00010	0.00075	<0.00050	0.0001	<0.00050	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), total	mg/L		0.000104	0.000171	0.000341	0.00035		0.000279	<0.0004	<0.0004	<0.0004	<0.0004	0.000145	0.000386	0.000054	0.0000681	0.000093	0.000068	0.000063	0.000087	0.000039
Copper (Cu), total	mg/L	*	0.000273	0.00023	0.000198	0.000182		0.00138	0.0002	0.0004	0.0007	0.0004	0.000291	0.00166	0.00106	0.000547	0.00134	0.000607	0.000422	0.000355	0.00024
Iron (Fe), total	mg/L	**0.3**	0.23	**0.395**	**0.552**	0.288		**1.51**	**0.73**	<0.005	0.05	0.048	**0.588**	**2.1**	0.196	0.254	0.23	0.186	0.226	0.255	0.0546
Lead (Pb), total	mg/L	*	<0.0000050	0.0000093	0.0000109	0.0000144		0.0000739	0.0007	0.0006	0.0002	<0.0001	0.0000135	0.000233	<0.000050	0.0000279	0.000074	0.000025	0.000017	0.000109	<0.0000050
Lithium (Li), total	mg/L		0.00645	0.00981	0.0157	0.0185		0.00679					0.00669	0.00172	0.00229	0.00359	0.00264	0.00281	0.00351	0.00684	0.00572
Magnesium (Mg), total	mg/L		26.7	32.2	38.2	42.1		36.2	10	3.3	5.7	6.4	25.4	7.99	12.9	16.7	15.4	15.4	17.3	21.6	23.1
Manganese (Mn), total	mg/L	*	0.113	0.204	0.35	0.288		0.22	0.15	<0.0002	0.0046	0.0029	0.113	0.208	0.0202	0.0279	0.0294	0.0327	0.04	0.0553	0.0392
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020		<0.0000020	<0.00001	<0.00001	<0.00001	<0.00001	<0.0000020	0.0000025	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	0.00159	0.00155	0.00168	0.00178		0.00148	<0.0004	<0.0004	<0.0004	<0.0004	0.00144	0.000774	0.00121	0.00131	0.00114	0.000996	0.00118	0.00116	0.0014
Nickel (Ni), total	mg/L	*	0.00207	0.00222	0.00277	0.00314		0.00272		0.001	0.002	0.002	0.0016	0.00279	0.00162	0.00189	0.002	0.00155	0.00111	0.00115	0.00111

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-21	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22
			02-Nov-2017	04-Dec-2017	07-Jan-2018	13-Feb-2018	14-Feb-2018	15-Mar-2018	07-Apr-1995	11-Jun-1995	22-Aug-1995	13-Sep-1995	29-Apr-2015	11-May-2015	23-Jun-2015	28-Jul-2015	23-Aug-2015	09-Sep-2015	14-Oct-2015	18-Nov-2015	01-Dec-2015
Phosphorus (P), total	mg/L		0.0118	0.016	0.014	0.0094		0.0367	0.007	0.006	0.009	0.005	0.0137	0.067	0.011	0.0222	0.012	0.0054	0.0058	0.0074	0.0033
Potassium (K), total	mg/L		1.66	2.17	2.17	2.37		3.12	1.8	0.96	0.58	0.75	2.08	1.99	1.17	1.32	0.97	1.18	1.38	1.72	1.72
Selenium (Se), total	mg/L	**0.002**	0.000663	0.00056	0.000261	0.000264		0.000635	<0.00005	<0.00005	<0.00005	0.00011	0.000811	0.000222	0.000462	0.000512	0.000477	0.000679	0.001	0.000968	0.00115
Silicon (Si), total	mg/L		5.33	6.62	7.39	8.8		7.68	5.1	1.4	1.2	1.3	5.55	2.78	2.81	3.71	3.51	3.65	3.9	4.8	5.44
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.0000050	<0.00001	0.00002	<0.00001	<0.00001	<0.0000050	0.0000179	0.0000155	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L		1.85	2.45	3.48	3.37		3.1	1.5	0.9	0.87	0.94	2.16	1.07	1.08	1.34	1.15	1.13	1.31	1.74	1.75
Strontium (Sr), total	mg/L		0.212	0.284	0.296	0.339		0.24	0.085	0.031	0.048	0.053	0.261	0.0839	0.152	0.19	0.158	0.159	0.191	0.23	0.244
Sulphur (S), total	mg/L		16.2	14.9	16	17.5		16.6	3.9	2.2	2.8	3.7	16.2	<15	<15	12.4	<15	11.6	13	13.3	14.9
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	<0.0000020	<0.0000020	<0.0000020		<0.0000020					<0.0000020	0.0000023	0.0000026	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020		<0.00020					<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		<0.00050	<0.00050	<0.00050	<0.00050		0.00121	0.0009	<0.0003	0.0006	0.0008	<0.00050	<0.0050	<0.0050	0.00059	<0.0050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), total	mg/L	**0.015**	0.00325	0.00292	0.00326	0.00344		0.00277					0.00392	0.000881	0.00191	0.00243	0.00194	0.00209	0.00294	0.00331	0.00349
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020		<0.00020	<0.0003	<0.0003	<0.0003	<0.0003	<0.00020	0.00057	<0.00050	<0.00020	<0.00050	0.00027	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	*	0.00121	0.00157	0.00213	0.00209		0.016	0.007	<0.001	0.002	0.001	0.00121	0.0072	0.0018	0.00629	0.0031	0.00224	0.00164	0.00196	0.00043
Zirconium (Zr), total	mg/L		0.00015	0.00026	0.00036	0.00031		0.00028	<0.0003	0.0003		<0.0003	0.00016	0.00026	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00014	0.00011
Aluminum (Al), dissolved	mg/L	*	0.00142	0.00255	0.00129	0.0055		0.00111	0.007		0.009	0.008	0.00082	0.0139	0.00413	0.00456	0.00526	0.00431	0.00127	0.00168	0.00064
Antimony (Sb), dissolved	mg/L		0.000083	0.000033	0.000034	0.000026		0.000053					0.000038	0.000034	0.00009	0.000086	0.000113	0.000077	0.00005	0.000047	0.000042
Arsenic (As), dissolved	mg/L		0.000713	0.000646	0.000406	0.000311		0.000632	0.00018	0.0001	0.0001	0.00007	0.00122	0.000875	0.00108	0.00126	0.00115	0.000976	0.000927	0.000505	0.000906
Barium (Ba), dissolved	mg/L		0.0661	0.0888	0.0879	0.0965		0.078	0.048	0.019	0.022	0.023	0.0843	0.0336	0.0578	0.0673	0.0568	0.0584	0.0628	0.0758	0.0699
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010		<0.000010	<0.0001	<0.0001	<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	0.0000064	<0.0000050		<0.0000050	<0.002	<0.002	<0.002	<0.002	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010		<0.010		0.026	0.023	0.011	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.00001	0.000021	0.0000266	0.0000267		0.000048	<0.00001	<0.00001	0.00006	<0.00001	0.0000118	0.0000216	0.0000098	0.0000114	0.000012	0.000014	0.000011	0.000013	0.00001
Calcium (Ca), dissolved	mg/L		73.4	88.9	96	104		85.8	26	11	14	15	84.3	27.6	48.6	56.1	49.8	51.3	59.7	70.4	69.5
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010		<0.00010	0.0005	0.0003	0.0004	0.001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		0.000103	0.000151	0.000319	0.00037		0.000232	<0.0004	<0.0004	<0.0004	<0.0004	0.0000815	0.0000601	0.0000379	0.0000346	0.000057	0.000051	0.000044	0.00005	0.000039
Copper (Cu), dissolved	mg/L		0.000272	0.000281	0.000209	0.000211		0.000782	<0.0002		0.0007	0.0005	0.000254	0.000978	0.000575	0.00049	0.000774	0.00054	0.000278	0.000322	0.000237
Iron (Fe), dissolved	mg/L	**0.35**	0.0816	0.0663	0.0295	0.0398		0.0479	0.064	0.13	0.02	0.024	0.0652	0.202	0.0899	0.0869	0.0835	0.0818	0.0382	0.0281	0.0702
Lead (Pb), dissolved	mg/L		<0.0000050	0.0000091	0.0000109	0.0000098		0.000008	0.0011	<0.0001	0.0002	<0.0001	<0.0000050	0.0000108	0.0000066	<0.0000050	0.000011	<0.0000050	<0.0000050	0.000024	<0.0000050
Lithium (Li), dissolved	mg/L		0.00684	0.0104	0.015	0.0166		0.00817					0.00649	0.00215	0.00218	0.00316	0.00263	0.00288	0.00355	0.00598	0.0051
Magnesium (Mg), dissolved	mg/L		26	33.8	38.4	41.9		34.7	9.7	3.5	4.8	6.3	27.3	7.94	13.5	16.8	15.1	15.4	16.8	21.7	22.9
Manganese (Mn), dissolved	mg/L		0.11	0.204	0.343	0.289		0.223	0.15	0.0051	0.0007	0.0013	0.0974	0.0264	0.00822	0.00916	0.0149	0.0206	0.027	0.0369	0.0392
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020		<0.0000020	<0.00001	<0.00001	<0.00001	<0.00001	<0.0000020	0.000003	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.00169	0.00161	0.00164	0.00174		0.00175	<0.0004	<0.0004	<0.0004	<0.0004	0.00155	0.000582	0.0012	0.0013	0.00107	0.000991	0.00113	0.00116	0.00135
Nickel (Ni), dissolved	mg/L		0.00212	0.0022	0.00266	0.00318		0.00268		0.002	0.002	0.002	0.00159	0.00188	0.00143	0.00168	0.0019	0.00149	0.000985	0.00113	0.00113
Phosphorus (P), dissolved	mg/L		0.0043	0.0043	0.0028	0.004		0.0066		0.01	0.006	0.008	0.0035	0.0127	0.0191	0.0241	0.0038	0.003	0.0033	0.0058	0.0034
Potassium (K), dissolved	mg/L		1.62	2.31	2.16	2.41		2.79	1.7	0.83	0.6	0.73	2.43	1.98	1.37	1.36	1.1	1.26	1.36	1.73	1.65
Selenium (Se), dissolved	mg/L		0.000716	0.00058	0.000273	0.000273		0.000495	<0.00005	<0.00005	0.00005	0.00011	0.000963	0.000214	0.000493	0.000553	0.000517	0.00062	0.000906	0.000957	0.00114
Silicon (Si), dissolved	mg/L		4.99	6.82	7.12	7.91		6.92	5	1.4	1.2	1.3	5.68	2.53	3.15	3.68	3.78	3.52	3.53	4.67	5.13
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.0000050	<0.00001	<0.00001	<0.00001	<0.00001	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		1.89	2.57	3.18	3.43		2.81	1.6	0.78	0.81	0.94	2.86	0.676	1.13	1.39	1.19	1.16	1.3	1.71	1.7
Strontium (Sr), dissolved	mg/L		0.202	0.294	0.302	0.338		0.278	0.085	0.032	0.048	0.052	0.299	0.0845	0.166	0.187	0.156	0.163	0.184	0.231	0.233
Sulphur (S), dissolved	mg/L		15.2	16	16.5	17.1		15.3	4	2	2.9	3.6	17.8	4.1	10.1	11.7	10.6	10.5	12	13.4	14.5
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020		<0.0000020					0.0000021	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020		<0.00020					<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050		<0.00050					<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.00343	0.00305	0.00321	0.00331		0.00318					0.00399	0.000794	0.00197	0.00238	0.00198	0.00211	0.00286	0.00333	0.00342
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020		<0.00020	<0.0003	<0.0003	<0.0003	<0.0003	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00032	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.00125	0.00175	0.00203	0.00252		0.00681	0.005	0.004	0.002	0.001	0.0009	0.00161	0.00071	0.00111	0.00131	0.0014	0.00068	0.00131	0.00057
Zirconium (Zr), dissolved	mg/L		0.00011	0.00026	0.00033	0.00035		0.0002	<0.0003	<0.0003			<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00011	0.00012

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22
			19-Jan-2016	08-Feb-2016	20-Mar-2016	19-Apr-2016	04-May-2016	15-May-2016	13-Jun-2016	25-Jul-2016	26-Aug-2016	06-Sep-2016	30-Sep-2016	15-Nov-2016	19-Dec-2016	16-Jan-2017	22-Feb-2017	20-Mar-2017	28-Apr-2017	16-May-2017	26-May-2017
Discharge (Flow)	L/s		349.2	771.7	299.7	540.6	612.6		778.4	2012.7	4177	2891.2	2513.8	620.4	399.2	322.8	222.8	207.8	265.9	2697.3	
Total Suspended Solids	mg/L		1	1.1	<1.0	1.6	1.7	2.3	1.2	3.8	33.8	1.8	1.5	<1.0	1.4	2.1	1.1	1.4	3.1	6.8	2.1
pH (field)	pH units	**6.5 - 9**	8.07	7.41	7.07	7.53	7.59	8.04	8.05	7.73	8.05	7.64	7.87	7.77	7.39	7.04	7.58	7.66	8.04	8.15	7.93
pH (lab)	pH units	**6.5 - 9**	8.15	8.09	8	8.18	8.22	8.38	8.33	8.25	8.21	8.18	8.28	8.19	7.8	8.19	7.99	7.83	8.28	8.07	8.04
Specific Conductance (field)	µS/cm		559.8	542.1	565	382.1	366	340.6	278.2	338.5	389.5	317.9	337.2	389.7	527.4	540.2	623.3	566.6	563	199	228.4
Specific Conductance (lab)	µS/cm		570	602	588	459	369	339	348	335	333	340	379	484	560	560	604	636	566	214	227
Temperature (field)	C		0	0	0.7	1.2	0.7	9.2	9.5	10.4	8.4	6.9	1.1	-0.3	-0.1	-0.1	-0.1	-0.1	0	1.8	4
Dissolved Oxygen (field)	mg/L	**6.5**	11.5	10.8	10.59	11.66	11.93	10.8	10.09	10.01	10.11	11.02	12.21	12.5	10.88	11.36	10.6	11.01	10.88	12.5	10.97
Dissolved Oxygen (field)	%		91	84	84.6	94.2	95.6	108	101.7	102.4	98.8	104.4	96.9	96.1	86.3	93.7	82.5	85.9	84.7	103	83.6
ORP (field)	mV		127.7	146.4	100.1	96.4	32.8	61.4	125.2	110.3	274.1	103.7	69	102.8	123.4	101.7	130.2	134.1	196.3	363.7	287.8
Turbidity (internal)	NTU		1.692	1.192	1.104	1.432	1.54		0.862	1.9	9.806	0.91	2.07	2.34	1.816	1.822	3.172	1.966	9.916	3.066	2.09
Hardness (from total)	mg/L		363	325	316	259	196	189	183	188	174	177	202	244	308	308	355	345	296	115	116
Hardness (from dissolved)	mg/L		334	326	322	279	193	201	183	192	183	183	199	256	301	305	328	349	291	102	115
Colour	TCU		10.4	17.3	<5.0	21	31.7	13.7	8.8		18.3										
Total Acidity	mg/L		<0.50	2.8	3.85	0.96	0.67	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	9.32	3.41	10.2	12.4	9.3	<0.50	<0.50
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		280	300	286	213	171	161	161	148	147	151	166	227	270	271	285	303	272	101	96
Alkalinity, bicarbonate HCO3	mg/L		342	366	349	260	209	190	191	181	179	184	203	277	330	331	348	369	332	123	117
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	2.83	2.47	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	2.36	2.06	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**	0.83	1.2	0.73	0.68	0.82	0.91	0.87	0.74	0.75	1	0.66	<0.50	0.9	0.95	0.85	0.78	0.92	1.1	0.62
Fluoride	mg/L	**0.12**	**0.16**	**0.17**	**0.15**	**0.15**	**0.13**	**0.13**	0.11	0.12	0.096	0.09	0.099	**0.13**	**0.14**	**0.15**	**0.17**	**0.18**	**0.17**	0.088	0.081
Sulphate, dissolved	mg/L	*	42.8	41.1	45.3	40.1	29.6	28.4	28.6	34.9	29.7	33.1	35	40.6	47.7	42.3	47.5	50.3	51.1	15.3	17.2
Cyanide, total	mg/L	**0.005**	0.00059	<0.00050	0.00057	0.00055	0.00075	0.00056	0.00066	<0.00050	<0.00050	0.00083	0.0007	0.0008	0.00068	<0.00050	<0.00050	<0.00050	0.00068	0.00115	0.0008
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	0.00077	0.00055	0.0007	<0.00050	0.00069	0.00054	0.00071	<0.00050	<0.00050	0.00101	0.00074	0.00064	<0.00050	<0.00050	<0.00050	<0.00050	0.00066	0.00108	0.0008
Ammonia (N)	mg/L	*	0.0431	0.0567	0.055	0.0105	0.0089	0.008	0.011	0.029	0.03	0.024	0.2	0.047	0.076	0.069	0.094	0.074	0.063	0.045	0.017
Nitrite (N)	mg/L	**0.02**	<0.0020	0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3.0**	0.223	0.205	0.247	0.0913	0.0609	0.0137	0.0112	0.0074	0.0118	0.0361	0.0898	0.174	0.209	0.215	0.254	0.267	0.21	0.0183	0.035
Nitrite & Nitrate, as N	mg/L		0.223	0.207	0.247	0.0913	0.0609	0.0137	0.0112	0.0074	0.0118	0.0361	0.0898	0.174	0.209	0.215	0.254	0.267	0.21	0.0183	0.035
Phosphorus,total-colourimetric	mg/L	**0.035**	0.0042	0.0057	0.0036	0.0163	0.0109	0.0068	0.0038	0.0185	**0.0683**	0.0091	0.0063	0.0049	0.0066	0.0101	0.0092	0.0083	0.0319	**0.043**	0.0165
Phosphorus, Total Dissolved	mg/L		0.0043	0.0062	0.0039	0.016	0.012	0.0072	0.004	0.0195	0.0726	0.0077	0.0057	0.0052	0.0059	0.0089	0.0087	0.0076	0.0308	0.0313	0.0148
Dissolved Organic Carbon	mg/L		2.23	0.77	1.39	4.36	5.29	3.77	2.74	6.29	5.14	5.02	2.95	1.91	2.31	1.05	1.37	1.28	3.36	11.3	5.18
Aluminum (Al), total	mg/L	*	0.00571	0.015	0.00939	0.006	0.0085	0.0064	0.0072	0.0195	**0.2**	0.0166	0.0178	0.00519	0.00832	0.00846	0.00372	0.00211	0.00532	0.0927	0.0313
Antimony (Sb), total	mg/L	**0.009**	0.000028	0.000034	0.000036	0.000064	0.000083	0.000056	0.000055	0.000119	0.000097	0.00007	0.000051	0.000039	0.000035	0.000032	0.000029	0.00003	0.000055	0.00008	0.000071
Arsenic (As), total	mg/L	**0.005**	0.00228	0.00472	0.00364	0.00225	0.00227	0.00167	0.00114	0.00223	**0.00906**	0.00124	0.00143	0.0014	0.00128	0.00163	0.00138	0.00138	0.00396	0.00315	0.00143
Barium (Ba), total	mg/L		0.0914	0.097	0.094	0.0679	0.0646	0.057	0.0604	0.059	0.0875	0.0569	0.0639	0.0803	0.0892	0.086	0.0817	0.0968	0.083	0.0462	0.0416
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000018	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.00001	<0.000010
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.000020	<0.000020	<0.000020	<0.000020	<0.000010	<0.000010	<0.0000050	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.000010
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.050	<0.050	<0.050	<0.050	0.013	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*	0.000026	0.000021	0.000021	0.000021	0.00002	0.000019	0.000015	0.000023	0.000144	0.000025	0.000019	0.000022	0.000022	0.000021	0.000022	0.000021	0.00002	0.0000703	0.000029
Calcium (Ca), total	mg/L		99.2	83.1	83.7	66.6	52.1	51.6	51.1	50.5	48.4	48.6	53	66.9	82.7	82.1	99.6	92.3	77	30.6	31.6
Chromium (Cr), total	mg/L	**0.001**	<0.00010	<0.00010	<0.00010	<0.00050	<0.00050	<0.00050	<0.00050	0.0001	0.00067	<0.00010	0.00013	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00025	0.00012
Cobalt (Co), total	mg/L		0.000166	0.000235	0.000201	0.000132	0.000094	0.000057	0.000055	0.000101	0.00099	0.000091	0.000079	0.000081	0.000111	0.000127	0.000157	0.000176	0.000167	0.000253	0.000082
Copper (Cu), total	mg/L	*	0.000278	0.000287	0.000263	0.00058	0.00067	0.00087	0.00082	0.00096	0.00182	0.000684	0.00069	0.000284	0.00026	0.000246	0.000184	0.000191	0.000284	0.00178	0.00126
Iron (Fe), total	mg/L	**0.3**	**0.651**	**1.27**	**1.07**	**0.456**	**0.459**	**0.336**	0.174	**0.472**	**3.05**	0.227	0.243	0.289	0.246	**0.355**	**0.433**	**0.372**	**1.26**	**0.806**	**0.31**
Lead (Pb), total	mg/L	*	0.000036	0.000059	0.000036	<0.000050	<0.000050	<0.000050	<0.000050	0.000027	0.000449	0.000057	0.000036	0.000024	0.000024	0.000024	0.000023	0.00007	0.000015	0.000161	0.000072
Lithium (Li), total	mg/L		0.00657	0.00857	0.00756	0.00468	0.0046	0.00341	0.00382	0.00329	0.00319	0.00206	0.00277	0.00431	0.00686	0.0071	0.00735	0.00883	0.00651	0.0022	0.00195
Magnesium (Mg), total	mg/L		28	28.6	26	22.5	16	14.6	13.5	15	13	13.6	16.9	18.6	24.5	25.1	25.9	27.8	25.2	9.32	9.08
Manganese (Mn), total	mg/L	*	0.111	0.178	0.117	0.0741	0.0616	0.0238	0.0168	0.0582	0.552	0.0436	0.0504	0.0662	0.097	0.103	0.116	0.141	0.13	0.13	0.0329
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000032	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	0.00128	0.00137	0.00132	0.00154	0.00169	0.0013	0.00113	0.00111	0.001	0.000903	0.00103	0.00124	0.00122	0.00134	0.00126	0.00141	0.00142	0.00103	0.000928
Nickel (Ni), total	mg/L	*	0.0016	0.00204	0.00154	0.0019	0.00177	0.00125	0.00092	0.00205	0.00417	0.00137	0.00125	0.00113	0.00139	0.00139	0.00148	0.0016	0.00173	0.00306	0.00186

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22
			19-Jan-2016	08-Feb-2016	20-Mar-2016	19-Apr-2016	04-May-2016	15-May-2016	13-Jun-2016	25-Jul-2016	26-Aug-2016	06-Sep-2016	30-Sep-2016	15-Nov-2016	19-Dec-2016	16-Jan-2017	22-Feb-2017	20-Mar-2017	28-Apr-2017	16-May-2017	26-May-2017
Phosphorus (P), total	mg/L		0.0127	0.0335	0.0244	0.017	0.01	0.011	<0.010	0.0133	0.0795	0.0085	0.0141	0.0075	0.0103	0.0121	0.0153	0.0091	0.0382	0.0457	0.0193
Potassium (K), total	mg/L		2.16	2.2	1.94	1.95	1.43	1.34	1.31	0.89	1.17	1.06	1.44	1.46	1.67	1.72	1.79	1.93	2.11	1.78	1.31
Selenium (Se), total	mg/L	**0.002**	0.00123	0.00073	0.00106	0.000661	0.000564	0.000479	0.000466	0.000497	0.000519	0.000625	0.00104	0.00114	0.00112	0.00114	0.00119	0.0012	0.000843	0.000446	0.000428
Silicon (Si), total	mg/L		7.04	6.32	5.2	4.77	3.51	3.02	3.3	3.95	4.05	3.41	3.53	4.58	5.28	5.24	5.79	6.07	5.33	2.76	2.46
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.000010	<0.000010	<0.0000050	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.000010
Sodium (Na), total	mg/L		2.35	2.4	2.16	1.79	1.21	1.29	1.16	1.32	1.04	1.03	1.28	1.47	2	1.91	2.11	2.22	1.87	0.71	0.7
Strontium (Sr), total	mg/L		0.306	0.271	0.273	0.22	0.176	0.164	0.177	0.147	0.162	0.142	0.209	0.212	0.269	0.256	0.267	0.315	0.254	0.102	0.101
Sulphur (S), total	mg/L		16.3	14.6	15.4	16	<15	<15	<15	10.8	10.3	10.7	14.6	13.1	14.2	14.2	15.1	18.1	16.7	6.3	6.1
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000005	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000029	<0.0000020
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		<0.00050	0.00086	0.00052	<0.0050	<0.0050	<0.0050	<0.0050	<0.0020	0.0096	0.00071	<0.0020	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0033	<0.0020
Uranium (U), total	mg/L	**0.015**	0.00403	0.00346	0.00435	0.00345	0.00288	0.00229	0.00186	0.00181	0.0017	0.00183	0.00225	0.00341	0.00362	0.00396	0.00372	0.0042	0.00425	0.00117	0.00122
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00050	<0.00050	<0.00050	<0.00050	<0.00020	0.00088	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	*	0.00209	0.00216	0.00175	0.0015	0.0018	0.0013	0.0013	0.0022	0.0153	0.00244	0.0033	0.00205	0.00206	0.00243	0.00164	0.00209	0.00163	0.0073	0.0031
Zirconium (Zr), total	mg/L		0.00019	0.00028	0.00019	0.00012	0.00011	<0.00010	<0.00010	<0.00010	0.00022	<0.00010	<0.00010	<0.00010	0.00011	0.00013	0.00015	0.00019	0.00018	0.00016	0.00011
Aluminum (Al), dissolved	mg/L	*	0.00171	0.00158	0.00195	0.00186	0.00184	0.00152	0.00107	0.0041	0.00163	0.00266	0.00179	0.00281	0.00076	0.0011	0.00093	0.00069	0.00083	0.0324	0.0155
Antimony (Sb), dissolved	mg/L		0.000029	0.000026	0.000031	0.000066	0.000068	0.000057	0.000053	0.000116	0.000064	0.000071	0.000056	0.000044	0.000034	0.000044	0.000028	0.000039	0.000036	0.00007	0.00006
Arsenic (As), dissolved	mg/L		0.000677	0.000685	0.000553	0.00145	0.00125	0.00105	0.000788	0.00114	0.00102	0.000882	0.000989	0.000638	0.000665	0.000691	0.000516	0.000429	0.000923	0.00151	0.00105
Barium (Ba), dissolved	mg/L		0.0939	0.0865	0.0918	0.0716	0.0544	0.0558	0.0565	0.057	0.0554	0.0584	0.0595	0.0766	0.0868	0.0857	0.0888	0.0919	0.0816	0.0398	0.0399
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.000016	0.000011	0.000013	0.000012	0.000009	0.00001	0.0000088	0.00001	0.000005	0.000014	0.000009	0.000014	0.000018	0.000013	0.000021	0.00002	0.000016	0.0000303	0.000018
Calcium (Ca), dissolved	mg/L		88.1	83.3	84.3	73.3	51.1	56.6	50.6	52.1	51.2	51.2	55.7	68.9	79.8	80.3	86.7	93.5	75.4	25.7	31.4
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00014	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		0.000073	0.000105	0.000094	0.000117	0.000071	0.000027	0.0000251	0.000043	0.00001	0.000027	0.000038	0.000058	0.000101	0.000102	0.000145	0.000176	0.000148	0.000132	0.000056
Copper (Cu), dissolved	mg/L		0.000272	0.000269	0.000202	0.000353	0.000399	0.000539	0.00044	0.000687	0.000545	0.000535	0.000348	0.000383	0.000225	0.000281	0.000172	0.000206	0.000254	0.00125	0.00112
Iron (Fe), dissolved	mg/L	**0.35**	0.0056	0.0734	0.0066	0.194	0.158	0.0821	0.0336	0.0897	0.0559	0.0468	0.0532	0.0124	0.0386	0.0358	0.0295	0.0317	0.141	0.256	0.17
Lead (Pb), dissolved	mg/L		0.000006	<0.0000050	<0.0000050	<0.0000050	0.000009	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000005	<0.0000050	0.000008	0.000007	0.000008	0.000006	0.000009	<0.0000050	0.0000313	0.000039
Lithium (Li), dissolved	mg/L		0.00674	0.00842	0.00754	0.00493	0.00331	0.00341	0.00369	0.00334	0.00303	0.00238	0.00264	0.00435	0.00664	0.00706	0.00778	0.00851	0.00666	0.00201	0.00203
Magnesium (Mg), dissolved	mg/L		27.7	28.6	27.2	23.3	15.9	14.6	13.6	15.1	13.5	13.4	14.5	20.4	24.6	25.3	27.1	28.1	25.1	9.14	8.9
Manganese (Mn), dissolved	mg/L		0.0769	0.113	0.0631	0.0669	0.0409	0.00669	0.00363	0.021	0.000612	0.00627	0.0237	0.0486	0.0925	0.0915	0.112	0.137	0.123	0.0768	0.0172
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000036	0.0000021
Molybdenum (Mo), dissolved	mg/L		0.00143	0.00155	0.0014	0.00156	0.0014	0.00131	0.00118	0.00111	0.000939	0.000886	0.00104	0.00125	0.0012	0.00132	0.00137	0.00135	0.00143	0.000984	0.000923
Nickel (Ni), dissolved	mg/L		0.00142	0.00177	0.00134	0.00178	0.00159	0.00108	0.000842	0.00179	0.00126	0.00118	0.000955	0.00247	0.00126	0.00136	0.00152	0.00157	0.00166	0.00249	0.00173
Phosphorus (P), dissolved	mg/L		<0.0020	0.0041	0.0023	0.0151	0.006	<0.0020	<0.0020	<0.0020	0.0065	0.0049	0.002	0.0066	0.0051	0.004	0.008	0.0034	0.0073	0.0222	0.0129
Potassium (K), dissolved	mg/L		2.17	2.2	1.99	2.05	1.4	1.42	1.35	0.9	1.11	1.19	1.19	1.57	1.69	1.73	1.87	1.97	2.31	1.69	1.3
Selenium (Se), dissolved	mg/L		0.00102	0.000772	0.00104	0.000704	0.000542	0.000473	0.000503	0.00047	0.000417	0.000614	0.00114	0.00115	0.00113	0.00114	0.00111	0.00104	0.000914	0.000382	0.000406
Silicon (Si), dissolved	mg/L		5.84	6.59	4.98	5.09	3.52	2.98	3.17	4.19	3.22	3.74	3.84	4.32	5.21	5.06	5.35	4.97	5.29	2.4	2.35
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		2.3	2.42	2.26	1.81	1.18	1.34	1.26	1.18	1.07	1.05	1.09	1.57	1.94	1.96	2.25	2.3	1.95	0.695	0.697
Strontium (Sr), dissolved	mg/L		0.299	0.277	0.296	0.239	0.168	0.166	0.163	0.149	0.165	0.162	0.185	0.214	0.271	0.248	0.279	0.286	0.256	0.0922	0.101
Sulphur (S), dissolved	mg/L		15.5	15.1	15.3	15.3	9.5	9	10.1	10.8	9.5	10.5	12.5	13.6	14.8	13.8	15.9	15.9	17.7	5.4	5.9
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.00416	0.00351	0.00406	0.00357	0.00246	0.0023	0.00186	0.00183	0.00177	0.00184	0.00238	0.00319	0.00368	0.00391	0.004	0.00414	0.00418	0.00121	0.00115
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.00134	0.0006	0.00098	0.00109	0.00072	0.00045	0.00054	0.00097	0.00052	0.00112	0.00076	0.00179	0.00171	0.00203	0.00191	0.00206	0.00149	0.00335	0.002
Zirconium (Zr), dissolved	mg/L		0.00011	0.0002	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0001	0.00017	0.00013	0.00017	0.00013	0.00016	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26
			31-May-2017	06-Jun-2017	14-Jun-2017	19-Jul-2017	09-Aug-2017	13-Sep-2017	04-Oct-2017	02-Nov-2017	04-Dec-2017	08-Jan-2018	13-Feb-2018	14-Feb-2018	15-Mar-2018	05-Apr-1995	08-May-1995	11-Jun-1995	23-Jul-1995	15-Aug-1995	22-Aug-1995
Discharge (Flow)	L/s			1797.5			4273.3	1330.8	1295.2	348.1	387.1	309		240	392.3						
Total Suspended Solids	mg/L		1.9	1.1	4.8	14.3	1.7	<1.0	2	<1.0	1.3	1.2	1		2.9	<4	11	6	<4	<4	5
pH (field)	pH units	**6.5 - 9**	7.84	8.32	7.83	7.84	7.7	7.86	8.06	7.84	7.47	7.78	7.01		7.21						
pH (lab)	pH units	**6.5 - 9**	7.99	8.22	8.18	8.27	8.32	8.42	8.4	8.16	8.3	7.97	8.12		8.37	8.2	7.6	8	8.1	8.1	8
Specific Conductance (field)	µS/cm		224.5	263	228.3	269.6	304.8	507	456.5	486.7	729.7	756.4			492.3						
Specific Conductance (lab)	µS/cm		230	272	228	270	347	431	446	535	545	653	711		650	515	224	276	364	382	389
Temperature (field)	C		7.4	5.7	4.4	6.5	9.5	3.8	3.8	-0.2	-0.2	-0.1	-0.2		-0.2						
Dissolved Oxygen (field)	mg/L	**6.5**	8.86	11.9	10.78	10.15	10.25	11.68	12.03	11.4	8.83	9.43	11		10.3						
Dissolved Oxygen (field)	%		73.7	108	83.0	82.8	101.5	100.6	103.7	87.3	70.4	74.1	84.8		68.8						
ORP (field)	mV		305.8	303.6	298.1	334.7	135	83.9	102.9	9.4	107	54.7	30.7		147.5						
Turbidity (internal)	NTU		0.81	0.73	2.62	4.86	1.24	1.74	2.77	2.76	2.298		1.858		4.55						
Hardness (from total)	mg/L		118	141	118	141	185	222	236	276	314	339	380		374	310	126	157	226	220	220
Hardness (from dissolved)	mg/L		115	140	112	144	186	229	239	315	326	362	389		355	310	29.7	136	217	199	222
Colour	TCU																				
Total Acidity	mg/L		1.23	<0.50	<0.50	<0.50	<1.0	<1.0	1.9	5.5	<1.0	16.8	9.4		<1.0						
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		<1.0						
Alkalinity, total	mg/L		102	121	98.4	118	157	201	210	247	264	314	329		317	272	109	124	197	192	184
Alkalinity, bicarbonate HCO3	mg/L		124	148	120	145	188	235	247	302	322	383	402		376				240	234	224
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		<0.50				<0.5	<0.5	<0.5
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	1.82	5.12	4.38	<0.50	<0.50	<0.50	<0.50		5.21				<0.5	<0.5	<0.5
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	1.52	4.27	3.65	<0.50	<0.50	<0.50	<0.50		4.34				<0.5	<0.5	<0.5
Chloride	mg/L	**120**	<0.50	0.64	0.76	<0.50	<0.50	0.74	0.79	0.86	0.67	<0.50	<0.50		0.6						
Fluoride	mg/L	**0.12**	0.081	0.087	0.083	0.081	0.089	**0.13**	**0.13**	**0.16**	**0.15**	**0.16**	**0.2**		**0.19**						
Sulphate, dissolved	mg/L	*	18.8	23.2	19.4	24.8	32.6	41.2	41.2	49.4	46.8	52.5	63.1		53.5	42.8	16.3	19.1	31.6	33.8	30.8
Cyanide, total	mg/L	**0.005**	0.00075	0.00095	0.00071	0.00078	0.00071	<0.00050	0.0005	0.00057	0.00057	<0.00050	0.0006		0.00069	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	0.00066	0.00068	0.00063	0.00105	0.00071	0.00055	<0.00050	0.00051	<0.00050	<0.00050	<0.00050		0.00051	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Ammonia (N)	mg/L	*	0.03	0.033	0.17	0.023	0.018	0.005	0.054	0.044	0.04	0.1	0.1		0.061	<0.005	0.007	<0.005	<0.005	<0.005	<0.005
Nitrite (N)	mg/L	**0.02**	0.0024	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.005	<0.005	<0.005	<0.005		<0.005
Nitrate (N)	mg/L	**3.0**	0.0093	0.0145	0.0154	0.0131	0.0241	0.0316	0.0709	0.131	0.184	0.251	0.28		0.211	0.26	0.03	<0.02	0.04	0.05	<0.02
Nitrite & Nitrate, as N	mg/L		0.0117	0.0145	0.0154	0.0131	0.0241	0.0316	0.0709	0.131	0.184	0.251	0.28		0.211	0.26	0.03	<0.02	0.04	0.05	0.02
Phosphorus,total-colourimetric	mg/L	**0.035**	0.0137	0.0097	0.0144	0.0278	0.0102	0.0072	0.0063	0.008	0.0064	0.0064	0.0171		0.0151	<0.003	**0.042**	0.01	<0.003	0.004	0.008
Phosphorus, Total Dissolved	mg/L		0.0192	0.0084	0.0065	0.0196	0.0105	0.0033	0.0087	0.0081	0.0063	0.0046	0.0175		0.0159						
Dissolved Organic Carbon	mg/L		4.48	4.53	8.76	8.3	4.6	3.08	2.86	3.31	1.79	1.87	1.74		1.83						
Aluminum (Al), total	mg/L	*	0.0228	0.0149	0.0417	**0.164**	0.0182	0.00488	0.00581	0.00185	0.00459	0.00161	0.00373		0.00462	0.011	**0.11**	**0.11**	0.011	0.1	**0.11**
Antimony (Sb), total	mg/L	**0.009**	0.000059	0.000076	0.000088	0.000135	0.000084	0.000064	0.000062	0.000064	0.000036	0.000031	0.00004		0.000029						
Arsenic (As), total	mg/L	**0.005**	0.00139	0.00117	0.00161	0.00175	0.00132	0.00164	0.00182	0.00108	0.00105	0.00158	0.0017		0.00304	0.00034	0.0028	0.0008	<0.00005	0.00032	0.0004
Barium (Ba), total	mg/L		0.0422	0.0472	0.0426	0.0537	0.0637	0.0736	0.0695	0.069	0.0875	0.0851	0.102		0.0797	0.085	0.041	0.046	0.066	0.065	0.066
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	0.000014	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		<0.000010	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Bismuth (Bi), total	mg/L		<0.000010	<0.0000050	<0.0000050	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.0000050	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.010	0.022	0.022	0.031	0.019	0.021	0.032
Cadmium (Cd), total	mg/L	*	0.000023	0.000017	0.00003	0.0000441	0.0000209	0.000021	0.00002	0.000013	0.0000242	0.0000234	0.0000316		0.0000202	0.00001	<0.00001	0.00004	<0.00001	<0.00001	0.00008
Calcium (Ca), total	mg/L		32.5	38.5	32.1	37.9	51.6	58.8	61.3	70.9	82.1	89.3	94.8		93.3	83	35	43	61	60	60
Chromium (Cr), total	mg/L	**0.001**	0.00012	<0.00010	0.00015	0.00048	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		<0.00010	0.0004	0.0006	0.0007	0.0003	**0.0072**	0.0007
Cobalt (Co), total	mg/L		0.000076	0.000059	0.000132	0.000279	0.0000765	0.000066	0.000083	0.000085	0.000099	0.000167	0.0002		0.000197	<0.0004	0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Copper (Cu), total	mg/L	*	0.00113	0.00086	0.00143	0.00157	0.0006	0.000368	0.000378	0.000285	0.000267	0.000212	0.000283		0.000275	0.0003	0.002	0.0019	0.0006	0.0011	0.0016
Iron (Fe), total	mg/L	**0.3**	0.273	0.201	**0.321**	**0.637**	0.191	0.229	**0.337**	0.248	0.188	**0.473**	**0.56**		**1.01**	0.031	**1**	0.29	0.032	0.21	0.27
Lead (Pb), total	mg/L	*	0.00006	0.000037	0.000079	0.000232	0.0000345	0.000011	0.000013	<0.0000050	0.0000111	0.0000053	0.0000119		0.00001	0.0008	<0.0001	0.0007	0.0002	0.0004	0.0002
Lithium (Li), total	mg/L		0.00238	0.00235	0.0017	0.00193	0.00252	0.00429	0.00366	0.007	0.00713	0.012	0.0146		0.00823						
Magnesium (Mg), total	mg/L		8.88	10.9	9.32	11.2	13.7	18.3	20.2	24.1	26.3	28.1	34.9		34.1	25	9.4	12	18	17	17
Manganese (Mn), total	mg/L	*	0.0278	0.0205	0.0384	0.0514	0.0323	0.0437	0.0564	0.0732	0.0871	0.122	0.138		0.142	0.004	0.094	0.015	0.0037	0.0053	0.0077
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020		<0.0000020	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Mo), total	mg/L	**0.073**	0.00093	0.00103	0.000826	0.000755	0.00104	0.0014	0.00133	0.00138	0.00124	0.00111	0.00125		0.00125	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Nickel (Ni), total	mg/L	*	0.00163	0.00159	0.00226	0.00275	0.00143	0.00124	0.00134	0.00154	0.00137	0.0015	0.00186		0.00192	<0.001	0.003	0.002	<0.001	0.003	0.001

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-22	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26
			31-May-2017	06-Jun-2017	14-Jun-2017	19-Jul-2017	09-Aug-2017	13-Sep-2017	04-Oct-2017	02-Nov-2017	04-Dec-2017	08-Jan-2018	13-Feb-2018	14-Feb-2018	15-Mar-2018	05-Apr-1995	08-May-1995	11-Jun-1995	23-Jul-1995	15-Aug-1995	22-Aug-1995
Phosphorus (P), total	mg/L		0.0148	0.0125	0.0159	0.053	0.0096	0.005	0.0094	0.0085	0.007	0.0086	0.0129		0.0246	0.007	0.040	0.013	0.007	0.015	0.017
Potassium (K), total	mg/L		1.28	1.24	0.927	0.73	1.1	1.34	1.38	1.51	1.78	1.62	2.01		2.26	1.5	1.6	1.1	1.4	1.3	1.3
Selenium (Se), total	mg/L	**0.002**	0.000383	0.000491	0.000413	0.000503	0.000936	0.000909	0.000918	0.000844	0.00102	0.00107	0.000969		0.00104	0.00092	0.0002	<0.00005	0.00037	0.0001	0.00066
Silicon (Si), total	mg/L		2.41	2.61	2.78	3.52	3.58	3.48	3.3	5.27	4.96	5.59	6.17		6.09	4.3	2.7	3.1	3.8	3.7	3.7
Silver (Ag), total	mg/L	**0.00025**	<0.000010	<0.0000050	<0.0000050	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.0000050	<0.00001	<0.00001	**0.00063**	<0.00001	0.00001	<0.00001
Sodium (Na), total	mg/L		0.78	1.01	0.772	0.82	1.04	1.38	1.55	1.86	2.01	2.65	2.85		2.73	2.3	0.95	1.1	1.7	1.5	1.5
Strontium (Sr), total	mg/L		0.109	0.117	0.102	0.108	0.16	0.2	0.201	0.221	0.281	0.273	0.337		0.269	0.23	0.094	0.12	0.18	0.17	0.17
Sulphur (S), total	mg/L		6.8	7.7	6.6	7.9	11.4	13.6	14.1	15.4	15.6	17.2	19.4		19	13	4.7	6.6	10	9.9	10
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	<0.0000020	<0.0000020	0.0000031	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020		<0.0000020						
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.00020	0.007	0.002	0.004	0.005	0.004	0.004
Titanium (Ti), total	mg/L		<0.0020	0.00077	0.00149	0.0059	0.00108	<0.00050	0.0005	<0.00050	<0.00050	<0.00050	<0.00050		<0.00050	0.0026	0.0044	0.0035	0.0021	0.0041	0.0035
Uranium (U), total	mg/L	**0.015**	0.00115	0.00155	0.00105	0.0013	0.00199	0.00318	0.00317	0.00349	0.00361	0.00399	0.00447		0.00375						
Vanadium (V), total	mg/L		<0.00020	<0.00020	<0.00020	0.00077	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.00020	<0.0003	0.0003	<0.0003	<0.0003	0.0003	<0.0003
Zinc (Zn), total	mg/L	*	0.0024	0.00251	0.00321	0.0063	0.00223	0.00144	0.00162	0.00132	0.00229	0.0022	0.00283		0.0022	<0.001	**0.053**	0.009	<0.001	0.002	0.003
Zirconium (Zr), total	mg/L		<0.00010	<0.00010	0.00013	0.00014	<0.00010	<0.00010	<0.00010	0.0002	0.00011	0.0004	0.0005		0.00035	0.0003	0.0004	0.0008	0.0003	0.0005	0.0004
Aluminum (Al), dissolved	mg/L	*	0.00905	0.00567	0.0109	0.00948	0.00424	0.00196	0.00134	0.00152	0.00105	0.00172	0.0014		0.00083	0.007	<0.006	0.015	0.006	<0.006	0.008
Antimony (Sb), dissolved	mg/L		0.000056	0.000079	0.000082	0.000108	0.000082	0.000059	0.000057	0.000066	0.000037	0.00004	0.000041		0.000038						
Arsenic (As), dissolved	mg/L		0.000981	0.000997	0.00103	0.000957	0.00111	0.00128	0.00113	0.0008	0.000604	0.00107	0.0012		0.000802	0.00022	0.0002	0.0005	<0.00005	<0.00005	0.00033
Barium (Ba), dissolved	mg/L		0.0416	0.0498	0.0381	0.0501	0.0644	0.0699	0.0657	0.0731	0.0905	0.0959	0.102		0.0867	0.086	0.0044	0.039	0.065	0.057	0.064
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		<0.000010	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.0000050	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.010	0.023	0.092	0.007	0.012	0.011	0.018
Cadmium (Cd), dissolved	mg/L	*	0.000014	0.000012	0.000014	0.000015	0.0000152	0.000015	0.000014	0.000015	0.0000249	0.0000249	0.0000417		0.0000261	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium (Ca), dissolved	mg/L		32	38.2	30.7	38.4	52.1	60.9	63.6	81.3	85.5	95.7	97.9		89.8	83	4.3	38	59	55	61
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		<0.00010	0.0003	0.0002	0.0004	0.0004	0.0005	0.0003
Cobalt (Co), dissolved	mg/L		0.000042	0.000041	0.000051	0.000048	0.000041	0.000059	0.000066	0.000108	0.0000853	0.000165	0.000202		0.00019	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Copper (Cu), dissolved	mg/L		0.000933	0.000756	0.00119	0.000874	0.000534	0.000327	0.000334	0.000332	0.000346	0.000224	0.000431		0.000406	0.0004	0.001	0.002	0.0005	0.0007	0.0011
Iron (Fe), dissolved	mg/L	**0.35**	0.154	0.13	0.113	0.0973	0.0961	0.0973	0.0766	0.0923	0.0323	0.336	**0.432**		0.178	<0.005	<0.005	0.05	0.011	0.007	0.01
Lead (Pb), dissolved	mg/L		0.000018	0.000028	0.00001	0.000015	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.00001	<0.0000050	0.0000367		<0.0000050	0.0011	<0.0001	0.0002	0.0001	<0.0001	<0.0001
Lithium (Li), dissolved	mg/L		0.00203	0.00218	0.00157	0.00196	0.00253	0.00422	0.00344	0.00733	0.00767	0.0128	0.0131		0.0096						
Magnesium (Mg), dissolved	mg/L		8.5	10.8	8.54	11.6	13.7	18.6	19.6	27.2	27.4	29.9	35		31.8	25	4.6	10	17	15	17
Manganese (Mn), dissolved	mg/L		0.0139	0.0143	0.0158	0.0151	0.0232	0.0403	0.0462	0.0881	0.0821	0.126	0.138		0.141	0.002	<0.0002	0.0024	0.0028	0.0018	0.0023
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020		<0.0000020	<0.00001		<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum (Mo), dissolved	mg/L		0.000896	0.000994	0.000825	0.000802	0.00105	0.00134	0.0013	0.00153	0.00129	0.00122	0.00125		0.00153	<0.0004	0.0009	<0.0004	<0.0004	<0.0004	<0.0004
Nickel (Ni), dissolved	mg/L		0.00153	0.00148	0.00198	0.00171	0.00127	0.00124	0.0012	0.00181	0.00139	0.00156	0.00193		0.00193	<0.001	0.001	0.001	<0.001	<0.001	<0.001
Phosphorus (P), dissolved	mg/L		0.0087	0.0085	0.0083	0.0065	0.0061	0.003	0.0027	0.0062	0.0054	0.0055	0.0089		0.0056		0.01	0.012	0.009	0.011	0.007
Potassium (K), dissolved	mg/L		1.25	1.24	0.877	0.729	1.11	1.41	1.3	1.75	1.86	1.69	2.09		2.23	1.6	1.6	0.95	1.3	1.1	1.3
Selenium (Se), dissolved	mg/L		0.000383	0.000472	0.00041	0.000524	0.000906	0.00091	0.000936	0.000994	0.00106	0.00114	0.000994		0.000918	0.00086	0.0002	<0.00005	0.00032	0.0001	0.00015
Silicon (Si), dissolved	mg/L		2.26	2.35	2.56	3.54	3.47	3.63	3.45	5.33	5.31	5.27	6.19		5.92	4.4	1.9	2.1	3.6	3.2	3.6
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.0000050	<0.00001	<0.00001	0.00004	0.00001	<0.00001	<0.00001
Sodium (Na), dissolved	mg/L		0.716	0.927	0.7	0.866	1.03	1.43	1.48	2.2	2.16	2.53	2.92		2.67	2.4	1	0.97	1.6	1.4	1.6
Strontium (Sr), dissolved	mg/L		0.105	0.118	0.0951	0.127	0.163	0.206	0.192	0.264	0.297	0.279	0.343		0.307	0.23	0.035	0.1	0.18	0.16	0.18
Sulphur (S), dissolved	mg/L		6.1	7.5	6.3	8.1	11.5	12.9	13.9	18.4	17.1	18.7	19.8		16.7	13	4.7	5.9	9.7	9.1	10
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020		<0.0000020						
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.00020	0.002	<0.002	0.004	0.005	0.003	0.003
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		<0.00050	0.0021	<0.0003	0.0013	0.0016	0.0017	0.0016
Uranium (U), dissolved	mg/L		0.00113	0.0015	0.00098	0.00123	0.00198	0.00307	0.00311	0.00379	0.00373	0.00441	0.00443		0.00413						
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.00020	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Zinc (Zn), dissolved	mg/L		0.0013	0.00213	0.00151	0.00182	0.00133	0.00109	0.00105	0.00217	0.00247	0.00233	0.00691		0.00274	0.003	<0.001	0.002	0.002	0.003	<0.001
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	0.0001	<0.00010	<0.00010	<0.00010	0.00021	0.00014	0.00042	0.00059		0.0004	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.0005

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-26 30-Aug-1995	KZ-26 06-Sep-1995	KZ-26 13-Sep-1995	KZ-26 23-Aug-2002	KZ-26 19-Aug-2004	KZ-26 24-Aug-2006	KZ-26 14-Aug-2008	KZ-26 18-Aug-2010	KZ-26 16-Aug-2012	KZ-26 22-Aug-2014	KZ-26 29-Apr-2015	KZ-26 11-May-2015	KZ-26 14-May-2015	KZ-26 23-Jun-2015	KZ-26 29-Jul-2015	KZ-26 22-Aug-2015	KZ-26 08-Sep-2015	KZ-26 15-Oct-2015	KZ-26 18-Nov-2015
Discharge (Flow)	L/s												338.3	11389.2	7608.1	2299	1754.8	4762.7	3412.8	1544.8	
Total Suspended Solids	mg/L		14	<4	<4	<4	<4	<4	<4	<1	<4.0	<4.0	<1.0	15.8		10.6	1.6	13.9	2.2	1.6	<1.0
pH (field)	pH units	**6.5 - 9**						8.3	8.5	8.4	8.3	8.23	8.43	7.54		8.18	8.24	8.05	8.24	8.18	8.45
pH (lab)	pH units	**6.5 - 9**	7.9	8.2	8		8.4	8.3	8.3	8.47	8.27	8.31	8.4	7.89		7.9	8.24	8.11	8.31	8.33	8.32
Specific Conductance (field)	µS/cm							298	390	423	353	438	476.5	159.9		318.6	387.7	312.9	329.9	438.1	484.4
Specific Conductance (lab)	µS/cm		391	350	416	314	424	372	390	447	368	433	541	196		327	383	322	348	434	470
Temperature (field)	C							7.1	9.5	10.2	9.6	9.4	0.1	-0.3		7	8.4	5.8	4	0.7	0
Dissolved Oxygen (field)	mg/L	**6.5**						11.2	10.4		10.1		13.3	12.7		10.96	10.34	10.9	12.7	13.2	11.8
Dissolved Oxygen (field)	%							98	102		89.0		102	96		90.3	88.2	98	110	103	92
ORP (field)	mV												241.7	289.8		71.6	75.7	249.7	109.2	295.7	153.2
Turbidity (internal)	NTU															6.56	0.71	4.52	1	1.31	0.16
Hardness (from total)	mg/L		203	197	217	183	241	210	233	219	189	230	302	107		178	213	176	200	223	258
Hardness (from dissolved)	mg/L		197	194	212	197	245	210	222	246	193	213	311	109		182	222	179	196	226	268
Colour	TCU												11.1	161		34.1	27.7	73.5	36.3	12.6	8.7
Total Acidity	mg/L					0.7	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50		1.03	<0.50	<0.50	<0.50	<0.50	<0.50
Acidity (pH 4.5)	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		176	161	173	151	206	172	180	210	168	193	252	86.1		146	176	145	158	195	213
Alkalinity, bicarbonate HCO3	mg/L		215	196	211	184	244	210	220	250	205	234	298	105		178	214	177	191	234	254
Alkalinity, hydroxide OH	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.5	<0.5	<0.5	<0.5	3.7	<0.5	2.8	5.7	<0.50	1.09	5.1	<0.50		<0.50	<0.50	<0.50	0.68	1.72	3.34
Alkalinity, PP carbonate CO3	mg/L		<0.5	<0.5	<0.5	<1	3.1	<0.5	2.4	4.8	<0.50	0.91	4.25	<0.50		<0.50	<0.50	<0.50	0.57	1.43	2.78
Chloride	mg/L	**120**											<0.50	1		0.97	0.55	<0.50	0.88	0.73	<0.50
Fluoride	mg/L	**0.12**											**0.13**	0.057		0.11	0.12	0.092	0.1	0.11	0.12
Sulphate, dissolved	mg/L	*	27.8	25.2	30.9	26.5	29.9	29	30	36	28.7	29.8	47.6	13.3		27.8	32.3	29.9	31.1	36.9	40.9
Cyanide, total	mg/L	**0.005**	0.001	<0.001	<0.001								0.00051	0.00108		<0.00050	0.0006	<0.00050	0.00099	<0.00050	<0.00050
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	<0.001	<0.001	<0.001								<0.00050	0.00114		<0.00050	0.00067	<0.00050	0.00095	<0.00050	<0.00050
Ammonia (N)	mg/L	*	<0.005	0.009	0.036	<0.005	0.02	<0.005	<0.005	0.08	0.011	0.019	0.0119	0.0078		0.0086	0.013	0.0054	<0.0050	0.0114	<0.0050
Nitrite (N)	mg/L	**0.02**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	<0.0020			<0.0020	<0.0020	0.0026	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3.0**	0.03	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.020	0.025	0.201	<0.020		0.0057	0.0079	0.0168	0.009	0.0565	0.101
Nitrite & Nitrate, as N	mg/L		0.03	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.020	0.025	0.201	<0.020		0.0057	0.0079	0.0194	0.009	0.0565	0.101
Phosphorus,total-colourimetric	mg/L	**0.035**	0.021	0.006	0.003								0.0032	0.0223		0.0062	0.0036	0.009	0.0037	0.0041	0.0023
Phosphorus, Total Dissolved	mg/L												0.0032	0.0223		0.0054	0.0052	0.0068	0.0034	<0.0020	<0.0020
Dissolved Organic Carbon	mg/L												1.84	13.9		5.64	3.32	9.1	5.6	4.12	2.3
Aluminum (Al), total	mg/L	*	**0.18**	0.047	0.022	0.03	0.003	0.009	0.01	0.006	0.0307	0.00532	0.00243	**0.144**		**0.101**	0.0129	**0.141**	0.0201	0.0107	0.00537
Antimony (Sb), total	mg/L	**0.009**									0.000096	0.000067	0.000063	0.000068		0.00014	0.000098	0.000156	0.000102	0.000076	0.000067
Arsenic (As), total	mg/L	**0.005**	0.00051	0.00026	0.00035		<0.001	<0.001	0.0008	0.0004	0.00128	0.000659	0.000654	0.00208		0.00119	0.00106	0.00149	0.00114	0.000932	0.000509
Barium (Ba), total	mg/L		0.063	0.055	0.06	0.058	0.08	0.063	0.069	0.077	0.0703	0.0698	0.0877	0.0425		0.0667	0.0683	0.0576	0.0641	0.0638	0.0752
Beryllium (Be), total	mg/L		<0.0001	<0.0001	<0.0001				<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	0.000014		0.000013	<0.000010	0.000012	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L		<0.002	<0.002	<0.002				<0.001	<0.001	<0.0000050	<0.0000050	<0.0000050	<0.000020		<0.000020	<0.0000050	<0.000020	<0.0000050	<0.000020	<0.0000050
Boron (B), total	mg/L	**1.5**	0.026	0.019	0.015	<0.008	<0.008	<0.008	<0.05	<0.05	<0.05	<0.02	<0.01	<0.050		<0.050	<0.010	<0.050	<0.010	<0.050	<0.010
Cadmium (Cd), total	mg/L	*	<0.00001	<0.00001	0.00001		0.00001	0.00001	0.00002	<0.00001	0.000018	0.00001	0.0000122	0.000058		0.000031	0.0000149	0.00004	0.000019	0.000011	0.00001
Calcium (Ca), total	mg/L		55	54	59	49.4	65.9	57.9	64.9	57.6	50.6	61	80.4	28.6		47.5	56.5	46.3	52.9	58.9	67.7
Chromium (Cr), total	mg/L	**0.001**	**0.0032**	0.0004	0.0004		<0.001	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00010	<0.00050		<0.00050	<0.00010	<0.00050	0.0001	<0.00050	<0.00010
Cobalt (Co), total	mg/L		<0.0004	<0.0004	<0.0004		<0.0005	<0.0005	<0.0005	<0.0005	0.000079	0.000021	0.0000184	0.000258		0.000141	0.000046	0.000203	0.00008	0.000026	0.000022
Copper (Cu), total	mg/L	*	0.0016	0.0011	0.001		0.0006	0.0007	0.0006	0.0005	0.000693	0.000476	0.000314	0.00163		0.00162	0.000675	0.00183	0.000902	0.00059	0.00049
Iron (Fe), total	mg/L	**0.3**	**0.47**	0.16	0.098	0.158	0.01	0.12	0.09	0.021	0.174	0.0572	0.094	**0.994**		**0.309**	0.134	**0.477**	0.18	0.102	0.0425
Lead (Pb), total	mg/L	*	0.0002	0.0002	<0.0001		<0.0005	<0.0005	<0.0002	<0.0002	0.000051	0.000008	0.0000105	0.000237		0.000221	0.0000272	0.000241	0.000058	<0.000050	0.000013
Lithium (Li), total	mg/L							0.004	<0.005	0.006	0.00408	0.0053	0.00721	0.00225		0.0035	0.00376	0.00371	0.00393	0.00422	0.00584
Magnesium (Mg), total	mg/L		16	15	17	14.4	18.5	15.5	17.1	18.3	15.2	18.9	24.6	8.63		14.3	17.6	14.8	16.4	18.5	21.7
Manganese (Mn), total	mg/L	*	0.014	0.0088	0.0041	0.014	0.003	0.009	0.007	0.003	0.016	0.00339	0.00498	0.0942		0.0174	0.0104	0.0394	0.0245	0.00764	0.00487
Mercury (Hg), total	mg/L	**0.000026**	<0.00001		<0.00001			<0.00001	<0.00002	<0.00002		0.0000035	<0.0000020	0.000003		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	<0.0004	<0.0004	<0.0004				0.001	0.001	0.00104	0.00114	0.00115	0.000651		0.00115	0.00121	0.000947	0.000912	0.00109	0.000944
Nickel (Ni), total	mg/L	*	0.003	0.002	<0.001				<0.001	<0.001	0.00138	0.0007	0.00082	0.00239		0.00183	0.00146	0.00249	0.00165	0.00094	0.000744

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26
			30-Aug-1995	06-Sep-1995	13-Sep-1995	23-Aug-2002	19-Aug-2004	24-Aug-2006	14-Aug-2008	18-Aug-2010	16-Aug-2012	22-Aug-2014	29-Apr-2015	11-May-2015	14-May-2015	23-Jun-2015	29-Jul-2015	22-Aug-2015	08-Sep-2015	15-Oct-2015	18-Nov-2015
Phosphorus (P), total	mg/L		0.024	0.009	0.008								0.0035	0.039		0.03	0.0124	0.023	0.0079	<0.010	0.0055
Potassium (K), total	mg/L		1.2	1.1	1.4	1	2	1	1.44	1.4	1.27	1.4	1.73	1.69		1.19	1.34	0.86	1.16	1.32	1.59
Selenium (Se), total	mg/L	**0.002**	0.00007	0.00006	0.00014		<0.001	<0.001	0.0005	0.0004	0.000665	0.000465	0.000866	0.000206		0.000426	0.000484	0.000455	0.000593	0.000689	0.000912
Silicon (Si), total	mg/L		3.8	3.9	3.6			3.56	3.5	3.92	3.45	3.76	5.03	2.66		3.21	3.86	4.02	3.91	3.71	4.45
Silver (Ag), total	mg/L	**0.00025**	<0.00001	0.00002	<0.00001						<0.0000050	<0.0000050	<0.0000050	0.0000112		0.0000133	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L		1.4	1.3	1.6	1.3	1.72	1.36	1.5	1.52	1.28	1.57	2.29	0.69		1.29	1.49	1.21	1.28	1.5	1.7
Strontium (Sr), total	mg/L		0.16	0.15	0.17	0.15	0.202	0.163	0.192	0.203	0.173	0.204	0.276	0.0858		0.159	0.198	0.144	0.171	0.187	0.236
Sulphur (S), total	mg/L		9.5	9.6	10	8.8	10.5	9.8	11	13	12	<15	16.4	<15		<15	12.3	<15	10.4	<15	13.7
Thallium (Tl), total	mg/L	**0.0008**									<0.0000020	<0.0000020	<0.0000020	0.0000022		0.0000043	<0.0000020	0.000003	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L		0.005	0.003	0.004				<0.005	<0.005	<0.00020	<0.00020	<0.00020	<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		0.0049	0.0028	0.0021	<0.003	<0.003	<0.003	<0.005	<0.005	0.00056	<0.00050	<0.00050	<0.0050		<0.0050	<0.00050	<0.0050	0.00077	<0.0050	<0.00050
Uranium (U), total	mg/L	**0.015**					0.00229	0.0018	0.0024	0.0022	0.00195	0.00231	0.00376	0.000937		0.00188	0.00237	0.00163	0.00204	0.00267	0.00289
Vanadium (V), total	mg/L		0.0004	<0.0003	<0.0003						<0.00020	<0.00020	<0.00020	0.00054		0.00056	<0.00020	0.00055	0.00028	0.0007	<0.00020
Zinc (Zn), total	mg/L	*	0.009	0.004	0.002	<0.005	<0.005	<0.005	<0.005	<0.005	0.0011	0.00063	0.00041	0.0044		0.0024	0.00086	0.0038	0.00177	0.0011	0.00077
Zirconium (Zr), total	mg/L		0.0005	<0.0003	0.0004				<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	0.00016		0.0002	<0.00010	0.00021	0.00012	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	*	0.006	0.017	0.023	0.02	<0.001	0.002	0.004	<0.003	0.00603	0.00104	0.00061	0.00908		0.00352	0.00196	0.00764	0.00583	0.00109	0.00677
Antimony (Sb), dissolved	mg/L										0.000097	0.000067	0.000055	0.00005		0.000101	0.000094	0.000138	0.000102	0.00007	0.000073
Arsenic (As), dissolved	mg/L		0.00017	0.00017	0.00031		<0.001	<0.001	0.0009	0.0006	0.000845	0.000613	0.000533	0.000775		0.000799	0.000836	0.000952	0.00084	0.000725	0.000413
Barium (Ba), dissolved	mg/L		0.057	0.053	0.057	0.061	0.077	0.065	0.068	0.085	0.0668	0.0684	0.0941	0.0371		0.0617	0.0715	0.0609	0.0601	0.0653	0.0799
Beryllium (Be), dissolved	mg/L		<0.0001	<0.0001	<0.0001				<0.0001	<0.0001	<0.000010	<0.000010	<0.000010	<0.000010		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.002	<0.002	<0.002				<0.001	<0.001	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		0.013	0.021	0.047	<0.008	<0.008	<0.008	<0.05	<0.05	<0.05	<0.02	<0.01	<0.010		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	<0.00001	<0.00001	0.00003		<0.00001	0.00002	0.00003	0.00001	0.000011	0.000008	0.0000119	0.0000228		0.0000118	0.0000085	0.000012	0.000011	0.000011	0.000008
Calcium (Ca), dissolved	mg/L		54	53	57	53.3	67.1	58.5	62	67.3	52.5	55	82	28.7		49.8	58.9	47.7	52.9	59.3	71.4
Chromium (Cr), dissolved	mg/L		0.0007	0.0003	0.0005		<0.001	<0.001	<0.001	<0.001	<0.00010	<0.00010	<0.00010	<0.00010		<0.00010	<0.00010	0.0001	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		<0.0004	<0.0004	<0.0004		<0.0005	<0.0005	<0.0005	<0.0005	0.000029	0.000014	0.0000137	0.0000458		0.0000271	0.000018	0.000049	0.000034	0.000022	0.000013
Copper (Cu), dissolved	mg/L		0.0006	0.0008	0.0012		0.0005	0.0006	0.0005	0.0005	0.000662	0.000454	0.000334	0.000987		0.000845	0.000565	0.00109	0.000771	0.000423	0.000442
Iron (Fe), dissolved	mg/L	**0.35**	0.024	0.036	0.036	0.041	<0.005	0.06	0.035	0.009	0.0634	0.0224	0.0109	0.161		0.0405	0.0357	0.0657	0.0538	0.0241	0.0068
Lead (Pb), dissolved	mg/L		<0.0001	<0.0001	0.0001		<0.0005	<0.0005	<0.0002	<0.0002	0.000007	<0.0000050	<0.0000050	0.0000087		0.0000112	<0.0000050	0.000008	0.000006	0.000006	0.000014
Lithium (Li), dissolved	mg/L							0.004	<0.005	0.006	0.00406	0.00472	0.00758	0.00217		0.00358	0.00446	0.00291	0.00328	0.00435	0.00577
Magnesium (Mg), dissolved	mg/L		15	15	17	15.6	18.9	16	16.3	19	14.9	18.4	25.9	9.1		13.9	18.2	14.5	15.6	18.8	21.7
Manganese (Mn), dissolved	mg/L		0.0037	0.0046	0.0034	0.006	0.002	0.005	0.004	0.003	0.00704	0.00211	0.00176	0.00733		0.00212	0.00285	0.00811	0.00985	0.00552	0.00152
Mercury (Hg), dissolved	mg/L		<0.00001		<0.00001			<0.00001	<0.00002	<0.00002		0.0000039	<0.0000020	0.0000029		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		<0.0004	<0.0004	<0.0004				0.001	0.001	0.0011	0.00112	0.00114	0.000568		0.0011	0.0012	0.000958	0.000913	0.00105	0.000968
Nickel (Ni), dissolved	mg/L		0.001	0.001	<0.001				<0.001	<0.001	0.00123	0.000711	0.000807	0.00178		0.00123	0.00135	0.00184	0.00141	0.000909	0.000792
Phosphorus (P), dissolved	mg/L		0.009	0.007	0.017								<0.0020	0.0116		0.0053	0.0025	0.0037	0.0022	0.0034	0.003
Potassium (K), dissolved	mg/L		1.1	1.1	1.3	<1	1	<1	1.35	1.55	1.26	1.33	1.85	1.86		1.37	1.41	0.942	1.18	1.35	1.63
Selenium (Se), dissolved	mg/L		0.00007	0.00006	0.00014		<0.001	<0.001	0.0005	0.0005	0.000354	0.000439	0.000862	0.000226		0.000449	0.000511	0.00047	0.000547	0.000806	0.000919
Silicon (Si), dissolved	mg/L		3.4	3.8	3.7			3.63	4.03	4.18	3.67	3.42	5.06	2.46		3.65	3.92	4.36	3.8	3.77	4.4
Silver (Ag), dissolved	mg/L		<0.00001	0.00001	<0.00001						<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		1.4	1.3	6	1.46	1.79	1.44	1.45	1.74	1.27	1.64	2.31	0.82		1.3	1.49	1.2	1.22	1.47	1.78
Strontium (Sr), dissolved	mg/L		0.15	0.15	0.16	0.163	0.201	0.167	0.188	0.228	0.17	0.203	0.285	0.0902		0.17	0.203	0.144	0.167	0.188	0.244
Sulphur (S), dissolved	mg/L		9.3	9.7	9.5	9.8	10.6	9.9	12	13	11	<15	15.4	4.9		9.3	11.3	8.8	9.9	12.3	13.4
Thallium (Tl), dissolved	mg/L										<0.0000020	<0.0000020	<0.0000020	<0.0000020		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L		0.005	0.005	0.003				<0.005	<0.005	<0.00020	<0.00020	<0.00020	<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		0.0017	0.0021	0.0033	<0.003	<0.003	<0.003	<0.005	<0.005	<0.00050	<0.00050	<0.00050	<0.00050		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L						0.00065	0.0019	0.0024	0.0028	0.00191	0.00234	0.00391	0.000907		0.00182	0.00233	0.00171	0.00202	0.00267	0.00303
Vanadium (V), dissolved	mg/L		<0.0003	<0.0003	<0.0003						<0.00020	<0.00020	<0.00020	<0.00020		<0.00020	<0.00020	<0.00020	0.00027	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.002	0.002	0.001	<0.005	<0.005	<0.005	<0.005	<0.005	0.00051	0.00025	0.00029	0.00127		0.00031	0.00035	0.00074	0.00081	0.00035	0.0006
Zirconium (Zr), dissolved	mg/L		<0.0003	0.0004	0.0006				<0.0005	<0.0005	<0.00010	<0.00010	<0.00010	<0.00010		<0.00010	<0.00010	0.00011	<0.00010	<0.00010	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-26 01-Dec-2015	KZ-26 08-Feb-2016	KZ-26 19-Mar-2016	KZ-26 19-Apr-2016	KZ-26 03-May-2016	KZ-26 14-May-2016	KZ-26 13-Jun-2016	KZ-26 25-Jul-2016	KZ-26 26-Aug-2016	KZ-26 06-Sep-2016	KZ-26 30-Sep-2016	KZ-26 15-Nov-2016	KZ-26 19-Dec-2016	KZ-26 15-Jan-2017	KZ-26 22-Feb-2017	KZ-26 20-Mar-2017	KZ-26 28-Apr-2017	KZ-26 16-May-2017	KZ-26 26-May-2017
Discharge (Flow)	L/s		321.7	442.6	316.1	633.3	974.6		1015.4	2930.8	2945.1	3670.8	2532	700	131.1	564.4	427.3	602.7	376.5	2808.4	
Total Suspended Solids	mg/L		1.1	3.3	<1.0	1.6	4	1.1	1.1	24.2	29	8.7	4	<1.0	32.1	2.7	2.5	1.1	<1.0	8.1	9
pH (field)	pH units	**6.5 - 9**	7.81	7.92	7.77	7.82	7.87	8.17	8.08	7.85	8.2	7.89	8.06	7.49	7.54	7.44	7.46	7.91	8.16	8.31	8.2
pH (lab)	pH units	**6.5 - 9**	8.2	8.35	8.29	8.35	8.23	8.48	8.29	8.27	8.29	8.25	8.36	8.35	8.14	8.31	8.31	8.23	8.48	8.14	8.16
Specific Conductance (field)	µS/cm		483	519.8	549.3	380.1	344.2	439.2	304.2	349.3	432.4	328.9	353.9	419.1	515.6	510.3	569.4	538.4	553.6	221.5	270.8
Specific Conductance (lab)	µS/cm		485	547	554	459	380	417	380	344	368	355	399	488	534	530	577	594	550	236	273
Temperature (field)	C		0	0	-0.1	1.2	2.0	7.9	7	8.5	8.8	5.8	0.2	-0.3	0	-0.5	-0.4	-0.4	0	0.5	3.7
Dissolved Oxygen (field)	mg/L	**6.5**	10.9	10.9	11.66	12.04	13.55	11.4	10.91	10.59	10.46	11.29	12.82	11.5	12.85	12.63	11.62	12.07	11.44	13.1	11.08
Dissolved Oxygen (field)	%		85	83	90.4	95.3	110.7	107	101.9	101	101.8	102.2	97.3	88.5	99.8	96.8	88.1	91.3	87.8	102	84
ORP (field)	mV		143.7	270.4	102.6	200.9	88.5	99.3	136.4	107.2	221.2	80	114.6	241	116.3	142.4	103.2	132.6	118.4	280.3	324.3
Turbidity (internal)	NTU		0.5	0.346	0.198	0.94	1.84		0.528	9.61	11.478	4.29	1.64	4.768	1.682	0.676	2.476	2.026	2.374	2.97	2.37
Hardness (from total)	mg/L		273	294	376	246	207	215	201	210	194	186	199	245	298	301	309	354	286	124	138
Hardness (from dissolved)	mg/L		263	300	306	288	204	225	202	201	202	194	210	255	290	303	322	331	301	115	140
Colour	TCU		8	6.7	<5.0	20.4	24.5	9.4	7.2		14.6										
Total Acidity	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2.73	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		222	267	271	214	178	199	176	157	166	162	177	232	257	260	275	283	270	113	121
Alkalinity, bicarbonate HCO3	mg/L		270	317	330	254	217	229	215	192	203	198	211	276	313	312	331	345	311	138	147
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	4.2	<0.50	3.47	<0.50	6.32	<0.50	<0.50	<0.50	<0.50	2.22	3.59	<0.50	2.47	2.03	<0.50	8.71	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.50	3.5	<0.50	2.89	<0.50	5.27	<0.50	<0.50	<0.50	<0.50	1.85	2.99	<0.50	2.06	1.69	<0.50	7.26	<0.50	<0.50
Chloride	mg/L	**120**	0.59	0.75	0.55	0.57	1.2	1.2	0.8	<0.50	0.96	1.1	0.59	0.54	0.69	1	0.91	0.82	1.3	1.1	0.6
Fluoride	mg/L	**0.12**	0.1	0.11	0.11	0.12	0.12	**0.14**	0.12	0.11	0.099	0.091	0.11	0.12	0.11	0.12	**0.13**	**0.13**	**0.13**	0.082	0.089
Sulphate, dissolved	mg/L	*	39.5	46.1	44.5	39.8	30.5	37	30.9	36.4	31.9	32.4	36.5	41.3	46.9	42.1	48	51	47.5	16.9	20.4
Cyanide, total	mg/L	**0.005**	0.00051	<0.00050	<0.00050	0.00059	0.0007	0.0005	0.00073	<0.00050	<0.00050	0.00077	0.00065	0.00072	0.00069	<0.00050	<0.00050	<0.00050	0.00059	0.00103	0.0008
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	<0.00050	<0.00050	0.0006	0.00052	0.00062	<0.00050	0.0006	0.00055	<0.00050	0.00083	0.00079	0.0008	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00108	0.00077
Ammonia (N)	mg/L	*	0.0084	0.0099	0.0394	<0.0050	0.01	<0.0050	0.019	0.028	0.011	0.018	0.17	0.026	0.078	0.043	0.039	0.044	0.021	0.042	0.012
Nitrite (N)	mg/L	**0.02**	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0026	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	**3.0**	0.157	0.252	0.272	0.115	0.0538	0.028	0.0303	0.0166	0.0124	0.0375	0.0812	0.159	0.224	0.235	0.299	0.308	0.267	0.031	0.0472
Nitrite & Nitrate, as N	mg/L		0.157	0.252	0.272	0.115	0.0538	0.028	0.0325	0.0166	0.0124	0.0375	0.0812	0.159	0.226	0.235	0.299	0.308	0.267	0.031	0.0472
Phosphorus,total-colourimetric	mg/L	**0.035**	0.0025	0.0031	0.003	0.0075	0.008	0.0052	0.0036	**0.0357**	**0.0371**	0.0176	0.0049	<0.0020	0.0271	0.0117	0.0052	0.0037	0.0073	0.0325	0.0187
Phosphorus, Total Dissolved	mg/L		0.0025	0.0032	0.0021	0.0082	0.0085	0.0039	0.0029	0.0366	0.0354	0.0187	0.0067	0.002	0.0259	0.0108	0.0061	0.002	0.0052	0.023	0.018
Dissolved Organic Carbon	mg/L		1.64	1.48	1.23	4.79	4.61	3.27	2.35	7.49	5.08	5.53	3.99	2.46	3.07	0.88	1.63	1.38	1.78	10.7	6.34
Aluminum (Al), total	mg/L	*	0.0008	0.042	0.00821	0.0078	0.0139	0.0064	0.0081	0.0793	**0.193**	0.0817	0.036	0.00328		0.00958	0.0173	0.00158	0.0108	0.0977	0.0414
Antimony (Sb), total	mg/L	**0.009**	0.000064	0.000074	0.00006	0.000067	0.000081	0.000078	0.000067	0.000159	0.000125	0.000103	0.000077	0.000069	0.000151	0.000104	0.000071	0.000058	0.000067	0.000071	0.000089
Arsenic (As), total	mg/L	**0.005**	0.000559	0.00193	0.000498	0.00104	0.00129	0.000725	0.000743	0.00139	0.00211	0.00127	0.00107	0.000506	0.00227	0.000534	0.000537	0.000429	0.000693	0.00265	0.00131
Barium (Ba), total	mg/L		0.0792	0.0993	0.0964	0.0728	0.06	0.0576	0.0664	0.0691	0.0766	0.0655	0.064	0.0789	0.109	0.0878	0.0929	0.0921	0.092	0.0492	0.048
Beryllium (Be), total	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.00002	<0.000010	<0.000010	<0.000010	0.000024	<0.000010	<0.000010	<0.000010	<0.000010	0.00001	<0.000010
Bismuth (Bi), total	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.000020	<0.000020	<0.000020	<0.000020	<0.000010	<0.000010	<0.0000050	<0.000010	<0.0000050	0.000013	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.000010
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.050	<0.050	<0.050	<0.050	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*	0.000005	0.000049	0.000011	0.000019	0.000021	0.000011	0.000013	0.000025	0.000041	0.000028	0.000022	0.000013	0.000153	0.000034	0.000022	0.000015	0.000015	0.0000538	0.000021
Calcium (Ca), total	mg/L		73.2	78.2	109	63.7	54.9	59	54.8	55.6	52.2	50.5	54.3	62.1	80.5	79.7	82.3	95.2	76.5	33	37.2
Chromium (Cr), total	mg/L	**0.001**	<0.00010	0.00018	<0.00010	<0.00050	<0.00050	<0.00050	<0.00050	0.00022	0.00054	0.00023	0.00015	<0.00010	0.001	0.00014	0.00075	<0.00010	<0.00010	0.00032	0.00013
Cobalt (Co), total	mg/L		0.00001	0.000243	0.000024	0.000038	0.000048	0.000027	0.000025	0.000119	0.000302	0.000178	0.000086	0.000014	0.000552	0.000026	0.000043	0.000018	0.000036	0.000232	0.000096
Copper (Cu), total	mg/L	*	0.000341	0.00107	0.000339	0.00063	0.00083	0.00067	0.0007	0.00141	0.00182	0.00109	0.00084	0.00047	0.00295	0.00088	0.00053	0.00029	0.000357	0.00152	0.00133
Iron (Fe), total	mg/L	**0.3**	0.0166	**0.57**	0.0694	0.198	0.27	0.0937	0.0687	**0.309**	**0.692**	**0.339**	0.229	0.0335		0.0712	0.154	0.0404	0.15	**0.761**	**0.311**
Lead (Pb), total	mg/L	*	<0.0000050	0.000443	0.000021	<0.000050	<0.000050	<0.000050	<0.000050	0.000153	0.000338	0.000199	0.000069	0.000041	0.00189	0.00146	0.000208	<0.0000050	0.000019	0.000179	0.000136
Lithium (Li), total	mg/L		0.00587	0.00677	0.00747	0.00544	0.00458	0.00406	0.00433	0.00427	0.00379	0.00331	0.00289	0.00558	0.00684	0.00705	0.00776	0.00738	0.0072	0.00287	0.00277
Magnesium (Mg), total	mg/L		22	24	25.3	21.1	17.1	16.5	15.7	17.2	15.3	14.6	15.4	21.8	23.6	24.9	25.2	28.3	23.1	10.1	11
Manganese (Mn), total	mg/L	*	0.000649	0.104	0.0071	0.0125	0.0161	0.00556	0.00667	0.0219	0.0555	0.0367	0.0255	0.00416	0.117	0.011	0.0112	0.00711	0.013	0.0969	0.021
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000023	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000029	<0.0000020
Molybdenum (Mo), total	mg/L	**0.073**	0.00109	0.000963	0.00104	0.00114	0.00126	0.00105	0.00104	0.00107	0.000982	0.000912	0.000982	0.00107	0.000867	0.000953	0.00129	0.000876	0.000963	0.000933	0.000976
Nickel (Ni), total	mg/L	*	0.000672	0.00157	0.000698	0.00114	0.00128	0.00089	0.0008	0.00211	0.0025	0.00179	0.00121	0.000834	0.00307	0.000898	0.000896	0.000824	0.00087	0.00275	0.00187

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26
			01-Dec-2015	08-Feb-2016	19-Mar-2016	19-Apr-2016	03-May-2016	14-May-2016	13-Jun-2016	25-Jul-2016	26-Aug-2016	06-Sep-2016	30-Sep-2016	15-Nov-2016	19-Dec-2016	15-Jan-2017	22-Feb-2017	20-Mar-2017	28-Apr-2017	16-May-2017	26-May-2017
Phosphorus (P), total	mg/L		<0.0020	0.0274	0.003	0.012	<0.010	<0.010	<0.010	0.0115	0.0255	0.0108	0.0124	0.0037	0.0707	0.0103	0.0073	0.0046	0.0073	0.0421	0.0241
Potassium (K), total	mg/L		1.57	1.73	1.73	1.68	1.32	1.28	1.29	0.92	1.19	1.04	1.17	1.55	1.58	1.52	1.57	1.78	1.65	1.67	1.31
Selenium (Se), total	mg/L	**0.002**	0.00116	0.000874	0.00133	0.000649	0.000535	0.000543	0.000496	0.000489	0.000401	0.000569	0.000846	0.000962	0.00108	0.00104	0.00102	0.00109	0.000848	0.000401	0.000462
Silicon (Si), total	mg/L		5.19	4.89	4.43	4.53	3.49	3.36	3.6	4.63	3.93	3.74	3.83	4.66	5.47	4.83	4.99	5.65	4.7	3.07	2.75
Silver (Ag), total	mg/L	**0.00025**	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.000010	<0.000010	<0.0000050	<0.000010	<0.0000050	0.000026	0.000006	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.000010
Sodium (Na), total	mg/L		1.76	2.17	2.23	1.83	1.36	1.56	1.35	1.59	1.25	1.14	1.15	1.75	2.11	2.07	2.25	2.43	2.01	0.8	0.9
Strontium (Sr), total	mg/L		0.248	0.276	0.27	0.222	0.19	0.183	0.193	0.162	0.182	0.154	0.187	0.244	0.263	0.251	0.277	0.327	0.247	0.111	0.118
Sulphur (S), total	mg/L		15.2	15.4	15.6	<15	<15	<15	<15	10.9	11	10.2	11.5	15.8	15.9	14.7	15.6	19.8	14.7	6	7.3
Thallium (Tl), total	mg/L	**0.0008**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000003	<0.0000020	0.000002	0.000003	0.000002	<0.0000020	<0.0000020	0.000007	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000003	<0.0000020
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		<0.00050	0.00223	<0.00050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0020	0.0045	0.00212	<0.0020	<0.00050	0.00861	0.00071	0.00076	<0.00050	<0.00050	0.0028	<0.0020
Uranium (U), total	mg/L	**0.015**	0.00325	0.00355	0.00376	0.00309	0.00263	0.00245	0.00205	0.0019	0.00179	0.00182	0.00229	0.00312	0.0033	0.00355	0.00355	0.00347	0.00363	0.0012	0.00141
Vanadium (V), total	mg/L		<0.00020	0.00033	<0.00020	<0.00050	<0.00050	<0.00050	<0.00050	0.00037	0.00063	0.00034	<0.00020	<0.00020	0.00095	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00022
Zinc (Zn), total	mg/L	*	0.00028	0.00421	0.00053	<0.0010	0.0012	<0.0010	<0.0010	0.0017	0.0045	0.00252	0.0019	0.00069	0.0447	0.00612	0.0027	0.00072	0.00096	0.0042	0.0023
Zirconium (Zr), total	mg/L		<0.00010	0.00012	<0.00010	<0.00010	0.00011	<0.00010	<0.00010	0.00024	0.00017	<0.00010	<0.00010	<0.00010	0.00017	0.0001	0.00012	0.00011	<0.00010	0.00016	0.00011
Aluminum (Al), dissolved	mg/L	*	0.00076	0.00072	0.0026	0.00186	0.0015	0.00104	0.00085	0.00576	0.00304	0.00341	0.00193	0.00253	0.00089	0.00144	0.00472	0.00064	0.00064	0.0199	0.0101
Antimony (Sb), dissolved	mg/L		0.00006	0.000048	0.000066	0.000064	0.000084	0.000086	0.000074	0.000139	0.000091	0.000092	0.000071	0.00007	0.000063	0.000063	0.000077	0.000062	0.000052	0.000059	0.000069
Arsenic (As), dissolved	mg/L		0.000514	0.000426	0.000411	0.00086	0.000883	0.000662	0.000582	0.000931	0.000863	0.000789	0.000907	0.00039	0.000356	0.000323	0.000402	0.000341	0.000419	0.00109	0.000872
Barium (Ba), dissolved	mg/L		0.0738	0.0914	0.109	0.0823	0.0592	0.066	0.064	0.0648	0.0663	0.0616	0.0639	0.0823	0.0923	0.0877	0.094	0.0957	0.0929	0.0396	0.0451
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.000005	0.000009	0.000008	0.000014	0.000006	0.000006	0.0000061	0.00001	0.000008	0.000009	0.000008	0.00001	0.000018	0.000013	0.000018	0.000011	0.000014	0.000028	0.000013
Calcium (Ca), dissolved	mg/L		69.1	80.2	81.5	75.2	54.2	59.4	54.5	53.7	54.5	53.2	56.9	69	78.7	80.7	84.9	89	82	29.7	37.4
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		0.000011	0.000009	0.00001	0.000028	0.000016	0.000015	0.0000123	0.000045	0.000017	0.000025	0.000029	0.000013	0.00001	0.00001	0.00002	0.000014	0.000018	0.0000973	0.000034
Copper (Cu), dissolved	mg/L		0.000353	0.000331	0.000332	0.000525	0.000519	0.000538	0.00053	0.000977	0.000711	0.000721	0.000438	0.000412	0.000416	0.000401	0.000535	0.000298	0.00029	0.0011	0.00112
Iron (Fe), dissolved	mg/L	**0.35**	0.0128	0.0034	0.0027	0.0866	0.0607	0.0217	0.0124	0.0509	0.0335	0.0331	0.0363	0.0051	0.007	0.0085	0.0058	0.0057	0.0162	0.217	0.134
Lead (Pb), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000012	0.000006	0.000009	<0.0000050	0.000007	0.000053	0.000101	0.000049	0.000005	<0.0000050	0.0000181	0.000015
Lithium (Li), dissolved	mg/L		0.00566	0.00689	0.00832	0.00627	0.00387	0.00489	0.00473	0.00416	0.00378	0.00323	0.0036	0.00527	0.00653	0.00712	0.00747	0.00789	0.00744	0.0026	0.00296
Magnesium (Mg), dissolved	mg/L		21.9	24.2	24.9	24.3	16.6	18.7	15.9	16.2	15.9	14.8	16.4	20	22.8	24.6	26.7	26.5	23.3	9.88	11.3
Manganese (Mn), dissolved	mg/L		0.000557	0.0019	0.0013	0.00822	0.00113	0.00164	0.00141	0.00862	0.000673	0.00372	0.0119	0.00236	0.00432	0.0058	0.00657	0.00432	0.00673	0.0464	0.00464
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000028	<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.00103	0.00105	0.00115	0.00118	0.00121	0.00124	0.00106	0.00102	0.00102	0.000887	0.00105	0.0011	0.000883	0.000955	0.000963	0.000905	0.000981	0.000794	0.000954
Nickel (Ni), dissolved	mg/L		0.000663	0.000688	0.000621	0.00124	0.00113	0.000876	0.000716	0.00168	0.00119	0.00125	0.000974	0.000791	0.000742	0.000699	0.000812	0.000726	0.000824	0.0022	0.0016
Phosphorus (P), dissolved	mg/L		<0.0020	0.0045	0.0032	0.0091	<0.0020	0.0081	<0.0020	0.0026	0.0029	0.0046	0.0022	0.008	0.005	0.0055	0.0041	0.0032	0.0025	0.0161	0.0104
Potassium (K), dissolved	mg/L		1.48	1.71	1.74	2.02	1.33	1.43	1.34	0.864	1.14	1.15	1.21	1.44	1.42	1.51	1.68	1.64	1.7	1.61	1.33
Selenium (Se), dissolved	mg/L		0.00107	0.000891	0.000957	0.000664	0.000589	0.000549	0.000539	0.000442	0.000388	0.000543	0.000968	0.00101	0.00102	0.00105	0.0011	0.000989	0.000942	0.000377	0.000477
Silicon (Si), dissolved	mg/L		4.97	5	4.69	5.07	3.46	3.41	3.46	4.63	3.36	4.02	4.11	4.19	5.5	5.03	4.91	4.65	4.95	2.62	2.64
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		1.77	2.05	2.15	2.07	1.34	1.7	1.45	1.32	1.3	1.16	1.2	1.63	1.9	1.98	2.47	2.27	2.1	0.804	0.916
Strontium (Sr), dissolved	mg/L		0.24	0.266	0.279	0.273	0.185	0.207	0.174	0.161	0.178	0.171	0.195	0.221	0.279	0.256	0.288	0.276	0.267	0.0982	0.118
Sulphur (S), dissolved	mg/L		14.4	15	14.4	13.2	10.6	11.5	10.7	10.4	10.8	10	12.4	13	15.4	14.2	16	15.9	15.5	5.7	7
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00063	<0.00050
Uranium (U), dissolved	mg/L		0.00307	0.00363	0.00404	0.00354	0.0025	0.00281	0.00224	0.00182	0.00194	0.00186	0.00233	0.00301	0.00322	0.00347	0.00361	0.00372	0.00365	0.00111	0.00138
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.00023	0.00062	0.00033	0.00059	0.00025	0.00027	0.0003	0.00053	0.00034	0.00057	0.0006	0.00057	0.00336	0.00126	0.00291	0.00068	0.00063	0.00175	0.00103
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00012	<0.00010	<0.00010	0.00014	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-37	KZ-37	KZ-37	KZ-37	KZ-37
			31-May-2017	05-Jun-2017	14-Jun-2017	18-Jul-2017	09-Aug-2017	13-Sep-2017	04-Oct-2017	01-Nov-2017	04-Dec-2017	07-Jan-2018	13-Feb-2018	01-Mar-2018	07-Mar-2018	15-Mar-2018	23-Feb-2017	21-Mar-2017	29-Apr-2017	17-May-2017	27-May-2017
Discharge (Flow)	L/s			2562.5		5177.7	3823.6	1793	1538.1	620.2	611.8						42.7	43.4	40.7	506.4	
Total Suspended Solids	mg/L		4.4	13.1	54.7	73.8	18.6	2.3	5.5	<1.0	4.8	1	<1.0	1.6	2.7	<1.0	1	1.4	<1.0	22.7	7.9
pH (field)	pH units	**6.5 - 9**	8.07	8.06	8.03	8.21	7.7	7.87	7.93	8.03	7.61	7.77	8.12	7.99	7.65	7.73	7.31	6.96	8.16	8.71	7.41
pH (lab)	pH units	**6.5 - 9**	8.06	8.25	8.22	8.34	8.33	8.42	8.44	8.41	8.37	8.28	8.43	8.41	8.34	8.51	7.9	7.44	8.27	7.73	7.99
Specific Conductance (field)	µS/cm		258.0	268.6	234.6	309.1	309.8	510.8	463.5	440	714.6	679.8		481.3	460.1	483.8	439.4	385	402.9	100.2	195.9
Specific Conductance (lab)	µS/cm		251	275	235	307	353	435	452	484	530	575	590	680	653	623	422	426	404	106	196
Temperature (field)	C		5.4	6.1	3.9	9	7.7	2.8	2.7	-0.4	-0.3	-0.4	-0.1	-0.2	-0.2	-0.3	-0.1	0	0.1	0.5	3.8
Dissolved Oxygen (field)	mg/L	**6.5**	9.34	11.7	10.90	11.43	10.52	11.64	12.24	12.76	9.24	9.79	10.59	8.08	8.84	9.99	10.47	11.9	12.22	12.1	11.42
Dissolved Oxygen (field)	%		73.9	103	83.0	99	98.5	95.9	101.1	95.5	71.5	75.5	78.1	55.1	60.2	68	83	96	98.1	98	86.7
ORP (field)	mV		346.9	313.2	292.5	332.5	123.1	72.8	89.1	149.2	156.8	129	76.1	112.9	184.5	205.6	100.8	108.9	108	338.9	193.8
Turbidity (internal)	NTU		1.78	5.55	20.16	28.08	7.32	2.16	3.13	0.97	1.232		1.732			1.082	2.686	1.314	1.62	4.15	2.54
Hardness (from total)	mg/L		121	141	118	159	182	235	246	253	308	292	319	370	372	306	218	223	196	59	95.6
Hardness (from dissolved)	mg/L		129	138	119	167	186	233	235	251	312	306	323	374	364	347	217	222	202	50.5	98
Colour	TCU																				
Total Acidity	mg/L		<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	9.9	<1.0	7.56	12.6	7.3	<0.50	2.52
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		112	123	104	139	162	206	215	226	256	275	260	327	312	303	196	198	191	49.8	81.9
Alkalinity, bicarbonate HCO3	mg/L		136	150	127	165	194	240	250	266	304	335	302	381	372	343	239	242	232	60.8	99.9
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	2.22	1.86	5.63	5.95	5.04	4.44	<0.50	7.61	8.71	4.62	12.9	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	1.85	1.55	4.69	4.96	4.2	3.7	<0.50	6.34	7.26	3.85	10.8	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**	0.51	0.65	0.9	0.55	<0.50	0.75	0.87	1.8	0.71	<0.50	<0.50	0.99	0.89	0.6	<0.50	0.6	0.85	1.4	0.59
Fluoride	mg/L	**0.12**	0.082	0.086	0.071	0.088	0.089	0.12	0.12	**0.13**	**0.13**	0.12	0.12	**0.14**	**0.14**	**0.14**	0.099	0.098	0.096	0.034	0.047
Sulphate, dissolved	mg/L	*	21.1	23.5	18.6	27.9	32.3	41	41	46.7	43.2	48.1	59.4	58.9	61	54.8	30.9	30.3	31.7	<0.50	15.6
Cyanide, total	mg/L	**0.005**	0.0007	0.00067	0.00078	0.0007	0.00065	0.00051	<0.00050	0.00056	0.00054	<0.00050	0.00057	0.00073	0.00162	0.00065	<0.00050	<0.00050	0.00059	0.00182	0.00075
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	0.00055	<0.00050	0.00055	0.00087	0.00071	0.00053	<0.00050	0.00056	<0.00050	<0.00050	0.00076	0.00082	<0.00050	<0.00050	<0.00050	<0.00050	0.00052	0.00163	0.00085
Ammonia (N)	mg/L	*	0.034	0.02	0.067	0.013	0.011	<0.0050	0.007	0.007	0.01	0.026	0.057	0.012	0.022	0.009	0.037	0.06	0.03	0.049	0.012
Nitrite (N)	mg/L	**0.02**	<0.0020	<0.0020	<0.0020	0.0116	<0.0020	<0.0020	0.0025	<0.0020	<0.0020	<0.0020	<0.0020	0.0034	<0.0020	<0.0020	<0.0020	<0.0020	0.0027	<0.020	<0.0020
Nitrate (N)	mg/L	**3.0**	0.0177	0.0127	0.0203	0.0095	0.0265	0.031	0.0752	0.148	0.2	0.272	0.289	0.105	0.0602	0.24	0.232	0.229	0.187	<0.020	0.0706
Nitrite & Nitrate, as N	mg/L		0.0177	0.0127	0.0203	0.0211	0.0265	0.031	0.0777	0.148	0.2	0.272	0.289	0.108	0.0602	0.24	0.232	0.229	0.19	<0.020	0.0706
Phosphorus,total-colourimetric	mg/L	**0.035**	0.0142	0.0218	**0.061**	**0.0946**	0.0165	0.0085	0.0054	0.0032	0.0044	0.0036	0.007	0.0273	0.0112	0.0039	0.018	0.0157	0.0188	**0.0452**	0.016
Phosphorus, Total Dissolved	mg/L		0.0095	0.0226	0.0142	0.0871	0.0173	0.0028	0.0053	0.006	0.0048	0.0039	0.0097	0.0129	0.0112	0.0039	0.018	0.0176	0.0205	0.0439	0.0141
Dissolved Organic Carbon	mg/L		4.64	3.2	9.96	6.5	4.89	3.29	2.87	2.62	2.28	2.37	1.66	4.77	2.49	1.92	<0.50	0.64	1.88	18.5	4.11
Aluminum (Al), total	mg/L	*	0.0318	**0.175**	**0.477**	**0.425**	**0.115**	0.0283	0.0325	0.00538	0.0523	0.00361	0.00989	0.00135	0.00621	0.00066	0.00764	0.00605	0.0101	**0.503**	0.0914
Antimony (Sb), total	mg/L	**0.009**	0.000067	0.000107	0.000178	0.000194	0.000126	0.000076	0.000074	0.000075	0.000071	0.000067	0.00007	0.000068	0.000071	0.000049	0.000028	0.000032	0.000048	0.00005	0.000063
Arsenic (As), total	mg/L	**0.005**	0.00102	0.00125	0.0024	0.00206	0.00135	0.00117	0.00135	0.000634	0.000661	0.000389	0.000366	0.000793	0.000659	0.000455	0.000497	0.000582	0.000455	0.00105	0.000533
Barium (Ba), total	mg/L		0.0423	0.0499	0.0653	0.0805	0.0693	0.0728	0.0706	0.0719	0.0915	0.0902	0.104	0.105	0.102	0.086	0.09	0.096	0.091	0.0472	0.0481
Beryllium (Be), total	mg/L		<0.000010	0.000014	0.000035	0.000038	0.000011	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000035	<0.000010
Bismuth (Bi), total	mg/L		<0.000010	<0.000010	0.000014	0.000011	<0.000010	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.000010	<0.000010
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	*	0.000019	0.000043	0.000102	0.0000966	0.0000377	0.0000187	0.000022	0.000011	0.0000212	0.0000179	0.0000204	0.0000491	0.0000753	0.000015	0.000056	0.000063	0.000064	**0.000323**	0.00009
Calcium (Ca), total	mg/L		33.1	37.4	31.7	42.5	50.2	62.8	67	66.9	81.8	75.1	83.2	97.1	98.3	74.4	67.7	69.8	61.7	18.6	30.7
Chromium (Cr), total	mg/L	**0.001**	0.00013	0.00046	**0.00136**	**0.00105**	0.0003	0.00011	0.00013	<0.00010	0.00015	<0.00010	<0.00010	<0.00010	0.0002	<0.00010	<0.00010	<0.00010	0.0001	0.00088	0.00017
Cobalt (Co), total	mg/L		0.000077	0.000211	0.000846	0.000697	0.000214	0.000074	0.0001	0.000028	0.0000985	0.0000209	0.0000284	0.0000182	0.0000209	0.000013	0.000127	0.000134	0.00013	0.000555	0.000132
Copper (Cu), total	mg/L	*	0.00119	0.00153	0.00402	0.00349	0.00129	0.0006	0.000608	0.000444	0.000587	0.000377	0.000463	0.000556	0.000567	0.000299	0.000151	0.000145	0.000307	**0.00346**	0.00185
Iron (Fe), total	mg/L	**0.3**	0.218	**0.533**	**1.23**	**1.03**	**0.353**	0.203	**0.321**	0.0578	0.167	0.03	0.0346	0.0083	0.0158	0.0146	**0.331**	**0.398**	**0.388**	**1.74**	**0.45**
Lead (Pb), total	mg/L	*	0.000092	0.000278	0.0012	0.00113	0.000306	0.000053	0.00008	0.000011	0.0000947	0.0000208	0.0000711	0.000019	0.0000422	<0.0000050	0.000016	0.000016	0.000025	0.00161	0.000486
Lithium (Li), total	mg/L		0.00283	0.00322	0.00238	0.00279	0.00293	0.00422	0.004	0.00529	0.00702	0.00829	0.00802	0.00849	0.00811	0.00659	0.00409	0.00459	0.00451	0.00135	0.0014
Magnesium (Mg), total	mg/L		9.37	11.6	9.53	12.7	13.8	19	19.1	20.8	25.2	25.3	27	31	30.8	29.1	11.9	11.9	10.2	3.07	4.62
Manganese (Mn), total	mg/L	*	0.0179	0.0261	0.0878	0.0627	0.0354	0.0266	0.0345	0.0124	0.0223	0.0107	0.00574	0.0068	0.00577	0.00578	0.0923	0.113	0.0957	0.108	0.0331
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000064	0.0000025
Molybdenum (Mo), total	mg/L	**0.073**	0.000848	0.00095	0.00071	0.000707	0.000967	0.00117	0.00115	0.00104	0.000971	0.000817	0.000817	0.000915	0.000862	0.000867	0.00104	0.00111	0.000917	0.000314	0.00047
Nickel (Ni), total	mg/L	*	0.00137	0.00206	0.00512	0.00406	0.002	0.0013	0.00131	0.000858	0.00112	0.000727	0.000772	0.000579	0.000608	0.000691	0.000466	0.000501	0.000538	0.00272	0.00103

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-26	KZ-37	KZ-37	KZ-37	KZ-37	KZ-37
			31-May-2017	05-Jun-2017	14-Jun-2017	18-Jul-2017	09-Aug-2017	13-Sep-2017	04-Oct-2017	01-Nov-2017	04-Dec-2017	07-Jan-2018	13-Feb-2018	01-Mar-2018	07-Mar-2018	15-Mar-2018	23-Feb-2017	21-Mar-2017	29-Apr-2017	17-May-2017	27-May-2017
Phosphorus (P), total	mg/L		0.0156	0.0227	0.0775	0.096	0.047	0.0093	0.0103	0.0039	0.0142	0.0043	0.008	0.0259	0.0133	0.0087	0.0255	0.0287	0.0209	0.0755	0.0226
Potassium (K), total	mg/L		1.15	1.14	0.91	0.94	1.06	1.33	1.28	1.34	1.6	1.44	1.6	2.71	2.35	1.83	1.44	1.57	1.85	1.67	1.3
Selenium (Se), total	mg/L	**0.002**	0.000385	0.000436	0.000427	0.000527	0.000818	0.000783	0.000909	0.000891	0.000921	0.000898	0.000938	0.0011	0.0012	0.0011	0.00134	0.0013	0.00105	0.000395	0.000666
Silicon (Si), total	mg/L		2.32	3.11	3.41	3.84	3.7	3.84	3.67	4.57	4.78	4.45	5.22	6.09	5.86	5.78	3.86	3.67	3.81	2.39	2.29
Silver (Ag), total	mg/L	**0.00025**	<0.000010	<0.000010	0.000025	0.000013	<0.000010	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000051	0.0000152	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000011	<0.000010
Sodium (Na), total	mg/L		0.84	1.03	0.83	0.97	1.06	1.46	1.53	1.65	2.99	2.2	2.28	2.86	2.7	2.46	1.36	1.37	1.38	0.39	0.55
Strontium (Sr), total	mg/L		0.114	0.114	0.107	0.135	0.163	0.196	0.201	0.214	0.284	0.252	0.283	0.333	0.319	0.276	0.231	0.256	0.209	0.0638	0.0976
Sulphur (S), total	mg/L		6.9	7.4	6.1	9.2	10.6	13.8	13.4	14.1	16	15.4	16.6	19.7	21.1	17.5	10.5	10.7	9.7	<3.0	5.6
Thallium (Tl), total	mg/L	**0.0008**	0.000002	0.000003	0.00001	0.0000049	0.0000028	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000093	0.000004
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00034	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L		<0.0020	0.0044	0.0139	0.008	0.0037	<0.0020	0.0015	<0.00050	0.0016	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00084	0.0214	0.0047
Uranium (U), total	mg/L	**0.015**	0.00117	0.00146	0.00107	0.00163	0.00189	0.00263	0.00286	0.00301	0.00327	0.00357	0.00365	0.00402	0.00435	0.00355	0.00218	0.0021	0.00201	0.000377	0.000676
Vanadium (V), total	mg/L		<0.00020	0.00055	0.00198	0.00156	0.00053	<0.00020	<0.00020	<0.00020	0.0002	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00079	0.00035
Zinc (Zn), total	mg/L	*	0.0018	0.0036	0.0094	0.0073	0.0032	0.0014	0.00154	0.00069	0.00182	0.00176	0.00177	0.00371	0.00623	0.00138	0.0108	0.0113	0.0113	**0.0525**	**0.0192**
Zirconium (Zr), total	mg/L		<0.00010	0.00012	0.00047	0.00036	0.00025	<0.00010	0.00011	<0.00010	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00035	0.00011
Aluminum (Al), dissolved	mg/L	*	0.0101	0.00664	0.0116	0.00796	0.00492	0.00224	0.00168	0.0011	0.0011	0.00332	0.00112	0.00115	0.00086	0.00157	0.0016	0.00177	0.00273	**0.152**	0.0228
Antimony (Sb), dissolved	mg/L		0.000064	0.000088	0.000107	0.000119	0.000111	0.000076	0.000072	0.000083	0.000067	0.000072	0.000065	0.000071	0.000073	0.00007	0.000024	0.000034	0.000026	0.000032	0.000053
Arsenic (As), dissolved	mg/L		0.000714	0.000749	0.000829	0.000944	0.000946	0.000961	0.000875	0.000517	0.000411	0.000336	0.000312	0.000775	0.000588	0.000427	0.000384	0.000382	0.000395	0.000301	0.000328
Barium (Ba), dissolved	mg/L		0.0454	0.0487	0.0413	0.0596	0.063	0.0728	0.0694	0.0715	0.0894	0.0934	0.101	0.11	0.108	0.0952	0.0881	0.0924	0.0911	0.0309	0.0476
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000065	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000015	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.000011	0.000011	0.000013	0.000011	0.0000118	0.000012	0.000013	0.000013	0.0000178	0.0000199	0.0000176	0.000051	0.000081	0.0000171	0.000041	0.000057	0.000063	0.000104	0.000061
Calcium (Ca), dissolved	mg/L		35.5	36.7	32.1	45.4	51.8	61.8	61.7	66.4	82.3	82.5	83.8	98	93.2	89.6	67.1	70.9	63.7	15.7	31.3
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00019	<0.00010
Cobalt (Co), dissolved	mg/L		0.00003	0.000032	0.000053	0.000056	0.0000399	0.000045	0.000053	0.000021	0.0000171	0.0000126	0.0000149	0.0000208	0.0000139	0.0000154	0.000111	0.00011	0.000124	0.000119	0.000062
Copper (Cu), dissolved	mg/L		0.000995	0.00086	0.00147	0.000859	0.000677	0.000461	0.00347	0.000414	0.000459	0.000457	0.00041	0.000215	0.000526	0.000559	0.000109	0.000156	0.000257	0.0019	0.00136
Iron (Fe), dissolved	mg/L	**0.35**	0.101	0.0761	0.1	0.0522	0.0577	0.0697	0.0549	0.0152	0.0079	0.0069	0.0053	0.0029	0.0017	0.003	0.133	0.189	0.225	0.24	0.194
Lead (Pb), dissolved	mg/L		0.000016	0.000023	0.000035	0.000036	0.0000178	<0.0000050	0.000005	<0.0000050	0.0000093	0.0000418	0.0000201	0.0000174	0.0000232	0.0000176	<0.0000050	0.000006	<0.0000050	0.0000877	0.000109
Lithium (Li), dissolved	mg/L		0.00255	0.00311	0.00202	0.00293	0.00288	0.00486	0.00419	0.00546	0.00707	0.00793	0.0069	0.00872	0.00908	0.00736	0.00386	0.00447	0.00464	0.00096	0.00147
Magnesium (Mg), dissolved	mg/L		9.74	11.3	9.46	13	13.8	19.1	19.6	20.6	25.8	24.2	27.6	31.4	31.9	30	12	10.9	10.5	2.75	4.79
Manganese (Mn), dissolved	mg/L		0.00401	0.00508	0.00909	0.0126	0.0155	0.021	0.0228	0.0111	0.00972	0.0078	0.0039	0.00711	0.00459	0.00584	0.0897	0.0992	0.0994	0.0336	0.0255
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000072	<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.000866	0.00101	0.000802	0.000926	0.00102	0.00121	0.00116	0.00111	0.000977	0.000854	0.000816	0.000854	0.00095	0.000991	0.00106	0.00104	0.000935	0.000259	0.000495
Nickel (Ni), dissolved	mg/L		0.00126	0.00138	0.00204	0.00138	0.00129	0.00111	0.00105	0.000861	0.000855	0.000735	0.000728	0.000609	0.00053	0.000805	0.000445	0.000479	0.000545	0.0015	0.00083
Phosphorus (P), dissolved	mg/L		0.008	0.0063	0.0075	0.0053	0.0069	0.003	0.0031	0.0028	0.0027	0.004	0.006	0.013	0.0099	0.0113	0.0208	0.0135	0.0204	0.0228	0.0115
Potassium (K), dissolved	mg/L		1.22	1.19	0.848	0.895	1.08	1.37	1.28	1.31	1.65	1.44	1.64	2.74	2.31	1.97	1.44	1.4	1.94	1.58	1.31
Selenium (Se), dissolved	mg/L		0.000396	0.000403	0.000356	0.000596	0.000869	0.000845	0.000835	0.00092	0.000909	0.000984	0.000905	0.00111	0.00115	0.00101	0.00125	0.0012	0.00112	0.000328	0.000621
Silicon (Si), dissolved	mg/L		2.44	2.61	2.77	3.75	3.64	3.79	3.37	3.96	4.84	4.54	4.75	5.83	5.85	5.39	3.61	3.49	4.05	1.73	2.23
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000008	<0.0000050
Sodium (Na), dissolved	mg/L		0.846	1.02	0.805	1.01	1.07	1.49	1.59	1.7	2.15	2.16	2.33	2.79	2.76	2.67	1.38	1.29	1.42	0.384	0.573
Strontium (Sr), dissolved	mg/L		0.116	0.123	0.0995	0.146	0.164	0.215	0.203	0.211	0.289	0.247	0.282	0.333	0.312	0.307	0.235	0.21	0.224	0.0571	0.0981
Sulphur (S), dissolved	mg/L		6.7	7.4	5.8	9	10.8	13.1	13	13.4	16.4	15.1	16.6	20.7	20.7	17.1	10	8.6	10.7	<3.0	5.8
Thallium (Tl), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000028	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000026	0.000003
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00158	<0.00050
Uranium (U), dissolved	mg/L		0.00124	0.00151	0.00101	0.00162	0.00189	0.00292	0.00295	0.00303	0.00332	0.00356	0.00354	0.00438	0.00388	0.00377	0.00215	0.00218	0.002	0.000278	0.000671
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.00101	0.00064	0.00075	0.0005	0.00068	0.00069	0.00058	0.00049	0.00125	0.00708	0.00178	0.0042	0.00455	0.0026	0.0106	0.00988	0.0121	0.0222	0.0134
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	0.00012	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00022	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-37 01-Jun-2017	KZ-37 07-Jun-2017	KZ-37 13-Jun-2017	KZ-37 19-Jul-2017	KZ-37 10-Aug-2017	KZ-37 14-Sep-2017	KZ-37 05-Oct-2017	KZ-37 03-Nov-2017	KZ-37 05-Dec-2017	KZ-37 09-Jan-2018	KZ-37 14-Feb-2018	KZ-37 21-Feb-2018	KZ-37 01-Mar-2018	KZ-37 07-Mar-2018	KZ-37 15-Mar-2018	KZ-9 East_Seep 24-Jun-2015	KZ-9 East_Seep 29-Jul-2015	KZ-9 East_Seep 15-Oct-2015
Discharge (Flow)	L/s			301.8			595.5	203.1	168.5	119.5	70.8	57.3	48.1			55.3	56.5			
Total Suspended Solids	mg/L		25.7	5.2	10.6	7.3	3	1.9	1.1	<1.0	1.2	2.1	1.2	1.5	1.4	1	<1.0			
pH (field)	pH units	**6.5 - 9**	7.40	7.87	7.43	7.65	7.92	7.55	7.89	7.87	7.22	7.82	6.89	6.77	6.97	7.04	7.01	**5.89**	**5.94**	**5.78**
pH (lab)	pH units	**6.5 - 9**	7.72	8.16	8.08	8.24	8.31	8.33	8.23	8.06	8.24	7.97	8.28	7.92	8.26	7.81	8.23	**6.48**	6.71	6.63
Specific Conductance (field)	µS/cm		176.6	236	184.6	259.1	276.2	407.6	359.5	336.2	513.4	472.3			311.3	320	366.5	1520	1577	1628
Specific Conductance (lab)	µS/cm		173	242	186	259	316	341	346	370	383	399	437	447	437	436	435	1550	1560	1600
Temperature (field)	C		4.3	4.6	6.2	7	7.3	2.2	1.4	0	0	0.3	0	-0.1	-0.1	-0.3	-0.4	7.2	5.8	0.8
Dissolved Oxygen (field)	mg/L	**6.5**	8.11	10.7	9.82	11.42	10.31	11.85	11.36	12.41	9.34	10	10.51	10.07	10.39	10.22	9.17	**2.98**	**3.26**	**2.6**
Dissolved Oxygen (field)	%		62.3	97	79.4	94.2	99.8	99.7	95.2	99.2	74.1	81.3	83.9	68.8	71.1	69.5	62	24.6	26.5	21
ORP (field)	mV		233.9	360	281.6	341.3	106.2	14.1	12.7	14.3	85.3	73.5	46.9	175.8	176.5	179.1	189.9	45.7	76.1	153.3
Turbidity (internal)	NTU		2.84	0.93	1.28	1.76	1.11	1.24	0.80	1.25	1.288		1.906				2.294			
Hardness (from total)	mg/L		85.9	118	89.7	125	156	174	182	181	220	205	223	217	221	203	235			
Hardness (from dissolved)	mg/L		84.5	121	88.8	134	162	174	174	184	220	203	237	209	226	231	236	993	982	970
Colour	TCU																	7.2	44.8	29.4
Total Acidity	mg/L		1.06	<0.50	<0.50	<0.50	<1.0	<1.0	2	4.5	<1.0	9.4	7	11.7	11.4	31.6	<1.0	242	188	237
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		68.8	98.9	72.7	108	138	156	155	163	174	178	195	207	202	204	208	889	951	924
Alkalinity, bicarbonate HCO3	mg/L		83.9	121	88.6	132	164	185	189	199	213	217	237	252	247	249	254	1090	1160	1130
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	1.96	2.29	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	1.63	1.91	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**	0.52	0.6	0.73	<0.50	<0.50	0.68	1.1	0.73	0.62	<0.50	<0.50	0.56	<0.50	0.84	<0.50		1.5	2.3
Fluoride	mg/L	**0.12**	0.044	0.049	0.053	0.054	0.059	0.072	0.071	0.076	0.081	0.094	0.11	0.1	0.11	0.11	0.11		**0.86**	**0.91**
Sulphate, dissolved	mg/L	*	17.4	25.1	20.6	25.8	30.8	32.9	31.2	34.5	32.6	33	30.1	31.1	29.4	29.5	28.9		18.8	11.8
Cyanide, total	mg/L	**0.005**	0.0007	0.00083	0.00073	0.00067	0.00068	<0.00050	<0.00050	0.00053	0.00051	<0.00050	0.00058	<0.00050	0.00061	0.00078	0.00065			
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	<0.00050	0.0006	0.00089	0.00123	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00058	<0.00050	0.00062	0.00087	<0.00050			
Ammonia (N)	mg/L	*	0.019	0.018	0.097	0.015	0.011	<0.0050	0.028	0.011	<0.0050	0.017	0.027	0.052	0.024	0.031	0.022			
Nitrite (N)	mg/L	**0.02**	<0.0020	<0.0020	0.0025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020
Nitrate (N)	mg/L	**3.0**	0.0452	0.0737	0.0252	0.037	0.0776	0.111	0.119	0.172	0.173	0.197	0.201	0.213	0.2	0.196	0.198		0.0142	0.0074
Nitrite & Nitrate, as N	mg/L		0.0452	0.0737	0.0277	0.037	0.0776	0.111	0.119	0.172	0.173	0.197	0.201	0.213	0.2	0.196	0.198		0.0142	0.0074
Phosphorus,total-colourimetric	mg/L	**0.035**	0.0241	0.0069	0.0086	0.0067	0.0058	0.0066	0.0053	0.0094	0.0094	0.0154	0.0128	0.008	0.0084	0.0078	0.008			
Phosphorus, Total Dissolved	mg/L		0.0229	0.0075	0.0051	0.0054	0.0054	0.0039	0.0063	0.0082	0.0046	0.0106	0.0127	0.003	0.0091	0.0088	0.0096			
Dissolved Organic Carbon	mg/L		3.64	2.62	5.99	3.7	2.4	1.58	1.31	1.51	0.95	0.6	1.17	1.33	0.79	<0.50	0.9			
Aluminum (Al), total	mg/L	*	**0.234**	0.0712	**0.114**	0.0568	0.0308	0.0146	0.00847	0.00636	0.0076	0.00706	0.0086	0.0317	0.00542	0.00659	0.00715			
Antimony (Sb), total	mg/L	**0.009**	0.000068	0.000072	0.00006	0.00004	0.000062	0.000043	0.000039	0.000036	0.00004	0.000034	0.000028	0.00003	0.000033	0.000027	0.000022			
Arsenic (As), total	mg/L	**0.005**	0.000719	0.000358	0.000482	0.000292	0.00027	0.000325	0.000317	0.000317	0.000365	0.000415	0.000342	0.000567	0.00036	0.000394	0.00043			
Barium (Ba), total	mg/L		0.0468	0.0574	0.0457	0.0568	0.0688	0.0753	0.0691	0.0764	0.0887	0.0896	0.111	0.103	0.0999	0.101	0.08			
Beryllium (Be), total	mg/L		0.000013	<0.000010	0.000011	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010			
Bismuth (Bi), total	mg/L		<0.000010	<0.0000050	<0.0000050	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050			
Boron (B), total	mg/L	**1.5**	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010			
Cadmium (Cd), total	mg/L	*	0.000131	0.000062	0.00009	0.0000795	0.000078	0.000083	0.000077	0.000079	0.0000724	0.0000659	0.0000774	0.0000891	0.0000651	0.0000842	0.0000574			
Calcium (Ca), total	mg/L		27.9	38.4	29.3	40.5	50	54.2	56.5	57.3	70	64	73.2	70.4	71.6	66.1	74.5			
Chromium (Cr), total	mg/L	**0.001**	0.00062	0.00016	0.00027	0.00056	0.00012	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00015	<0.00010	<0.00010	<0.00010			
Cobalt (Co), total	mg/L		0.000314	0.000124	0.00017	0.00008	0.0000634	0.000071	0.000087	0.000083	0.0000989	0.000107	0.000221	0.00022	0.000189	0.000183	0.000174			
Copper (Cu), total	mg/L	*	0.00253	0.00114	0.00205	0.00107	0.000608	0.000395	0.000406	0.000265	0.00026	0.000208	0.000205	0.000679	0.000228	0.000178	0.000156			
Iron (Fe), total	mg/L	**0.3**	**0.88**	**0.316**	**0.407**	0.241	0.2	0.294	**0.322**	**0.318**	**0.317**	**0.604**	**0.493**	**0.578**	**0.384**	**0.446**	**0.384**			
Lead (Pb), total	mg/L	*	0.0011	0.000271	0.000464	0.000374	0.000116	0.000051	0.000033	0.000024	0.0000192	0.0000218	0.0000176	0.0000813	0.0000173	0.0000192	0.0000136			
Lithium (Li), total	mg/L		0.0014	0.00157	0.00102	0.00123	0.00143	0.00237	0.00211	0.00299	0.00357	0.00431	0.00591	0.00429	0.00486	0.00537	0.00381			
Magnesium (Mg), total	mg/L		3.96	5.44	4.01	5.88	7.65	9.24	9.79	9.26	11.1	11	9.72	10	10.3	9.29	11.9			
Manganese (Mn), total	mg/L	*	0.0375	0.0235	0.0217	0.0147	0.0252	0.0497	0.061	0.0635	0.0758	0.0834	0.165	0.143	0.139	0.146	0.132			
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020			
Molybdenum (Mo), total	mg/L	**0.073**	0.000432	0.00053	0.000447	0.000515	0.000631	0.000786	0.000743	0.000793	0.000894	0.000889	0.000774	0.000943	0.000932	0.00082	0.000749			
Nickel (Ni), total	mg/L	*	0.00131	0.000672	0.00105	0.00062	0.000402	0.000417	0.000457	0.000397	0.000475	0.000484	0.000647	0.000724	0.000547	0.000635	0.000566			

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	KZ-37	KZ-37	KZ-37	KZ-37	KZ-37	KZ-37	KZ-37	KZ-37	KZ-37	KZ-37	KZ-37	KZ-37	KZ-37	KZ-37	KZ-37	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 East_Seep
			01-Jun-2017	07-Jun-2017	13-Jun-2017	19-Jul-2017	10-Aug-2017	14-Sep-2017	05-Oct-2017	03-Nov-2017	05-Dec-2017	09-Jan-2018	14-Feb-2018	21-Feb-2018	01-Mar-2018	07-Mar-2018	15-Mar-2018	24-Jun-2015	29-Jul-2015	15-Oct-2015
Phosphorus (P), total	mg/L		0.0429	0.01	0.0191	0.037	0.0139	0.0066	0.008	0.0141	0.0151	0.0167	0.0114	0.0263	0.0163	0.0106	0.0175			
Potassium (K), total	mg/L		1.15	1.14	0.911	0.81	0.976	1.21	1.28	1.22	1.37	1.38	1.7	1.65	1.6	1.52	1.74			
Selenium (Se), total	mg/L	**0.002**	0.000568	0.000761	0.000558	0.00063	0.00105	0.00106	0.00105	0.00121	0.00117	0.00122	0.00108	0.00119	0.00114	0.00113	0.00143			
Silicon (Si), total	mg/L		2.23	2.29	2.34	2.8	2.84	2.95	2.9	3.58	3.67	3.75	4.28	3.56	3.91	3.89	4.79			
Silver (Ag), total	mg/L	**0.00025**	0.000011	<0.0000050	0.000007	<0.000010	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050			
Sodium (Na), total	mg/L		0.5	0.727	0.563	0.75	0.91	1.08	1.2	1.19	1.3	1.41	1.57	1.68	1.64	1.51	1.67			
Strontium (Sr), total	mg/L		0.087	0.123	0.0924	0.121	0.162	0.181	0.185	0.184	0.235	0.209	0.252	0.232	0.253	0.241	0.224			
Sulphur (S), total	mg/L		5.8	8.1	6.9	8.4	10.3	10.4	11.1	11.1	11.8	11	9.7	9.1	10	9.6	10.3			
Thallium (Tl), total	mg/L	**0.0008**	0.000007	0.000003	0.000004	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020			
Tin (Sn), total	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020			
Titanium (Ti), total	mg/L		0.016	0.0051	0.00754	0.0027	0.00186	0.00068	0.00055	<0.00050	<0.00050	<0.00050	<0.00050	0.00129	<0.00050	<0.00050	0.00059			
Uranium (U), total	mg/L	**0.015**	0.00052	0.000872	0.000447	0.000796	0.00114	0.00154	0.00143	0.00161	0.00184	0.00206	0.00188	0.00202	0.00185	0.00207	0.00162			
Vanadium (V), total	mg/L		0.00095	0.00027	0.00027	0.00021	0.00021	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020			
Zinc (Zn), total	mg/L	*	**0.0268**	0.014	**0.0187**	0.0153	0.0129	0.0112	0.0118	0.015	0.0154	0.0123	0.0136	0.013	0.0119	0.0126	0.0109			
Zirconium (Zr), total	mg/L		0.00013	<0.00010	0.00015	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010			
Aluminum (Al), dissolved	mg/L	*	0.0104	0.00816	0.0188	0.00979	0.00663	0.00329	0.00259	0.00188	0.00228	0.00209	0.0021	0.00251	0.00196	0.00228	0.00317	**0.0585**	**0.126**	**0.0917**
Antimony (Sb), dissolved	mg/L		0.00007	0.000067	0.000047	0.000048	0.000063	0.00004	0.000038	0.000037	0.000035	0.000041	0.00003	0.000032	0.000027	0.000027	0.000048	<0.000020	<0.000020	<0.000020
Arsenic (As), dissolved	mg/L		0.00028	0.000258	0.00026	0.000223	0.000211	0.000262	0.00025	0.000265	0.000328	0.000306	0.000299	0.000411	0.000319	0.000291	0.000362	0.00188	0.00275	0.0018
Barium (Ba), dissolved	mg/L		0.0435	0.0575	0.0419	0.0582	0.0702	0.0777	0.0714	0.079	0.0928	0.088	0.109	0.101	0.106	0.105	0.0952	0.171	0.166	0.148
Beryllium (Be), dissolved	mg/L		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000283	0.000333	0.000337
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.000046	0.000042	0.000042	0.00006	0.0000617	0.00007	0.000069	0.000065	0.0000731	0.0000652	0.0000789	0.0000876	0.0000636	0.0000877	0.0000808	0.0000505	0.0000752	0.000069
Calcium (Ca), dissolved	mg/L		27.4	38.7	29	43.4	52.2	53.8	54.7	58.2	69.5	64.7	77.2	64.8	73.7	75	74.3	339	333	333
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L		0.000042	0.000046	0.000039	0.000025	0.0000326	0.000057	0.000068	0.000079	0.0000973	0.0000934	0.000201	0.000203	0.000191	0.000185	0.000174	0.00267	0.00274	0.00283
Copper (Cu), dissolved	mg/L		0.00133	0.000869	0.00163	0.000791	0.00045	0.000328	0.000284	0.000241	0.000251	0.000337	0.000171	0.000807	<0.000050	0.000173	0.00094	<0.000050	<0.000050	<0.000050
Iron (Fe), dissolved	mg/L	**0.35**	0.16	0.127	0.0875	0.0719	0.103	0.17	0.196	0.168	0.157	0.145	0.245	0.209	0.23	0.278	0.223	**3.89**	**13**	**9.02**
Lead (Pb), dissolved	mg/L		0.000104	0.000039	0.000042	0.000074	0.0000111	0.000006	0.000006	<0.0000050	0.0000124	0.0000399	<0.0000050	0.0000516	0.0000172	0.0000081	0.0000209	<0.0000050	<0.0000050	<0.0000050
Lithium (Li), dissolved	mg/L		0.00096	0.0015	0.00092	0.00139	0.00142	0.00266	0.00213	0.00315	0.00382	0.00409	0.00525	0.00424	0.0051	0.00548	0.00463	0.0758	0.0824	0.0803
Magnesium (Mg), dissolved	mg/L		3.91	5.78	3.99	6.13	7.81	9.57	9.06	9.3	11.4	9.97	10.8	11.4	10.1	10.6	12.2	35.8	36.4	33.5
Manganese (Mn), dissolved	mg/L		0.0164	0.0203	0.0116	0.0102	0.0223	0.0487	0.0556	0.0626	0.075	0.0723	0.16	0.142	0.143	0.149	0.14	2.16	2.17	2.09
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020			
Molybdenum (Mo), dissolved	mg/L		0.000423	0.000535	0.000437	0.000506	0.000624	0.000796	0.000745	0.000824	0.000924	0.000921	0.00092	0.001	0.000843	0.000866	0.000979	0.000443	0.000511	0.000452
Nickel (Ni), dissolved	mg/L		0.000581	0.000464	0.000703	0.000456	0.000384	0.000376	0.000384	0.000392	0.000454	0.000402	0.000656	0.000715	0.000601	0.000596	0.000612	0.00789	0.00836	0.00832
Phosphorus (P), dissolved	mg/L		0.0085	0.0054	0.0062	0.0043	0.0069	0.0056	0.0086	0.0078	0.0137	0.0097	0.0104	0.0154	0.0083	0.0087	0.0164	0.0045	0.003	0.0052
Potassium (K), dissolved	mg/L		1.16	1.21	0.922	0.836	1.01	1.25	1.17	1.23	1.53	1.36	1.72	1.8	1.63	1.71	1.8	6.13	5.68	5.32
Selenium (Se), dissolved	mg/L		0.000493	0.000717	0.000583	0.000813	0.00104	0.00105	0.00105	0.00118	0.00124	0.00127	0.00124	0.00106	0.00115	0.00127	0.00115	<0.000040	<0.000040	<0.000040
Silicon (Si), dissolved	mg/L		1.89	2.1	2.09	3	2.84	3	2.78	3.45	3.78	3.65	3.75	3.49	3.88	4.1	4.1	11.9	18.3	16.8
Silver (Ag), dissolved	mg/L		0.000006	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		0.488	0.76	0.559	0.789	0.915	1.09	1.15	1.18	1.46	1.37	1.56	1.89	1.65	1.65	1.87	9.88	9.46	8.74
Strontium (Sr), dissolved	mg/L		0.089	0.123	0.089	0.143	0.165	0.189	0.176	0.191	0.247	0.183	0.253	0.243	0.25	0.247	0.255	1.33	1.16	1.08
Sulphur (S), dissolved	mg/L		5.6	8.2	6.8	8.3	10.2	10.5	10.2	10.8	13.2	10	10	9.8	9.9	11.7	10	7.5	6.9	6.9
Thallium (Tl), dissolved	mg/L		0.000002	0.000002	<0.0000020	0.000002	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000002
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00021	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00143
Uranium (U), dissolved	mg/L		0.000502	0.000874	0.000426	0.000845	0.00116	0.00157	0.00151	0.00167	0.00186	0.002	0.00211	0.00213	0.00208	0.00179	0.00192	0.0019	0.00189	0.00178
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.012	0.0103	0.0108	0.0111	0.0112	0.0102	0.0107	0.0152	0.0163	0.0112	0.0128	0.0129	0.0125	0.0132	0.0128	0.0302	0.0337	0.0321
Zirconium (Zr), dissolved	mg/L		<0.00010	<0.00010	0.00011	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00033	0.00063	0.00043

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	Seep-3
		Guideline	16-Jun-2016	27-Jul-2016	27-Aug-2016	07-Sep-2016	04-Oct-2016	24-Jun-2015	29-Jul-2015	15-Oct-2015	14-Jun-2016	16-Jun-2016	27-Jul-2016	27-Aug-2016	07-Sep-2016	04-Oct-2016	24-Jun-2015
Discharge (Flow)	L/s																
Total Suspended Solids	mg/L		11.6		68.6							1.1		2.1			
pH (field)	pH units	**6.5 - 9**	**5.91**	**5.88**	**5.99**	**5.88**	**5.84**	7.66	7.71	7.7	7.88		7.41	7.92	7.6	7.28	7.89
pH (lab)	pH units	**6.5 - 9**	6.65	6.52	6.7	6.61	6.61	8.31	8.12	8.27	8.21		8.24	8.14	8.25	7.99	8.06
Specific Conductance (field)	µS/cm		1517	1534	1882	1422	1360	443.6	473.4	484.7	465.6		475.8	516.6	428	450.1	314.4
Specific Conductance (lab)	µS/cm		1550	1530	1260	1560	1560	446	470	465	463		468	457	464	506	320
Temperature (field)	C		6.4	4.6	2.9	4.3	0.4	6	4.4	0.2	4.2		4.2	2.7	3.5	-0.1	9.6
Dissolved Oxygen (field)	mg/L	**6.5**	**2.83**	**5.16**	**6.44**	**3.17**	**4.74**	10.19	9.63	9.4	8.91		8.18	11.22	8.96	9.02	10.6
Dissolved Oxygen (field)	%		27.1	44.5	53.5	28.6	39	80.9	74.4	75	80.6		73	96.5	80.1	72	93.9
ORP (field)	mV		80.8	73.4	127.2	60.4	74.4	94.7	74.3	249.9	39.9		107.3	262.7	93.5	22.8	83
Turbidity (internal)	NTU																
Hardness (from total)	mg/L		848		818						242			241			
Hardness (from dissolved)	mg/L		834	921	852	895	952	260	268	250	251		259	238	257	258	173
Colour	TCU		12.6		80.5			<5.0	<5.0	<5.0	<5.0			<5.0			6.1
Total Acidity	mg/L		271	296	131	169	199	<0.50	<0.50	<0.50	0.87		1.7	1.5	<0.50	2.76	<0.50
Acidity (pH 4.5)	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		901	798	686	771	804	204	218	201	211		204	213	210	227	142
Alkalinity, bicarbonate HCO3	mg/L		1100	974	836	941	981	246	266	245	257		248	260	256	277	173
Alkalinity, hydroxide OH	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	1.34	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.50	<0.50	<0.50	<0.50	<0.50	1.12	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**	2.1		1.4	2			<0.50	0.67	0.91			0.77	0.75		
Fluoride	mg/L	**0.12**	**0.97**		**0.97**	**0.92**			0.061	0.056	0.072			0.067	0.056		
Sulphate, dissolved	mg/L	*	17		16.2	24.6			37.6	45.8	47.2			26	40.9		
Cyanide, total	mg/L	**0.005**	0.00059		<0.00050						0.00078			<0.00050			
Cyanide, Weak Acid Dissociable	mg/L	**0.005**	0.00091		<0.00050						0.00107			<0.00050			
Ammonia (N)	mg/L	*	0.12		0.079						0.048			0.07			
Nitrite (N)	mg/L	**0.02**	<0.0020		<0.0020	<0.0020			<0.0020	<0.0020	<0.0020			0.0024	<0.0020		
Nitrate (N)	mg/L	**3.0**	0.0152		0.0489	0.0161			0.384	0.59	0.358			0.39	0.486		
Nitrite & Nitrate, as N	mg/L		0.0152		0.0489	0.0161			0.384	0.59	0.358			0.392	0.486		
Phosphorus,total-colourimetric	mg/L	**0.035**	0.0127		0.0116						0.0026			0.0081			
Phosphorus, Total Dissolved	mg/L		0.0066		0.0138						0.0021			0.0071			
Dissolved Organic Carbon	mg/L		0.63		<0.50						1.27			0.91			
Aluminum (Al), total	mg/L	*	**0.18**		**0.148**						0.0203			0.00473			
Antimony (Sb), total	mg/L	**0.009**	<0.000050		<0.000020						<0.000050			0.00002			
Arsenic (As), total	mg/L	**0.005**	**0.0143**		**0.0141**						0.000171			0.000093			
Barium (Ba), total	mg/L		0.174		0.16						0.169			0.156			
Beryllium (Be), total	mg/L		0.000357		0.000339						<0.000010			<0.000010			
Bismuth (Bi), total	mg/L		<0.000020		<0.0000050						<0.000020			<0.0000050			
Boron (B), total	mg/L	**1.5**	<0.050		<0.010						<0.050			<0.010			
Cadmium (Cd), total	mg/L	*	0.000057		0.000076						0.000065			0.000089			
Calcium (Ca), total	mg/L		288		278						81.4			79.2			
Chromium (Cr), total	mg/L	**0.001**	<0.00050		<0.00010						<0.00050			0.00018			
Cobalt (Co), total	mg/L		0.00206		0.00226						0.000025			0.00001			
Copper (Cu), total	mg/L	*	0.00021		0.000071						0.00038			0.000203			
Iron (Fe), total	mg/L	**0.3**	**13**		**13.3**						0.0447			0.0134			
Lead (Pb), total	mg/L	*	0.000075		0.000056						0.000063			0.000014			
Lithium (Li), total	mg/L		0.0827		0.0761						0.0019			0.0013			
Magnesium (Mg), total	mg/L		31.5		30.2						9.45			10.4			
Manganese (Mn), total	mg/L	*	1.8		1.93						0.00747			0.00211			
Mercury (Hg), total	mg/L	**0.000026**	<0.0000020		<0.0000020						<0.0000020			<0.0000020			
Molybdenum (Mo), total	mg/L	**0.073**	0.000466		0.000483						0.00156			0.00151			
Nickel (Ni), total	mg/L	*	0.00652		0.00692						0.00021			0.000117			

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 East_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	KZ-9 West_Seep	Seep-3
		Guideline	16-Jun-2016	27-Jul-2016	27-Aug-2016	07-Sep-2016	04-Oct-2016	24-Jun-2015	29-Jul-2015	15-Oct-2015	14-Jun-2016	16-Jun-2016	27-Jul-2016	27-Aug-2016	07-Sep-2016	04-Oct-2016	24-Jun-2015
Phosphorus (P), total	mg/L		0.023		0.0153						<0.010			0.0053			
Potassium (K), total	mg/L		4.94		4.8						1.09			1.08			
Selenium (Se), total	mg/L	**0.002**	<0.000040		<0.000040						**0.00233**			**0.00308**			
Silicon (Si), total	mg/L		18.1		18.6						3.35			3.25			
Silver (Ag), total	mg/L	**0.00025**	0.000052		<0.0000050						0.000038			<0.0000050			
Sodium (Na), total	mg/L		8.51		7.85						1.06			0.99			
Strontium (Sr), total	mg/L		1.23		1.17						0.281			0.238			
Sulphur (S), total	mg/L		<15		7.5						16			8.5			
Thallium (Tl), total	mg/L	**0.0008**	0.000004		0.000003						<0.0000020			<0.0000020			
Tin (Sn), total	mg/L		<0.00020		<0.00020						<0.00020			<0.00020			
Titanium (Ti), total	mg/L		<0.0050		0.00072						<0.0050			<0.00050			
Uranium (U), total	mg/L	**0.015**	0.00174		0.00185						0.00287			0.00272			
Vanadium (V), total	mg/L		<0.00050		<0.00020						<0.00050			<0.00020			
Zinc (Zn), total	mg/L	*	0.0235		0.0279						<0.0010			0.00132			
Zirconium (Zr), total	mg/L		0.00059		0.00063						0.00011			<0.00010			
Aluminum (Al), dissolved	mg/L	*	**0.0586**	**0.0489**	**0.0952**	**0.0793**	**0.0276**	0.00091	0.0012	0.00059	0.00094		0.00121	0.00107	0.00129	0.0006	0.00261
Antimony (Sb), dissolved	mg/L		<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000025	0.000023	0.000025	0.000024		0.000021	0.000021	0.000027	0.000021	<0.000020
Arsenic (As), dissolved	mg/L		0.000781	0.000605	0.000579	0.000649	0.00115	0.000131	0.000121	0.000122	0.000109		0.000085	0.000085	0.000098	0.000077	0.000175
Barium (Ba), dissolved	mg/L		0.132	0.143	0.147	0.145	0.075	0.18	0.204	0.226	0.176		0.168	0.161	0.233	0.184	0.13
Beryllium (Be), dissolved	mg/L		0.000244	0.000247	0.000279	0.000293	0.000122	<0.000010	<0.000010	<0.000010	<0.000010		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.000061	0.00007	0.000062	0.000069	0.000039	0.0000386	0.0000324	0.000016	0.000041		0.00004	0.000055	0.000012	0.000039	0.0000092
Calcium (Ca), dissolved	mg/L		282	315	290	305	325	88.1	90.3	84.2	85		88	78.2	87.5	83.8	65.4
Chromium (Cr), dissolved	mg/L		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0002	0.00021	0.00046	0.00015		0.00016	0.00015	0.00027	0.00028	<0.00010
Cobalt (Co), dissolved	mg/L		0.00228	0.00225	0.0023	0.00226	0.00223	0.0000059	0.0000056	0.000008	<0.0000050		<0.0000050	0.000006	<0.0000050	<0.0000050	0.0000099
Copper (Cu), dissolved	mg/L		<0.000050	0.000066	0.000052	<0.000050	0.000085	0.000115	<0.000050	0.000103	0.000095		0.000084	0.000157	0.000112	<0.000050	0.00012
Iron (Fe), dissolved	mg/L	**0.35**	**3.13**	**1.85**	**6.64**	**4.44**	**0.497**	<0.0010	0.0011	<0.0010	<0.0010		<0.0010	0.0027	<0.0010	<0.0010	<0.0010
Lead (Pb), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000007	<0.0000050		<0.0000050	<0.0000050	0.000007	<0.0000050	<0.0000050
Lithium (Li), dissolved	mg/L		0.0726	0.0779	0.0806	0.0831	0.0525	0.00197	0.00191	0.00181	0.00197		0.00181	0.00171	0.00193	0.00141	<0.00050
Magnesium (Mg), dissolved	mg/L		31.5	32.5	30.8	32.3	34.3	9.73	10.3	9.74	9.32		9.47	10.4	9.36	11.7	2.27
Manganese (Mn), dissolved	mg/L		2.04	2.04	1.96	2.02	1.82	0.000096	0.000216	0.0014	<0.000050		0.000083	0.000533	0.000191	0.000468	0.000138
Mercury (Hg), dissolved	mg/L		<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020				<0.0000020		<0.0000020	<0.0000020	<0.0000020	<0.0000020	
Molybdenum (Mo), dissolved	mg/L		0.000405	0.000442	0.000459	0.000444	0.000161	0.00153	0.00133	0.000881	0.00155		0.00148	0.00157	0.00103	0.00135	0.000594
Nickel (Ni), dissolved	mg/L		0.00698	0.00712	0.00718	0.00713	0.00735	0.000144	0.000103	0.000123	0.000101		0.000111	0.000094	0.000087	0.000054	0.000106
Phosphorus (P), dissolved	mg/L		0.0086	<0.0020	<0.0020	<0.0020	0.006	0.0026	<0.0020	0.0025	0.0041		<0.0020	<0.0020	<0.0020	<0.0020	0.0027
Potassium (K), dissolved	mg/L		5.18	4.65	4.89	5.02	5.1	1.17	1.28	1.17	1.08		0.922	1.08	1.04	1.09	1.44
Selenium (Se), dissolved	mg/L		<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	0.00247	0.00308	0.00197	0.0024		0.00237	0.00343	0.00261	0.00362	0.000757
Silicon (Si), dissolved	mg/L		15.9	19.7	19.3	20.1	14.6	3.67	3.43	3.46	3.43		3.85	3.46	3.47	3.61	2.69
Silver (Ag), dissolved	mg/L		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		8.53	8.48	8.18	8.41	9.1	1.09	1.21	1.76	1.04		1.04	0.994	1.05	1.2	0.845
Strontium (Sr), dissolved	mg/L		1.25	1.22	1.28	1.21	1.23	0.269	0.284	0.253	0.268		0.247	0.249	0.253	0.257	0.225
Sulphur (S), dissolved	mg/L		6.2	7.6	7.2	8.1	8.1	13.1	13.6	14.9	14.3		14.8	9.3	13.7	15.1	8.3
Thallium (Tl), dissolved	mg/L		0.000004	0.000002	0.000002	0.000004	0.000005	<0.0000020	<0.0000020	<0.0000020	0.000005		<0.0000020	<0.0000020	<0.0000020	0.000002	<0.0000020
Tin (Sn), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.00020	<0.00020	0.00033	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.00149	0.00179	0.00183	0.00185	0.00107	0.00301	0.00303	0.0021	0.00311		0.00285	0.00279	0.00208	0.00289	0.00097
Vanadium (V), dissolved	mg/L		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.0266	0.0263	0.0282	0.0287	0.0269	0.00029	0.00053	0.00056	0.00038		<0.00010	0.00115	0.00128	0.00052	0.00023
Zirconium (Zr), dissolved	mg/L		0.00029	0.00018	0.0004	0.00027	0.00019	<0.00010	<0.00010	<0.00010	<0.00010		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	Seep-3	Seep-3	Seep-3	Seep-3	Seep-3	Seep-3	Seep-4	Seep-4	Seep-4	Seep-4	Seep-4	Seep-4	Seep-5	Seep-5	Seep-5	Seep-5	Seep-5	Seep-5	Seep-5
			16-Oct-2015	16-Jun-2016	27-Jul-2016	28-Aug-2016	07-Sep-2016	04-Oct-2016	24-Jun-2015	15-Oct-2015	16-Jun-2016	27-Aug-2016	08-Sep-2016	03-Oct-2016	24-Jun-2015	16-Oct-2015	16-Jun-2016	27-Jul-2016	27-Aug-2016	07-Sep-2016	04-Oct-2016
Discharge (Flow)	L/s																				
Total Suspended Solids	mg/L					1.4					1	8.4					13.1		3.1		
pH (field)	pH units	**6.5 - 9**	7.31	7.89	7.44	7.8	7.75	7.6	7.51	7.29	7.6	8.08	7.93	7.49	**5.99**	**5.95**	7.02	7.28	**6.04**	7.85	6.73
pH (lab)	pH units	**6.5 - 9**	8.05		8.25	8.19	8.11	8.03	7.97	8.06	8.17	8.06	7.91	7.67	6.51	6.75	8.06	7.68	7.56	7.32	6.74
Specific Conductance (field)	µS/cm		344.3	312.9	361	323.3	268.7	299.1	272.4	320	301.1	374.2	274.6	273.3	563.9	557.5	516.4	234.9	620.4	146.6	447.3
Specific Conductance (lab)	µS/cm		342		355	319	290	335	269	322	309	320	291	311	521	400	520	222	233	154	424
Temperature (field)	C		0.1	9.4	9.9	2.5	6.7	-0.2	7.7	2.4	2	8.2	2.7	2.4	12.6	0.6	11.1	9.1	9.3	6.5	1.2
Dissolved Oxygen (field)	mg/L	**6.5**	10.6	8.53	8.22	11.5	8.7	10.73	10	9	10.76	8.41	9.38	8.62	7.06	**3.2**	8.23	6.8	12.7	**6.43**	7.07
Dissolved Oxygen (field)	%		86	88.5	84.6	98	84.2	85.7	84.3	78	91.8	84.4	81.6	74.5	65.7	26	89.2	69	128	64.2	59.2
ORP (field)	mV		22.7	67.3	94.5	69.8	108.1	109.8	71	273.8	130	271.8	103.9	145.1	19.7	99	13.6	-14.2	34.2	-7.3	22.4
Turbidity (internal)	NTU																				
Hardness (from total)	mg/L					159					166	156					262		109		
Hardness (from dissolved)	mg/L		176		193	163	152	172	142	167	156	159	151	152	267	196	255	72.6	110	47.8	220
Colour	TCU		5.5			5.2			<5.0	<5.0	<5.0	6.9			6.8	86.6	16		64.6		
Total Acidity	mg/L		<0.50		2.55	<0.50	<0.50	<0.50	1.11	<0.50	<0.50	0.67	0.83	2.21	81.6	54.5	8.22	3.44	6.37	2.74	25.1
Acidity (pH 4.5)	mg/L		<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L		142		149	133	131	145	104	120	124	118	112	120	277	198	262	70.7	92.8	65	208
Alkalinity, bicarbonate HCO3	mg/L		173		182	163	160	177	127	146	151	144	137	146	338	242	319	86.3	113	79.3	254
Alkalinity, hydroxide OH	mg/L		<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L		<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L		<0.50		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	**120**	0.7			0.75	0.73			<0.50	0.71	<0.50	0.64			0.98	11		2.6	2.6	
Fluoride	mg/L	**0.12**	0.036			0.032	0.036			0.033	0.038	0.038	0.047			0.089	**0.17**		0.084	0.074	
Sulphate, dissolved	mg/L	*	31.1			27.7	18.2			39.3	39.5	38.4	39.2			11.5	8.6		17.7	7.51	
Cyanide, total	mg/L	**0.005**				<0.00050					0.00081	<0.00050					0.00093		0.00113		
Cyanide, Weak Acid Dissociable	mg/L	**0.005**				<0.00050					0.00131	<0.00050					0.00123		0.00115		
Ammonia (N)	mg/L	*				0.017					0.034	0.036					0.03		0.16		
Nitrite (N)	mg/L	**0.02**	<0.0020			<0.0020	<0.0020			<0.0020	<0.0020	<0.0020	<0.0020			<0.020	<0.0020		0.003	<0.0020	
Nitrate (N)	mg/L	**3.0**	0.566			0.587	0.509			0.269	0.489	0.378	0.495			<0.020	0.0046		<0.0020	<0.0020	
Nitrite & Nitrate, as N	mg/L		0.566			0.587	0.509			0.269	0.489	0.378	0.495			<0.020	0.0046		0.0025	<0.0020	
Phosphorus,total-colourimetric	mg/L	**0.035**				<0.0020					0.0027	0.0061					**0.0635**		0.0223		
Phosphorus, Total Dissolved	mg/L					<0.0020					0.0023	0.0031					0.0127		0.0227		
Dissolved Organic Carbon	mg/L					1.43					0.91	1.8					4.17		9.67		
Aluminum (Al), total	mg/L	*				0.00784					0.0051	0.0129					0.0202		**0.0334**		
Antimony (Sb), total	mg/L	**0.009**				<0.000020					<0.000020	<0.000020					0.000064		0.000065		
Arsenic (As), total	mg/L	**0.005**				0.000148					0.000066	0.000069					0.00069		0.000423		
Barium (Ba), total	mg/L					0.118					0.12	0.124					0.163		0.0737		
Beryllium (Be), total	mg/L					<0.000010					<0.000010	<0.000010					0.000017		<0.000010		
Bismuth (Bi), total	mg/L					<0.0000050					<0.0000050	<0.0000050					<0.000020		<0.0000050		
Boron (B), total	mg/L	**1.5**				<0.010					<0.010	<0.010					<0.050		<0.010		
Cadmium (Cd), total	mg/L	*				0.000011					0.000012	0.000013					0.000092		**0.000352**		
Calcium (Ca), total	mg/L					60.2					61.7	57.7					84.2		35.6		
Chromium (Cr), total	mg/L	**0.001**				<0.00010					<0.00010	<0.00010					<0.00050		0.00017		
Cobalt (Co), total	mg/L					0.000014					0.000006	0.000022					0.000466		0.000374		
Copper (Cu), total	mg/L	*				0.000158					0.000268	0.000494					0.00171		0.00298		
Iron (Fe), total	mg/L	**0.3**				0.0084					0.0048	0.0178					**3.92**		**1.96**		
Lead (Pb), total	mg/L	*				0.000037					0.000008	0.000057					0.000391		0.000238		
Lithium (Li), total	mg/L					0.0006					0.00061	<0.00050					0.0177		0.00401		
Magnesium (Mg), total	mg/L					2.23					2.86	2.87					12.6		4.88		
Manganese (Mn), total	mg/L	*				0.000522					0.00015	0.00272					0.444		0.124		
Mercury (Hg), total	mg/L	**0.000026**				<0.0000020					<0.0000020	<0.0000020					<0.0000020		<0.0000020		
Molybdenum (Mo), total	mg/L	**0.073**				0.000477					0.000569	0.000545					0.000106		0.000587		
Nickel (Ni), total	mg/L	*				0.000062					0.000161	0.000216					0.00171		0.00283		

Appendix A Historic and April 2015 to March 2018 Surface Water Monitoring Data

		Water Quality Guideline	Seep-3	Seep-3	Seep-3	Seep-3	Seep-3	Seep-3	Seep-4	Seep-4	Seep-4	Seep-4	Seep-4	Seep-4	Seep-5	Seep-5	Seep-5	Seep-5	Seep-5	Seep-5	Seep-5
			16-Oct-2015	16-Jun-2016	27-Jul-2016	28-Aug-2016	07-Sep-2016	04-Oct-2016	24-Jun-2015	15-Oct-2015	16-Jun-2016	27-Aug-2016	08-Sep-2016	03-Oct-2016	24-Jun-2015	16-Oct-2015	16-Jun-2016	27-Jul-2016	27-Aug-2016	07-Sep-2016	04-Oct-2016
Phosphorus (P), total	mg/L					0.0048					0.0039	0.0104					0.103		0.0223		
Potassium (K), total	mg/L					1.17					1.89	1.78					2.71		0.823		
Selenium (Se), total	mg/L	**0.002**				0.000734					0.00092	0.000839					0.000108		0.000291		
Silicon (Si), total	mg/L					2.24					2.84	2.82					7.05		5.59		
Silver (Ag), total	mg/L	**0.00025**				<0.0000050					<0.0000050	<0.0000050					0.000014		0.000005		
Sodium (Na), total	mg/L					0.726					0.676	0.663					11.8		3.49		
Strontium (Sr), total	mg/L					0.204					0.229	0.222					0.404		0.135		
Sulphur (S), total	mg/L					9.4					13.1	13.4					<15		6.5		
Thallium (Tl), total	mg/L	**0.0008**				<0.0000020					<0.0000020	<0.0000020					0.000002		0.000003		
Tin (Sn), total	mg/L					<0.00020					<0.00020	<0.00020					<0.00020		<0.00020		
Titanium (Ti), total	mg/L					<0.00050					<0.00050	<0.00050					<0.0050		0.00125		
Uranium (U), total	mg/L	**0.015**				0.000838					0.00144	0.00125					0.000295		0.000251		
Vanadium (V), total	mg/L					<0.00020					<0.00020	<0.00020					<0.00050		<0.00020		
Zinc (Zn), total	mg/L	*				0.00056					0.00055	0.00165					0.0231		**0.071**		
Zirconium (Zr), total	mg/L					<0.00010					<0.00010	<0.00010					0.0002		0.00017		
Aluminum (Al), dissolved	mg/L	*	0.0037		0.00422	0.00217	0.00328	0.00122	0.00126	0.00146	0.00155	0.00234	0.00159	0.00103	0.00257	0.00099	0.00102	0.0147	0.0126	0.0228	0.00097
Antimony (Sb), dissolved	mg/L		<0.000020		<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000022	0.000073	0.000064	0.000069	0.000039
Arsenic (As), dissolved	mg/L		0.000085		0.000096	0.000125	0.000074	0.000149	0.000056	0.000087	0.000062	0.000052	0.000062	0.000044	0.000264	0.000239	0.000277	0.000676	0.000308	0.000274	0.000292
Barium (Ba), dissolved	mg/L		0.123		0.129	0.12	0.0997	0.119	0.106	0.123	0.115	0.122	0.108	0.118	0.15	0.111	0.158	0.0674	0.0693	0.0489	0.104
Beryllium (Be), dissolved	mg/L		<0.000010		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L		<0.0000050		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L		<0.010		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	*	0.000014		0.000007	0.000008	0.000012	0.000007	0.0000137	0.000018	0.00001	0.000013	0.000013	0.000015	0.0000141	0.000035	0.000038	**0.000185**	**0.000345**	**0.000518**	0.00003
Calcium (Ca), dissolved	mg/L		65.9		73.1	61.7	58	65.3	52.9	61.9	58.1	59.1	56.7	56.7	88.3	64.7	85.2	23.1	36.1	14.4	74
Chromium (Cr), dissolved	mg/L		0.00017		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00094	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00017	0.00014	0.00019	<0.00010
Cobalt (Co), dissolved	mg/L		0.000008		0.000007	0.000007	0.000008	0.000008	0.0000079	0.000006	0.000019	0.00001	0.000008	0.000007	0.000552	0.000275	0.000019	0.000034	0.000366	0.000546	0.000263
Copper (Cu), dissolved	mg/L		0.000098		0.000167	0.000131	0.000234	0.00008	0.000295	0.000178	0.000352	0.000347	0.000319	0.00021	0.000151	0.000157	0.000432	0.00239	0.00235	0.00358	0.000204
Iron (Fe), dissolved	mg/L	**0.35**	<0.0010		0.0011	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.007	0.0025	<0.0010	<0.0010	0.0333	0.0273	0.0373	**0.681**	**1.11**	**0.513**	0.24
Lead (Pb), dissolved	mg/L		<0.0000050		<0.0000050	<0.0000050	<0.0000050	0.000027	<0.0000050	<0.0000050	<0.0000050	0.000006	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000025	0.000035	0.000034	0.000005
Lithium (Li), dissolved	mg/L		<0.00050		0.00063	<0.00050	<0.00050	<0.00050	0.00053	0.00051	0.00061	<0.00050	0.00067	<0.00050	0.0178	0.00851	0.0169	0.0026	0.00359	0.00168	0.00731
Magnesium (Mg), dissolved	mg/L		2.7		2.52	2.14	1.83	2.31	2.37	3.02	2.75	2.81	2.32	2.53	11.4	8.28	10.3	3.64	4.81	2.87	8.56
Manganese (Mn), dissolved	mg/L		0.000061		<0.000050	<0.000050	0.000108	0.000146	0.000087	0.000164	0.000175	0.000073	0.000155	0.000107	1.1	0.579	0.103	0.0155	0.131	0.0379	0.458
Mercury (Hg), dissolved	mg/L				<0.0000020	0.000002	<0.0000020	0.0000031			<0.0000020	<0.0000020	<0.0000020	<0.0000020			<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L		0.000592		0.000602	0.000506	0.000556	0.000563	0.000493	0.000523	0.000603	0.000537	0.000526	0.000515	<0.000050	<0.000050	0.000078	0.000536	0.000538	0.000799	0.000081
Nickel (Ni), dissolved	mg/L		0.000105		0.000095	0.000042	0.000112	0.000038	0.000159	0.000187	0.000597	0.000133	0.000146	0.000136	0.00112	0.000926	0.00119	0.00334	0.00275	0.00494	0.00113
Phosphorus (P), dissolved	mg/L		0.0027		<0.0020	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	0.0048	<0.0020	0.0034	0.0024	<0.0020	0.0033	0.0166	0.0043	0.0086	0.0101	0.0192
Potassium (K), dissolved	mg/L		1.42		1.19	1.25	1.07	1.17	1.78	2.01	1.84	1.79	1.76	1.77	1.93	1.19	2.06	0.71	0.83	0.316	1.6
Selenium (Se), dissolved	mg/L		0.000799		0.000732	0.000765	0.000627	0.000798	0.000709	0.00082	0.000833	0.00086	0.000826	0.000814	0.000043	0.000101	0.000099	0.000183	0.000237	0.000207	0.000363
Silicon (Si), dissolved	mg/L		2.31		3.18	2.43	2.8	2.32	2.72	2.73	2.61	3.01	2.82	2.82	11.2	7.47	6.32	6.41	5.42	5.82	6.99
Silver (Ag), dissolved	mg/L		<0.0000050		<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L		0.882		0.875	0.713	0.644	0.787	0.67	0.741	0.663	0.687	0.616	0.683	3.26	2.16	9.52	18.4	3.73	13	2.57
Strontium (Sr), dissolved	mg/L		0.211		0.226	0.223	0.195	0.2	0.187	0.225	0.222	0.237	0.202	0.205	0.336	0.222	0.33	0.0834	0.139	0.0589	0.244
Sulphur (S), dissolved	mg/L		9.9		10.9	9.4	5.2	8.5	10.3	12.9	11.9	14.2	11.3	12.6	<3.0	3.6	3.5	3.2	5.9	<3.0	3.8
Thallium (Tl), dissolved	mg/L		<0.0000020		<0.0000020	<0.0000020	<0.0000020	0.000002	<0.0000020	<0.0000020	0.000003	<0.0000020	<0.0000020	0.000002	<0.0000020	<0.0000020	0.000005	0.000005	0.000003	0.000003	0.000005
Tin (Sn), dissolved	mg/L		<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L		<0.00050		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L		0.00118		0.00112	0.000923	0.000702	0.00101	0.000944	0.00137	0.00131	0.00119	0.000879	0.00106	0.0000684	0.000114	0.000287	0.000069	0.000218	0.000089	0.000666
Vanadium (V), dissolved	mg/L		<0.00020		<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L		0.00029		<0.00010	0.00064	0.00043	0.00052	0.00026	0.00015	0.00037	0.00084	0.00014	0.00027	0.00856	0.0121	0.0105	0.0233	0.0681	0.1	0.0139
Zirconium (Zr), dissolved	mg/L		<0.00010		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00026	0.00016	0.00027	<0.00010

Appendix A Field and Trip Blank Data Associated with Surface Water Monitoring, April 2015 to March 2018

		Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank
		30-Apr-15	11-May-15	23-Jun-15	29-Jul-15	22-Aug-15	8-Sep-15	15-Oct-15	20-Nov-15	3-Dec-15	21-Jan-16	8-Feb-16	21-Mar-16	20-Apr-16	3-May-16	19-May-16	14-Jun-16
Total Suspended Solids	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
pH (lab)	pH units	5.75	5.74	6.11	5.47	6.14	6.2	6.1	5.82	5.92	5.96	5.73	5.94	5.92	5.95	5.18	5.84
Specific Conductance (lab)	µS/cm	1.2	1	1.2	<1.0	1.2	1.2	1.3	2.5	<1.0	1.4	1.4	1.5	1.2	1.1	1.1	1.1
Hardness (from total)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Hardness (from dissolved)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Colour	TCU	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	7.8	<5.0	<5.0	<5.0	<5.0	
Total Acidity	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.54	<0.50
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L	0.92	0.97	0.62	<0.50	0.69	0.84	1.11	0.97	0.67	0.81	<0.50	0.55	0.94	1.17	<0.50	<0.50
Alkalinity, bicarbonate HCO3	mg/L	1.12	1.18	0.76	<0.50	0.84	1.02	1.35	1.18	0.82	0.99	<0.50	0.67	1.15	1.43	<0.50	<0.50
Alkalinity, hydroxide OH	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.86	<0.50	0.6
Fluoride	mg/L	<0.010	0.013	<0.010	<0.010	<0.010	<0.010	<0.010	0.012	0.012	<0.010	0.018	<0.010	0.013	0.011	0.014	<0.010
Sulphate, dissolved	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cyanide, total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00065	<0.00050	<0.00050	<0.00050	0.00053	0.00062	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cyanide, Weak Acid Dissociable	mg/L	<0.00050	0.00057	<0.00050	<0.00050	<0.00050	0.00062	<0.00050	<0.00050	<0.00050	0.00067	0.00072	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Ammonia (N)	mg/L	0.0106	0.0086	<0.0050	0.0104	0.0066	<0.0050	0.0057	0.0063	<0.0050	0.022	0.0056	<0.0050	0.0165	0.0116	0.011	<0.0050
Nitrite (N)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	0.0027	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.002
Nitrate (N)	mg/L	0.0025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0023	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrite & Nitrate, as N	mg/L	0.0025	<0.0020	<0.0020	<0.0020	0.0032	<0.0020	0.0023	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus,total-colourimetric	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus, Total Dissolved	mg/L	<0.0020	<0.0020	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Dissolved Organic Carbon	mg/L	<0.50	1.38	0.65	0.85	<0.50	<0.50	<0.50	0.82	<0.50	<0.50	<0.50	0.53	0.6	<0.50	<0.50	<0.50
Aluminum (Al), total	mg/L	<0.00050	<0.00050	<0.00050	0.00065	0.00055	0.00391	0.0174	0.00144	0.00609	<0.00050	0.00138	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Antimony (Sb), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Arsenic (As), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000049	0.000023	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Barium (Ba), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	0.000025	0.0003	0.000087	0.000232	<0.000020	<0.000020	<0.000020	<0.000020	0.000025	<0.000020	<0.000020	<0.000020
Beryllium (Be), total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000006	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.057	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chromium (Cr), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Copper (Cu), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000378	<0.000050	<0.000050	0.000058	0.000062	0.000546	<0.000050
Iron (Fe), total	mg/L	<0.0010	0.0016	<0.0010	<0.0010	<0.0010	0.0205	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lead (Pb), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000006	0.000042	0.000011	<0.0000050	<0.0000050	0.000008	0.000006	<0.0000050	<0.0000050	0.000006	0.000025	<0.0000050
Lithium (Li), total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Magnesium (Mg), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Manganese (Mn), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000184	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury (Hg), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni), total	mg/L	0.000102	0.000028	0.000129	0.000079	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P), total	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0041	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0029	<0.0020	<0.0020	0.0029	0.0029
Potassium (K), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium (Se), total	mg/L	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si), total	mg/L	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Silver (Ag), total	mg/L	<0.0000050	<0.0000050	0.0000083	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Strontium (Sr), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000067	0.000239	0.000153	0.000097	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Sulphur (S), total	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Thallium (Tl), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00174	0.00074	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000002	0.000002	0.000005	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000009	<0.0000020	<0.0000020	<0.0000020
Vanadium (V), total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00032	0.00054	0.00031	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00028	0.00018	0.00017	<0.00010	0.00013	0.00025	0.00012	0.0002	<0.00010	0.0004	0.00011	0.00012
Zirconium (Zr), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	<0.00050	<0.00050	0.00219	<0.00050	<0.00050	0.00285	<0.00050	<0.00050	<0.00050	0.00087	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

Appendix A Field and Trip Blank Data Associated with Surface Water Monitoring, April 2015 to March 2018

		Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank
		30-Apr-15	11-May-15	23-Jun-15	29-Jul-15	22-Aug-15	8-Sep-15	15-Oct-15	20-Nov-15	3-Dec-15	21-Jan-16	8-Feb-16	21-Mar-16	20-Apr-16	3-May-16	19-May-16	14-Jun-16
Antimony (Sb), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Arsenic (As), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000037	0.000028	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Barium (Ba), dissolved	mg/L	<0.000020	<0.000020	0.000021	<0.000020	<0.000020	0.000025	0.000041	0.000261	<0.000020	<0.000020	<0.000020	0.000026	<0.000020	<0.000020	<0.000020	<0.000020
Beryllium (Be), dissolved	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000005	<0.0000050	<0.0000050	0.000005	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000005	<0.0000050
Calcium (Ca), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chromium (Cr), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Copper (Cu), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe), dissolved	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.002	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lead (Pb), dissolved	mg/L	<0.0000050	<0.0000050	0.0000059	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000005	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.000007	<0.0000050
Lithium (Li), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Magnesium (Mg), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Manganese (Mn), dissolved	mg/L	<0.000050	<0.000050	0.000159	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury (Hg), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni), dissolved	mg/L	<0.000020	0.000042	<0.000020	<0.000020	0.000203	0.000031	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P), dissolved	mg/L	<0.0020	<0.0020	0.0109	0.0053	<0.0020	<0.0020	0.0025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0043	<0.0020	<0.0020	0.0025
Potassium (K), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium (Se), dissolved	mg/L	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si), dissolved	mg/L	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Silver (Ag), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Strontium (Sr), dissolved	mg/L	<0.000050	<0.000050	0.000094	<0.000050	<0.000050	<0.000050	<0.000050	0.000151	<0.000050	0.000161	<0.000050	<0.000050	0.000134	<0.000050	<0.000050	<0.000050
Sulphur (S), dissolved	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Thallium (Tl), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000002	<0.0000020	0.000005	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.000014	<0.0000020	0.000002	<0.0000020
Vanadium (V), dissolved	mg/L	<0.00020	0.00021	<0.00020	<0.00020	<0.00020	0.00074	0.00069	0.00029	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00019	<0.00010	<0.00010	<0.00010	<0.00010
Zirconium (Zr), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A Field and Trip Blank Data Associated with Surface Water Monitoring, April 2015 to March 2018

		Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank
		26-Jul-16	27-Aug-16	08-Sep-2016	03-Oct-2016	15-Nov-2016	21-Dec-2016	17-Jan-2017	22-Feb-2017	20-Mar-2017	28-Apr-2017	16-May-2017	26-May-2017	31-May-2017	07-Jun-2017	13-Jun-2017	19-Jul-2017
Total Suspended Solids	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
pH (lab)	pH units	5.34	5.71	5.89	5.57	5.79	5.97	6.03	5.43	5.24	5.86	6.07	5.63	5.72	5.21	5.95	5.67
Specific Conductance (lab)	µS/cm	1.2	1.2	1.1	1.3	1.3	1.4	1.5	1.2	1.3	1.6	1.3	1.2	1.5	1.3	1.1	<1.0
Hardness (from total)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Hardness (from dissolved)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Colour	TCU		<5.0														
Total Acidity	mg/L	<0.50	<0.50	<0.50	0.62	<0.50	0.76	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L	0.68	<0.50	<0.50	<0.50	<0.50	0.88	0.59	<0.50	<0.50	0.92	1.02	0.62	<0.50	<0.50	0.61	<0.50
Alkalinity, bicarbonate HCO3	mg/L	0.83	<0.50	<0.50	<0.50	<0.50	1.07	0.72	<0.50	<0.50	1.12	1.24	0.76	<0.50	<0.50	0.74	<0.50
Alkalinity, hydroxide OH	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	<0.50	0.6	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride	mg/L	<0.010	0.011	0.015	<0.010	0.013	0.010	<0.010	0.012	0.014	0.011	<0.010	0.010	<0.010	0.013	0.011	<0.010
Sulphate, dissolved	mg/L	<0.50	<0.50	<0.50	<0.50	0.53	<0.50	<0.50	0.54	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cyanide, total	mg/L	<0.00050	<0.00050	0.0007	<0.00050	0.00056	0.00062	<0.00050	<0.00050	<0.00050	0.00056	<0.00050	<0.00050	<0.00050	0.00059	<0.00050	<0.00050
Cyanide, Weak Acid Dissociable	mg/L	<0.00050	<0.00050	0.00077	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00051	<0.00050	0.00058	<0.00050	0.00059	<0.00050	0.00072
Ammonia (N)	mg/L	0.006	<0.0050	<0.0050	0.013	0.019	0.013	0.033	0.0087	<0.0050	0.02	<0.0050	0.0099	0.01	0.0053	<0.0050	<0.0050
Nitrite (N)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0064	<0.0020	<0.0020	<0.0020	<0.0020
Nitrite & Nitrate, as N	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0064	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus,total-colourimetric	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0023	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0022	<0.0020	0.0024
Phosphorus, Total Dissolved	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0041	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	<0.0020	<0.0020	0.0021	<0.0020
Dissolved Organic Carbon	mg/L	0.67	<0.50	<0.50	<0.50	<0.50	0.60	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Aluminum (Al), total	mg/L	0.00067	<0.00050	0.00059	<0.00050	<0.00050	<0.00050	0.00087	0.00079	<0.00050	<0.00050	<0.00050	0.00303	<0.00050	<0.00050	0.00080	0.00060
Antimony (Sb), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Arsenic (As), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Barium (Ba), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000024	<0.000020	<0.000020	<0.000020	0.000086	<0.000020	<0.000020	<0.000020	0.000025
Beryllium (Be), total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chromium (Cr), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Copper (Cu), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000060	<0.000050	<0.000050	<0.000050
Iron (Fe), total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0045	<0.0010	<0.0010	<0.0010	0.0013
Lead (Pb), total	mg/L	<0.0000050	<0.0000050	0.000011	<0.0000050	<0.0000050	<0.0000050	0.0000120	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	<0.0000050	0.0000060	<0.0000050	0.0000102
Lithium (Li), total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Magnesium (Mg), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Manganese (Mn), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000216	<0.000050	<0.000050	<0.000050	<0.000050
Mercury (Hg), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000053	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P), total	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0039	0.0039	<0.0020	0.0029	0.0030	0.0029	0.0029	0.0021	<0.0020	0.0023
Potassium (K), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium (Se), total	mg/L	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Silver (Ag), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Strontium (Sr), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000134	<0.000050	<0.000050	<0.000050	<0.000050
Sulphur (S), total	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Thallium (Tl), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Vanadium (V), total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	0.00022	0.00014	0.00023	<0.00010	<0.00010	<0.00010	0.00019	0.00020	<0.00010	0.00011	<0.00010	0.00025	<0.00010	0.00030	<0.00010	0.00020
Zirconium (Zr), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00081	0.00063	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00090

Appendix A Field and Trip Blank Data Associated with Surface Water Monitoring, April 2015 to March 2018

		Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank
		26-Jul-16	27-Aug-16	08-Sep-2016	03-Oct-2016	15-Nov-2016	21-Dec-2016	17-Jan-2017	22-Feb-2017	20-Mar-2017	28-Apr-2017	16-May-2017	26-May-2017	31-May-2017	07-Jun-2017	13-Jun-2017	19-Jul-2017
Antimony (Sb), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Arsenic (As), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Barium (Ba), dissolved	mg/L	0.000024	<0.000020	<0.000020	0.000024	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000027	<0.000020	<0.000020	0.000027
Beryllium (Be), dissolved	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chromium (Cr), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Copper (Cu), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe), dissolved	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0018	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lead (Pb), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Lithium (Li), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Magnesium (Mg), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Manganese (Mn), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000053	<0.000050	<0.000050
Mercury (Hg), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L	0.000078	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P), dissolved	mg/L	<0.0020	<0.0020	<0.0020	0.002	0.0033	0.0025	<0.0020	0.0036	<0.0020	0.0022	0.0034	0.0025	0.0026	<0.0020	<0.0020	0.0022
Potassium (K), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium (Se), dissolved	mg/L	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Silver (Ag), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Strontium (Sr), dissolved	mg/L	<0.000050	<0.000050	0.000052	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000231	<0.000050	<0.000050	<0.000050	<0.000050
Sulphur (S), dissolved	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Thallium (Tl), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000050	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Vanadium (V), dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00012	0.00021	0.00013	<0.00010	<0.00010	<0.00010	0.00011	<0.00010	0.00075	<0.00010	0.00020
Zirconium (Zr), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A Field and Trip Blank Data Associated with Surface Water Monitoring, April 2015 to March 2018

		Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
		09-Aug-2017	14-Sep-2017	04-Oct-2017	01-Nov-2017	05-Dec-2017	08-Jan-2018	13-Feb-2018	21-Feb-2018	01-Mar-2018	07-Mar-2018	15-Mar-2018	30-Apr-2015	14-May-2015	24-Jun-2015	30-Jul-2015	25-Aug-2015
Total Suspended Solids	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
pH (lab)	pH units	5.98	5.47	5.28	5.94	5.61	5.71	5.87	5.48	5.48	4.48	5.04	6.04	5.71	6.04	5.97	6.1
Specific Conductance (lab)	µS/cm	1.4	1.1	1.2	1.2	1.5	1.3	1.4	1.1	1.1	1	1.1	1.5	1.6	1.3	1.3	1.2
Hardness (from total)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Hardness (from dissolved)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Colour	TCU												<5.0	<5.0	<5.0	<5.0	<5.0
Total Acidity	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50
Acidity (pH 4.5)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L	0.74	<0.50	<0.50	0.89	0.82	0.83	0.85	0.63	0.81	<0.50	<0.50	<0.50	0.9	0.68	<0.50	0.55
Alkalinity, bicarbonate HCO3	mg/L	0.90	<0.50	<0.50	1.09	1.00	1.01	1.04	0.77	0.99	<0.50	<0.50	<0.50	1.1	0.83	<0.50	0.67
Alkalinity, hydroxide OH	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	<0.50	0.53	0.75	0.55	0.71	<0.50	<0.50	<0.50	<0.50	0.54	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride	mg/L	<0.010	0.018	0.014	0.011	<0.010	<0.010	0.010	0.010	<0.010	0.010	<0.010	<0.010	0.013	<0.010	0.01	<0.010
Sulphate, dissolved	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.72	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cyanide, total	mg/L	0.00053	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00051	<0.00050	<0.00050	0.00072	0.00053	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cyanide, Weak Acid Dissociable	mg/L	<0.00050	<0.00050	<0.00050	0.00053	<0.00050	<0.00050	0.00063	<0.00050	<0.00050	0.00083	<0.00050	<0.00050	0.00054	<0.00050	<0.00050	<0.00050
Ammonia (N)	mg/L	<0.0050	<0.0050	0.009	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.007	<0.0050	0.0067	<0.0050	<0.0050	0.0061
Nitrite (N)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	<0.0020	0.0026	0.0139	0.0046	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0032	<0.0020	<0.0020	<0.0020	0.0023
Nitrite & Nitrate, as N	mg/L	<0.0020	0.0026	0.0139	0.0046	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0032	<0.0020	<0.0020	<0.0020	0.0023
Phosphorus,total-colourimetric	mg/L	0.0022	<0.0020	<0.0020	0.0021	0.0021	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus, Total Dissolved	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	0.0034	0.0023	<0.0020	0.0021	0.0023	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Dissolved Organic Carbon	mg/L	<0.50	<0.50	<0.50	<0.50	0.88	0.81	0.57	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.63	<0.50
Aluminum (Al), total	mg/L	0.00173	0.00053	0.00475	0.00057	<0.00050	0.00060	0.00063	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Antimony (Sb), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Arsenic (As), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Barium (Ba), total	mg/L	0.000021	<0.000020	0.000067	0.000144	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Beryllium (Be), total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chromium (Cr), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Copper (Cu), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000071	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe), total	mg/L	<0.0010	<0.0010	0.0054	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lead (Pb), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000054	0.0000068	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Lithium (Li), total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Magnesium (Mg), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Manganese (Mn), total	mg/L	<0.000050	<0.000050	0.000212	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury (Hg), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P), total	mg/L	0.0023	<0.0020	0.0024	0.0032	0.0031	<0.0020	<0.0020	0.0021	0.0028	<0.0020	0.0030	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium (Se), total	mg/L	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.05	<0.050	<0.050	<0.050	<0.050
Silver (Ag), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Strontium (Sr), total	mg/L	<0.000050	0.000063	0.000293	0.000227	<0.000050	0.000090	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Sulphur (S), total	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Thallium (Tl), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000023	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Vanadium (V), total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	<0.00010	<0.00010	0.00050	<0.00010	<0.00010	<0.00010	0.00027	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00013	<0.00010	<0.00010	<0.00010
Zirconium (Zr), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	0.00106	<0.00050	0.00066	<0.00050	<0.00050	0.00486	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

Appendix A Field and Trip Blank Data Associated with Surface Water Monitoring, April 2015 to March 2018

		Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
		09-Aug-2017	14-Sep-2017	04-Oct-2017	01-Nov-2017	05-Dec-2017	08-Jan-2018	13-Feb-2018	21-Feb-2018	01-Mar-2018	07-Mar-2018	15-Mar-2018	30-Apr-2015	14-May-2015	24-Jun-2015	30-Jul-2015	25-Aug-2015
Antimony (Sb), dissolved	mg/L	0.000021	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Arsenic (As), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Barium (Ba), dissolved	mg/L	<0.000020	<0.000020	0.000123	<0.000020	<0.000020	0.000085	<0.000020	<0.000020	<0.000020	<0.000020	0.00003	<0.000020	0.000035	<0.000020	<0.000020	<0.000020
Beryllium (Be), dissolved	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000079	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chromium (Cr), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Copper (Cu), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	0.000077	0.000087	<0.000050	0.000287	<0.000050	<0.000050	0.000273	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe), dissolved	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lead (Pb), dissolved	mg/L	<0.0000050	<0.0000050	0.0000100	0.0000180	0.0000074	0.0000187	<0.0000050	0.0000111	<0.0000050	<0.0000050	0.0000175	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Lithium (Li), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Magnesium (Mg), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Manganese (Mn), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	0.000072	0.000052	<0.000050	<0.000050	<0.000050	<0.000050	0.000061	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury (Hg), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	0.000023	0.000047	<0.000020	0.000036	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P), dissolved	mg/L	0.0021	<0.0020	<0.0020	<0.0020	0.0022	<0.0020	<0.0020	0.0032	<0.0020	0.0035	0.0041	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.054	<0.050	<0.050	0.052	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium (Se), dissolved	mg/L	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.05	<0.050	<0.050	<0.050	<0.050
Silver (Ag), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	0.059	0.076	<0.050	0.086	<0.050	<0.050	0.093	<0.050	<0.050	<0.050	<0.050	<0.050
Strontium (Sr), dissolved	mg/L	<0.000050	<0.000050	0.000253	<0.000050	<0.000050	0.000105	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Sulphur (S), dissolved	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	4.6	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Thallium (Tl), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Vanadium (V), dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L	<0.00010	<0.00010	0.00063	0.00012	0.00066	0.00084	<0.00010	0.00064	<0.00010	<0.00010	0.00086	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Zirconium (Zr), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A Field and Trip Blank Data Associated with Surface Water Monitoring, April 2015 to March 2018

		Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
		14-Sep-2015	14-Oct-2015	23-Nov-2015	03-Dec-2015	22-Jan-2016	10-Feb-2016	22-Mar-2016	21-Apr-2016	05-May-2016	19-May-2016	14-Jun-2016	27-Jul-2016	28-Aug-2016	08-Sep-2016	04-Oct-2016	18-Nov-2016
Total Suspended Solids	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
pH (lab)	pH units	5.86	5.78	5.89	6.26	5.33	5	5.68	5.85	5.93	5.74	5.34	5.75	5.44	5.75	5.27	5.43
Specific Conductance (lab)	µS/cm	<1.0	1.5	<1.0	1.3	1.5	1.4	1.4	1.2	1.1	1.1	<1.0	1	1.2	1.1	1.1	1.3
Hardness (from total)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Hardness (from dissolved)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Colour	TCU	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0			<5.0			
Total Acidity	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.83	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, total	mg/L	0.88	<0.50	0.98	1.03	0.79	<0.50	<0.50	<0.50	0.94	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, bicarbonate HCO3	mg/L	1.07	<0.50	1.2	1.26	0.96	<0.50	<0.50	<0.50	1.15	0.61	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, hydroxide OH	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.52	0.51	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Fluoride	mg/L	<0.010	<0.010	0.012	0.011	<0.010	0.018	<0.010	0.014	0.011	0.013	<0.010	<0.010	0.011	0.015	<0.010	0.013
Sulphate, dissolved	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cyanide, total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00081
Cyanide, Weak Acid Dissociable	mg/L	<0.00050	0.00051	<0.00050	<0.00050	0.00052	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00063
Ammonia (N)	mg/L	0.0085	<0.0050	<0.0050	<0.0050	<0.0050	0.0051	<0.0050	0.0083	0.0073	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.009	<0.0050
Nitrite (N)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	<0.0020	<0.0020	0.0025	<0.0020
Nitrite & Nitrate, as N	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	<0.0020	<0.0020	0.0025	<0.0020
Phosphorus,total-colourimetric	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0024	<0.0020
Phosphorus, Total Dissolved	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Dissolved Organic Carbon	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Aluminum (Al), total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Antimony (Sb), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Arsenic (As), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Barium (Ba), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Beryllium (Be), total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chromium (Cr), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Copper (Cu), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe), total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lead (Pb), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Lithium (Li), total	mg/L	<0.00050	<0.00050	0.00053	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00076	<0.00050	<0.00050	<0.00050
Magnesium (Mg), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Manganese (Mn), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury (Hg), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P), total	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium (Se), total	mg/L	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Silver (Ag), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Strontium (Sr), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Sulphur (S), total	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Thallium (Tl), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), total	mg/L	<0.0000020	<0.0000020	<0.0000020	0.000004	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Vanadium (V), total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00011	<0.00010	<0.00010	<0.00010
Zirconium (Zr), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

Appendix A Field and Trip Blank Data Associated with Surface Water Monitoring, April 2015 to March 2018

		Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
		14-Sep-2015	14-Oct-2015	23-Nov-2015	03-Dec-2015	22-Jan-2016	10-Feb-2016	22-Mar-2016	21-Apr-2016	05-May-2016	19-May-2016	14-Jun-2016	27-Jul-2016	28-Aug-2016	08-Sep-2016	04-Oct-2016	18-Nov-2016
Antimony (Sb), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Arsenic (As), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Barium (Ba), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Beryllium (Be), dissolved	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chromium (Cr), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Copper (Cu), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe), dissolved	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lead (Pb), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Lithium (Li), dissolved	mg/L	<0.00050	<0.00050	0.00055	<0.00050	<0.00050	<0.00050	0.00053	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Magnesium (Mg), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Manganese (Mn), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury (Hg), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P), dissolved	mg/L	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium (Se), dissolved	mg/L	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Silver (Ag), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Strontium (Sr), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Sulphur (S), dissolved	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Thallium (Tl), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Vanadium (V), dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Zirconium (Zr), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A Field and Trip Blank Data Associated with Surface Water Monitoring, April 2015 to March 2018

		Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
		21-Dec-2016	17-Jan-2017	23-Feb-2017	21-Mar-2017	30-Apr-2017	18-May-2017	27-May-2017	01-Jun-2017	07-Jun-2017	14-Jun-2017	20-Jul-2017	10-Aug-2017	14-Sep-2017	05-Oct-2017	03-Nov-2017	07-Dec-2017
Total Suspended Solids	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
pH (lab)	pH units	5.21	5.52	5.89	5.26	5.53	5.65	5.29	5.18	5.3	5.57	5.38	5.75	5.29	5.76	5.77	5.64
Specific Conductance (lab)	µS/cm	1.2	<1.0	1.4	1.1	1.4	1.1	1.1	<1.0	1.1	1.1	<1.0	1.2	1.2	1.1	1.1	1.7
Hardness (from total)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Hardness (from dissolved)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Colour	TCU																
Total Acidity	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, total	mg/L	<0.50	<0.50	0.93	<0.50	<0.50	<0.50	<0.50	<0.50	0.53	<0.50	<0.50	<0.50	0.58	<0.50	0.69	0.60
Alkalinity, bicarbonate HCO3	mg/L	<0.50	<0.50	1.13	<0.50	<0.50	<0.50	<0.50	<0.50	0.65	<0.50	<0.50	<0.50	0.71	<0.50	0.84	0.73
Alkalinity, hydroxide OH	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	0.56	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.72	0.51	0.56
Fluoride	mg/L	0.010	<0.010	0.012	0.012	0.011	<0.010	<0.010	<0.010	0.012	0.015	<0.010	0.010	0.017	0.012	0.011	<0.010
Sulphate, dissolved	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cyanide, total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00071	<0.00050	<0.00050	0.00068	<0.00050	<0.00050	0.00059	<0.00050	<0.00050	<0.00050	<0.00050
Cyanide, Weak Acid Dissociable	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00079	<0.00050	<0.00050	0.00064	<0.00050	0.00062	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Ammonia (N)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0054	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Nitrite (N)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrite & Nitrate, as N	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus,total-colourimetric	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0025
Phosphorus, Total Dissolved	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0043	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0024
Dissolved Organic Carbon	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.66	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Aluminum (Al), total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Antimony (Sb), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Arsenic (As), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Barium (Ba), total	mg/L	0.000030	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000027	<0.000020	0.000117	<0.000020	<0.000020	<0.000020
Beryllium (Be), total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chromium (Cr), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Copper (Cu), total	mg/L	<0.000050	0.000088	<0.000050	0.000055	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe), total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lead (Pb), total	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Lithium (Li), total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Magnesium (Mg), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Manganese (Mn), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury (Hg), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P), total	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium (Se), total	mg/L	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Silver (Ag), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Strontium (Sr), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Sulphur (S), total	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Thallium (Tl), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), total	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Vanadium (V), total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	<0.00010	<0.00010	<0.00010	0.00017	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Zirconium (Zr), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00062	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

Appendix A Field and Trip Blank Data Associated with Surface Water Monitoring, April 2015 to March 2018

		Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
		21-Dec-2016	17-Jan-2017	23-Feb-2017	21-Mar-2017	30-Apr-2017	18-May-2017	27-May-2017	01-Jun-2017	07-Jun-2017	14-Jun-2017	20-Jul-2017	10-Aug-2017	14-Sep-2017	05-Oct-2017	03-Nov-2017	07-Dec-2017
Antimony (Sb), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Arsenic (As), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Barium (Ba), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000064	<0.000020	<0.000020	<0.000020	0.000060	<0.000020
Beryllium (Be), dissolved	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chromium (Cr), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Copper (Cu), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe), dissolved	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lead (Pb), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000060	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Lithium (Li), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Magnesium (Mg), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Manganese (Mn), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury (Hg), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P), dissolved	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0035
Potassium (K), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium (Se), dissolved	mg/L	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Silver (Ag), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Strontium (Sr), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Sulphur (S), dissolved	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Thallium (Tl), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Vanadium (V), dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Zirconium (Zr), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Appendix A Field and Trip Blank Data Associated with Surface Water Monitoring, April 2015 to March 2018

		Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
		09-Jan-2018	15-Feb-2018	21-Feb-2018	01-Mar-2018	07-Mar-2018	15-Mar-2018
Total Suspended Solids	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
pH (lab)	pH units	5.81	5.41	5.41	5.48	4.57	5.76
Specific Conductance (lab)	µS/cm	1.4	1.1	1	1	1.1	1.1
Hardness (from total)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Hardness (from dissolved)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Colour	TCU						
Total Acidity	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Acidity (pH 4.5)	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, total	mg/L	0.88	0.55	0.52	0.73	<0.50	1.04
Alkalinity, bicarbonate HCO3	mg/L	1.07	0.67	0.63	0.89	<0.50	1.27
Alkalinity, hydroxide OH	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, carbonate CO3	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Alkalinity, PP carbonate CO3	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chloride	mg/L	<0.50	<0.50	<0.50	<0.50	0.53	<0.50
Fluoride	mg/L	<0.010	0.011	0.010	<0.010	0.011	0.010
Sulphate, dissolved	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cyanide, total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00074	<0.00050
Cyanide, Weak Acid Dissociable	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00066	<0.00050
Ammonia (N)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Nitrite (N)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrate (N)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Nitrite & Nitrate, as N	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus,total-colourimetric	mg/L	<0.0020	0.0029	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus, Total Dissolved	mg/L	0.0020	0.0020	0.0022	<0.0020	<0.0020	<0.0020
Dissolved Organic Carbon	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Aluminum (Al), total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Antimony (Sb), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Arsenic (As), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Barium (Ba), total	mg/L	<0.000020	<0.000020	0.000028	<0.000020	<0.000020	<0.000020
Beryllium (Be), total	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), total	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chromium (Cr), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Copper (Cu), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe), total	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lead (Pb), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Lithium (Li), total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Magnesium (Mg), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Manganese (Mn), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury (Hg), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni), total	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P), total	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium (Se), total	mg/L	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Silver (Ag), total	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), total	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Strontium (Sr), total	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Sulphur (S), total	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Thallium (Tl), total	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), total	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), total	mg/L	<0.0000020	0.0000036	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Vanadium (V), total	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Zirconium (Zr), total	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Aluminum (Al), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050

Appendix A Field and Trip Blank Data Associated with Surface Water Monitoring, April 2015 to March 2018

		Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
		09-Jan-2018	15-Feb-2018	21-Feb-2018	01-Mar-2018	07-Mar-2018	15-Mar-2018
Antimony (Sb), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Arsenic (As), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Barium (Ba), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Beryllium (Be), dissolved	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Bismuth (Bi), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Boron (B), dissolved	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Calcium (Ca), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Chromium (Cr), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Cobalt (Co), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Copper (Cu), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Iron (Fe), dissolved	mg/L	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lead (Pb), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Lithium (Li), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Magnesium (Mg), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Manganese (Mn), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Mercury (Hg), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Molybdenum (Mo), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Nickel (Ni), dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
Phosphorus (P), dissolved	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0021
Potassium (K), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Selenium (Se), dissolved	mg/L	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040	<0.000040
Silicon (Si), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Silver (Ag), dissolved	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050
Sodium (Na), dissolved	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Strontium (Sr), dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Sulphur (S), dissolved	mg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
Thallium (Tl), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Tin (Sn), dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Titanium (Ti), dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Uranium (U), dissolved	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020
Vanadium (V), dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020
Zinc (Zn), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Zirconium (Zr), dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010

Page left intentionally blank

APPENDIX B.

Surface Water Monitoring Photo Log

1. SOUTH CREEK

1.1 KZ-13

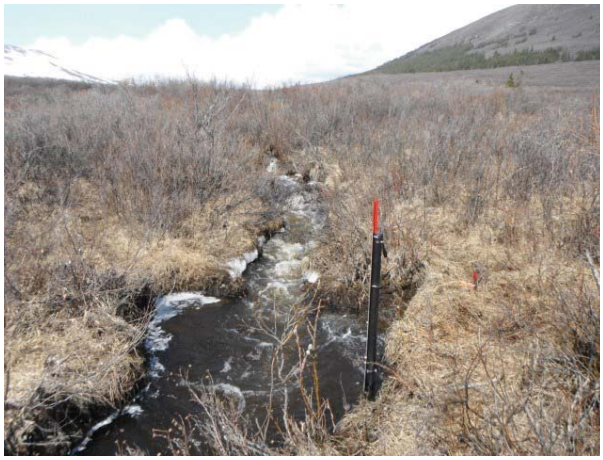


Photo 1: KZ-13 looking upstream, May 2015.

Photo 2: KZ-13 looking downstream, July 2015.

Photo 3: KZ-13 looking downstream, September 2015.

Photo 4: KZ-13 looking downstream, February 2016

2. GEONA CREEK

2.1 KZ-6

Photo 5: KZ-6 looking upstream, January 2016.

Photo 6: KZ-6 looking upstream, April 2016.

Photo 7: KZ-6 looking downstream, April 2016.

2.2 KZ-7

Photo 8: KZ-7 looking downstream, May 2015.

Photo 9: KZ-7 looking downstream, August 2015.

Photo 10: KZ-7 looking upstream, October 2015.

Photo 11: KZ-7 looking downstream, February 2016.

2.3 KZ-9

Photo 12: KZ-9 looking upstream, May 2015.

Photo 13: KZ-9 looking downstream, July 2015.

Photo 14: KZ-9 looking upstream, September 2015.

Photo 15: KZ-9 looking upstream, March 2016.

2.4 KZ-17

Photo 16: KZ-17 looking upstream, July 2015.

Photo 17: KZ-17 looking upstream, March 2016.

2.5 KZ-18

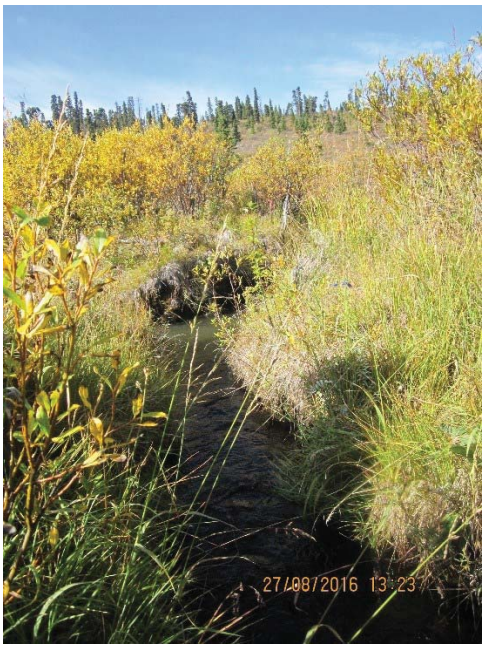


Photo 18: KZ-18 looking upstream, August 2016.

Photo 19: KZ-18 looking upstream, September 2016.

Photo 20: KZ-18 looking upstream, November 2016.

2.6 KZ-37

Photo 21: KZ-37 Looking downstream, May 2017

Photo 22: KZ-37 Looking downstream, July 2017.

Photo 23: KZ-37 Looking downstream, October 2017.

Photo 24: KZ-37 Looking downstream, December 2017

3. FAULT CREEK

3.1 KZ-2

Photo 25: KZ-2 looking downstream, May 2015.

Photo 26: KZ-2 looking upstream, July 2015.

Photo 27: KZ-2 looking upstream, October 2015.

Photo 28: KZ-2 looking downstream, March 2016.

4. GEONA CREEK SEEPS

Photo 29: KZ-9 West Seep, July 2015.

Photo 30: KZ-9 East Seep, July 2016.

Photo 31: Seep 3, July 2015.

Photo 32: Seep 4, July 2015.

Photo 33: Seep 5, July 2015.

5. FINLAYSON CREEK

5.1 KZ-16

Photo 34: KZ-16 looking downstream, May 2015.

Photo 35: KZ-16 looking downstream, June 2015.

Photo 36: KZ-16 looking downstream, October 2015.

Photo 37: KZ-16 looking downstream, February 2016.

5.2 KZ-15

Photo 38: KZ-15 looking downstream, May 2015.

Photo 39: KZ-15 looking upstream, July 2015.

Photo 40: KZ-15 looking downstream, October 2015.

Photo 41: KZ-15 looking downstream, March 2016.

5.3 KZ-22

Photo 42: KZ-38 looking downstream, May 2015.

Photo 43: KZ-22 looking downstream, July 2015.

Photo 44: KZ-22 looking upstream from hydrometric station, September 2015.

Photo 45: KZ-22 looking downstream, March 2016.

5.4 KZ-26

Photo 46: KZ-26 looking downstream from Robert Campbell Highway, May 2015.

Photo 47: KZ-26 looking upstream from Robert Campbell Highway, July 2015.

Photo 48: KZ-26 looking upstream from hydrometric station, October 2015.

Photo 49: KZ-26 looking downstream approximately 200 meters upstream of Robert Campbell Highway, February 2016.

6. EAST CREEK

6.1 KZ-21

Photo 50: KZ-21 looking upstream, May 2015.

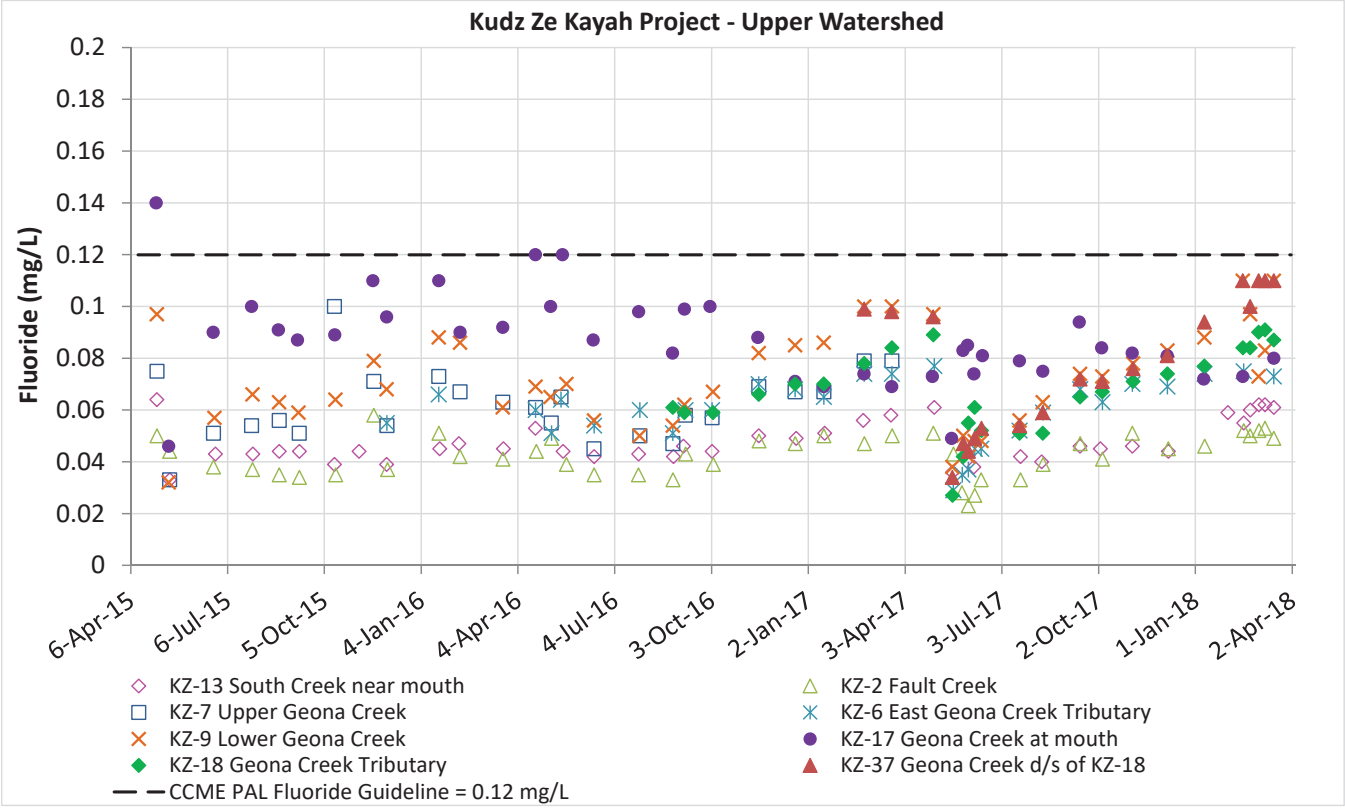
Photo 51: KZ-21 looking downstream August 2015.

Photo 52: KZ-21 looking upstream, October 2015.

Photo 53: KZ-21 looking downstream, January 2016.

APPENDIX C.

Historic and April 2015 to March 2018 Surface Water Graphs



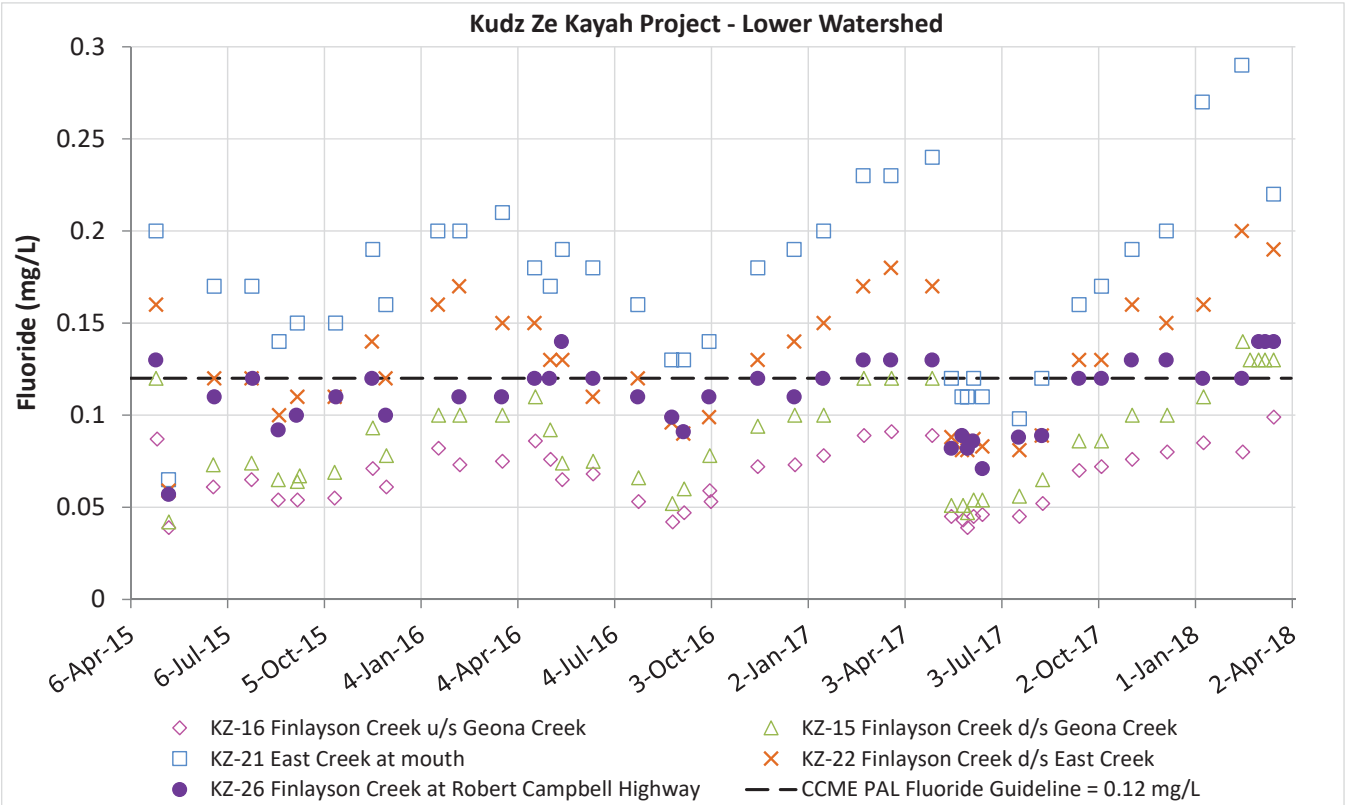
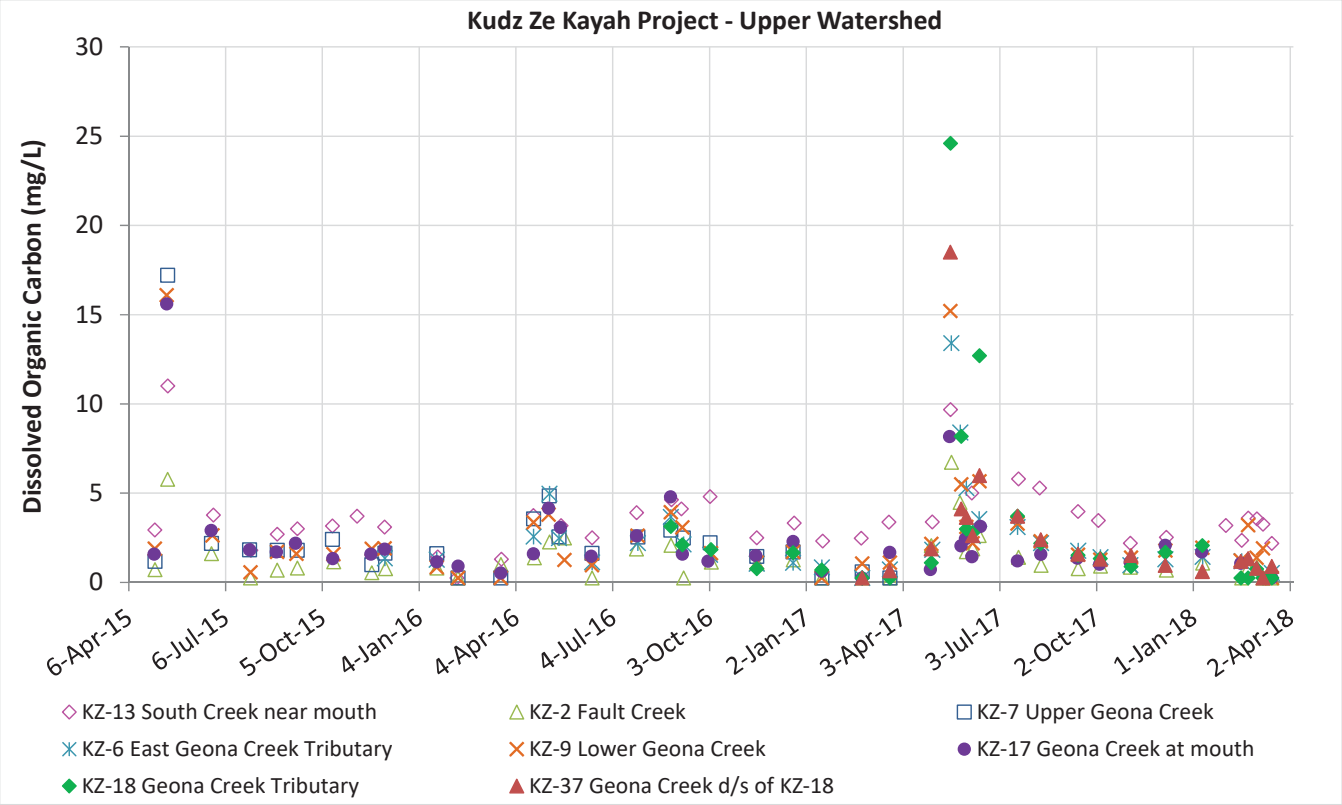


Figure C-1: Temporal Variation in Dissolved Fluoride Concentration in Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project



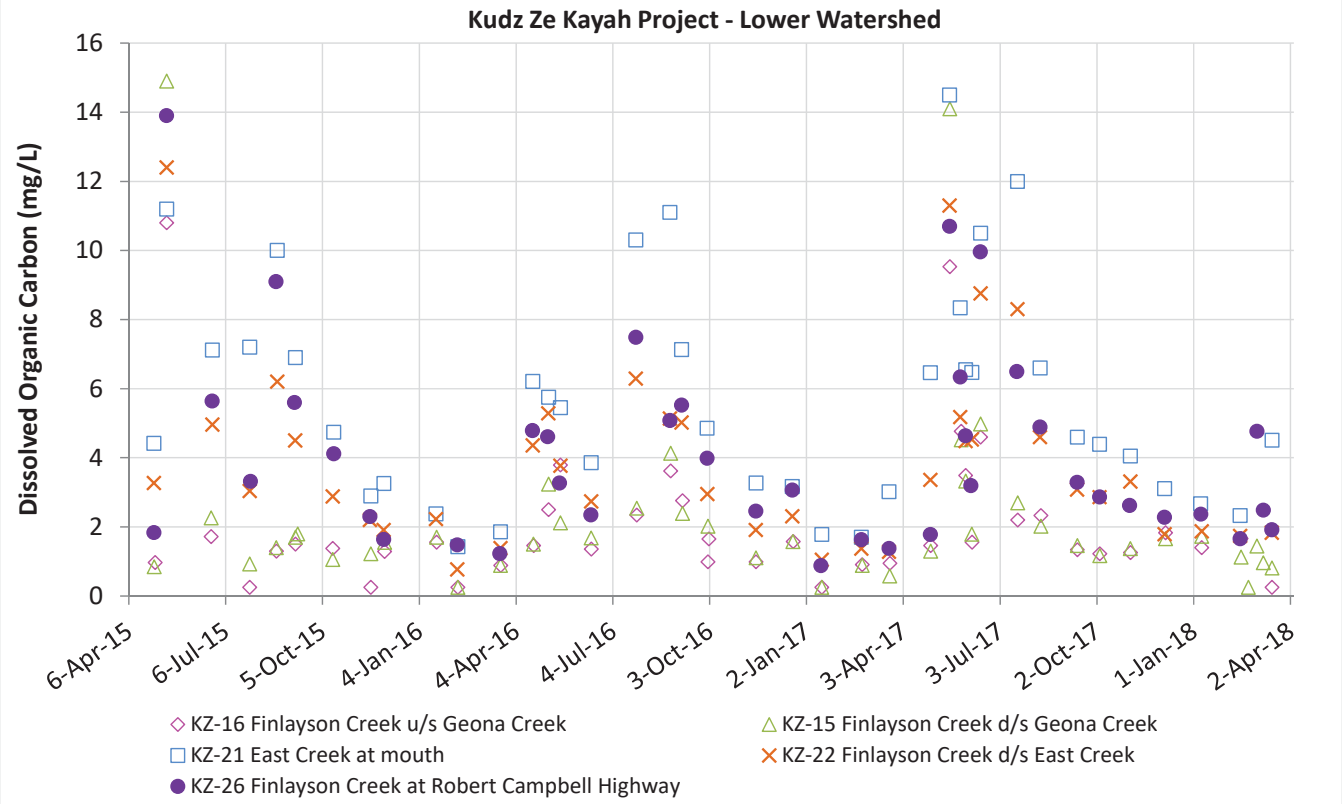
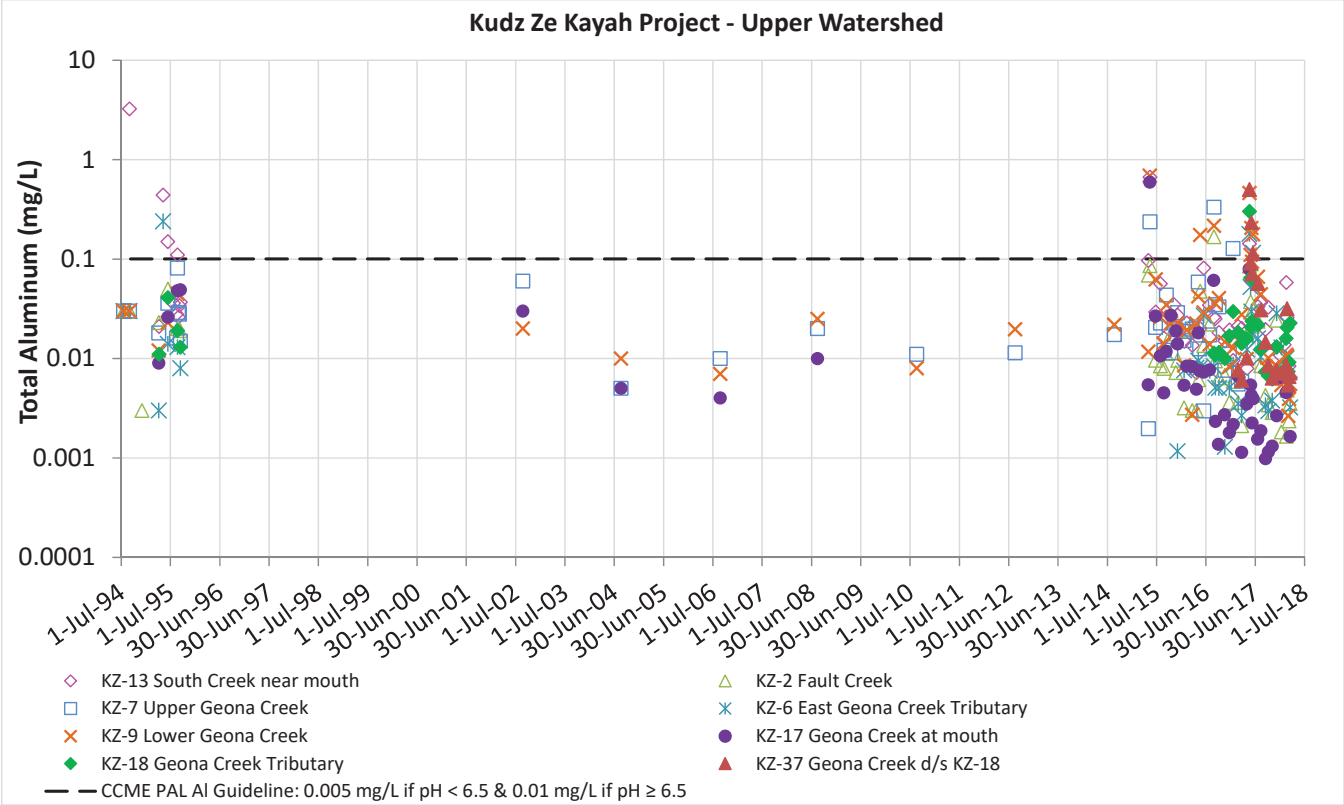


Figure C-2: Temporal Variation in Dissolved Organic Carbon Concentration in Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project



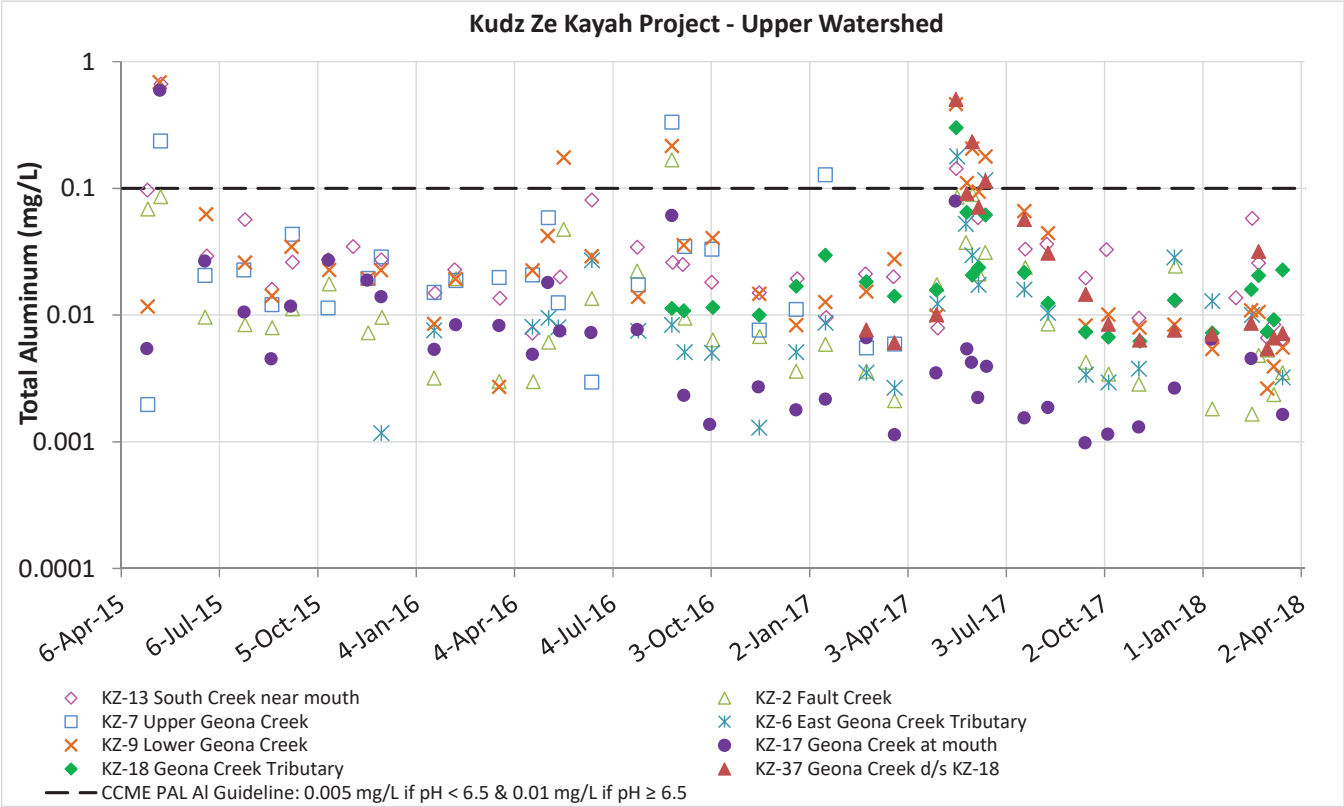


Figure C-3: Temporal Variation in Total Aluminum Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)

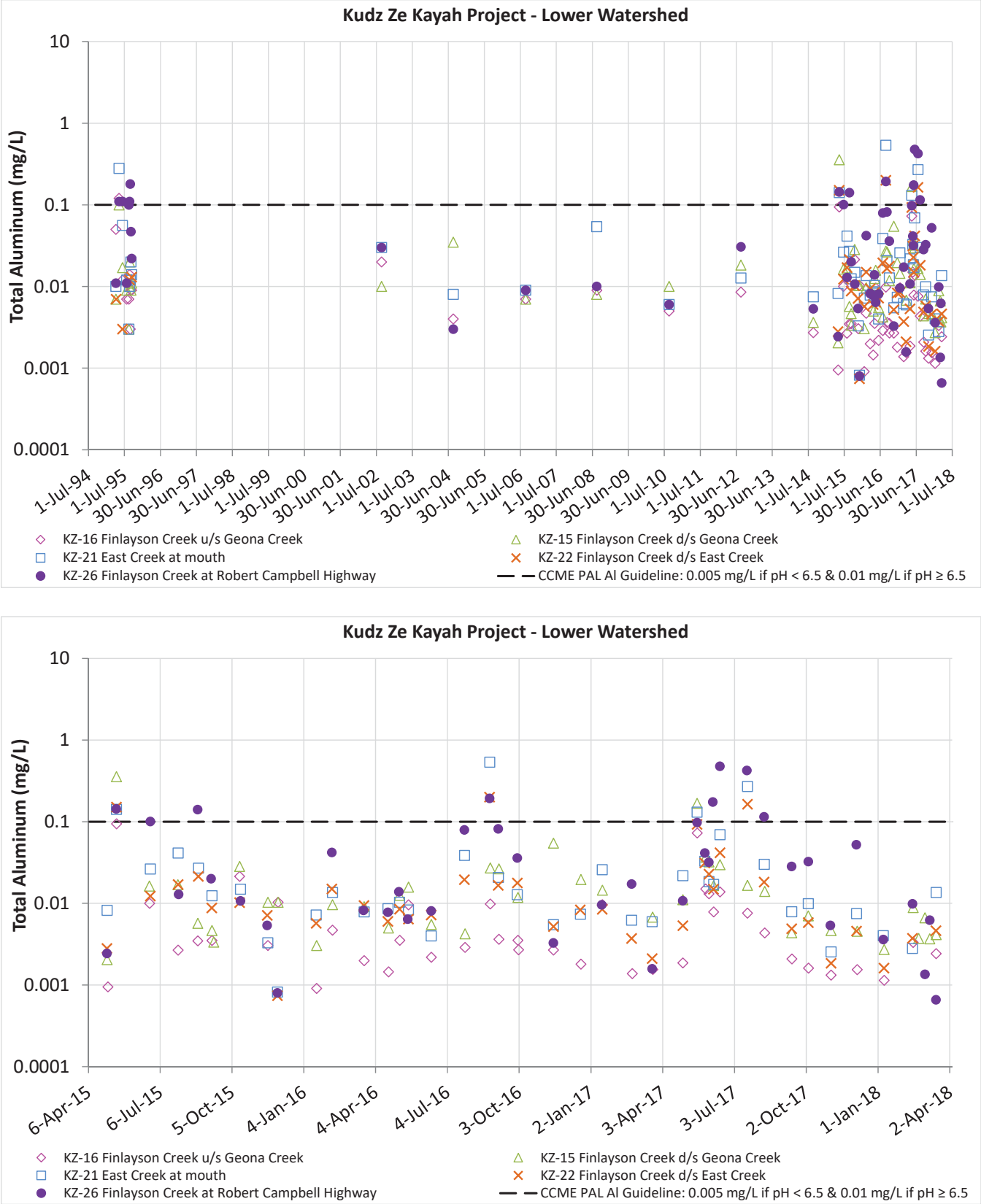


Figure C-4: Temporal Variation in Total Aluminum Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)

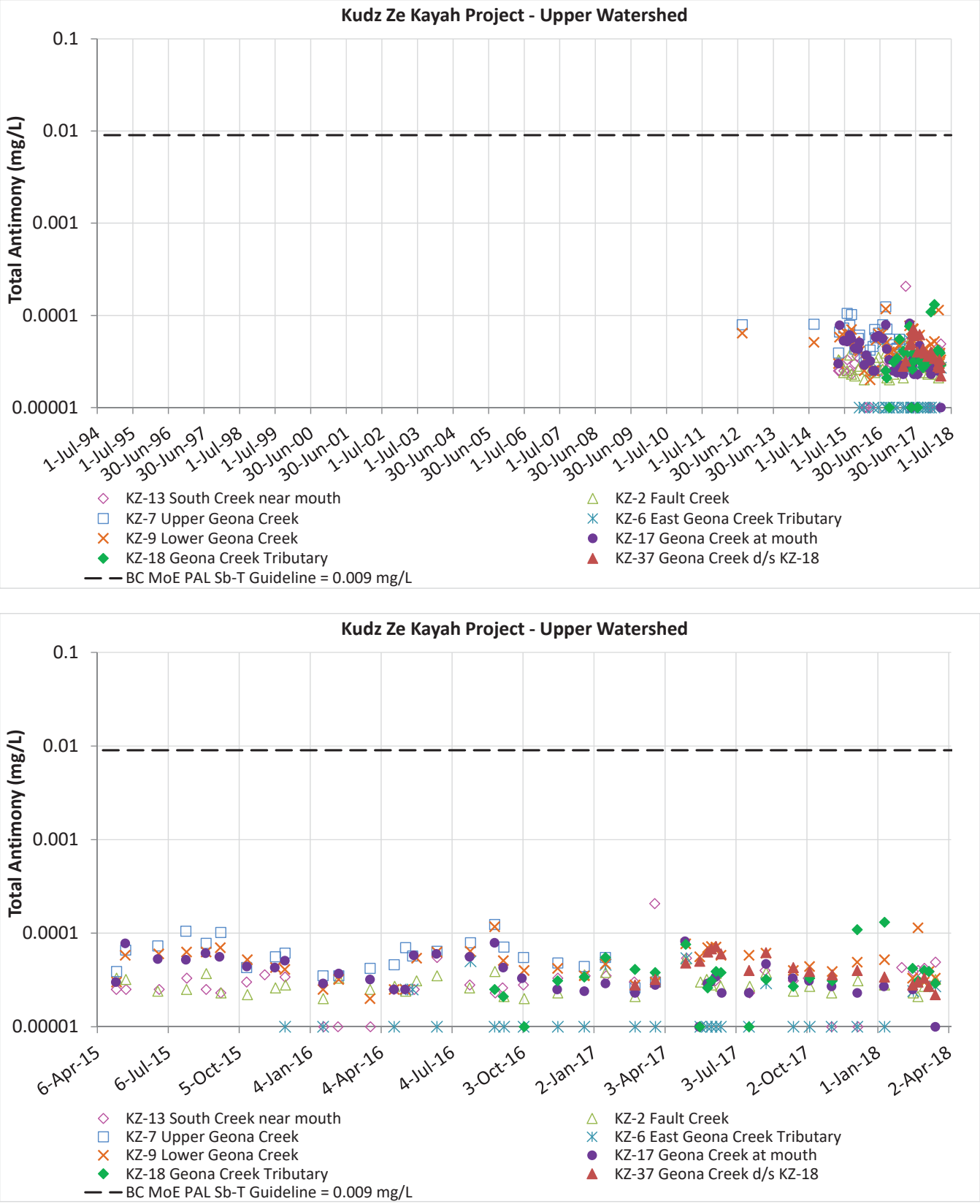


Figure C-5: Temporal Variation in Total Antimony Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)

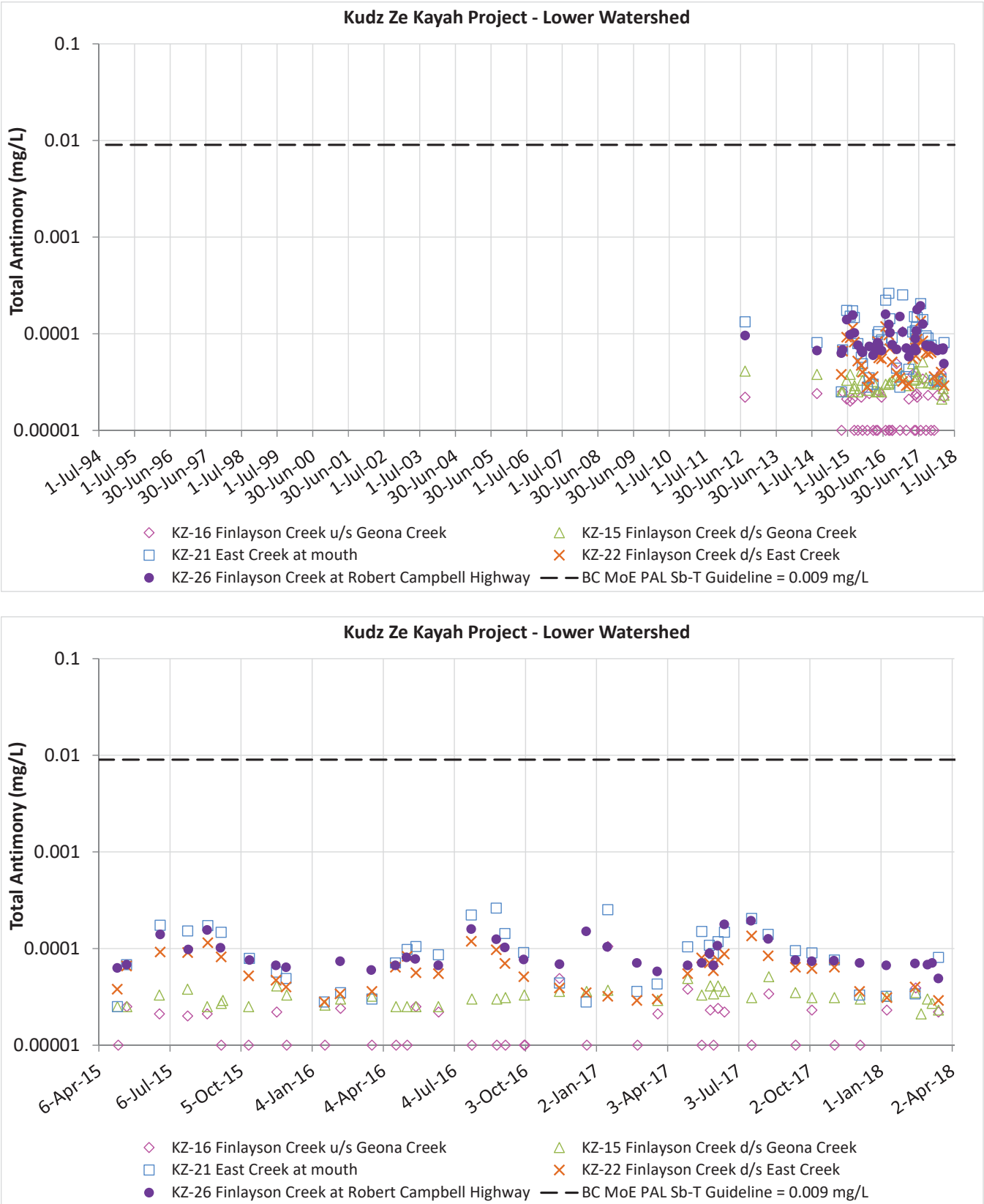


Figure C-6: Temporal Variation in Total Antimony Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)

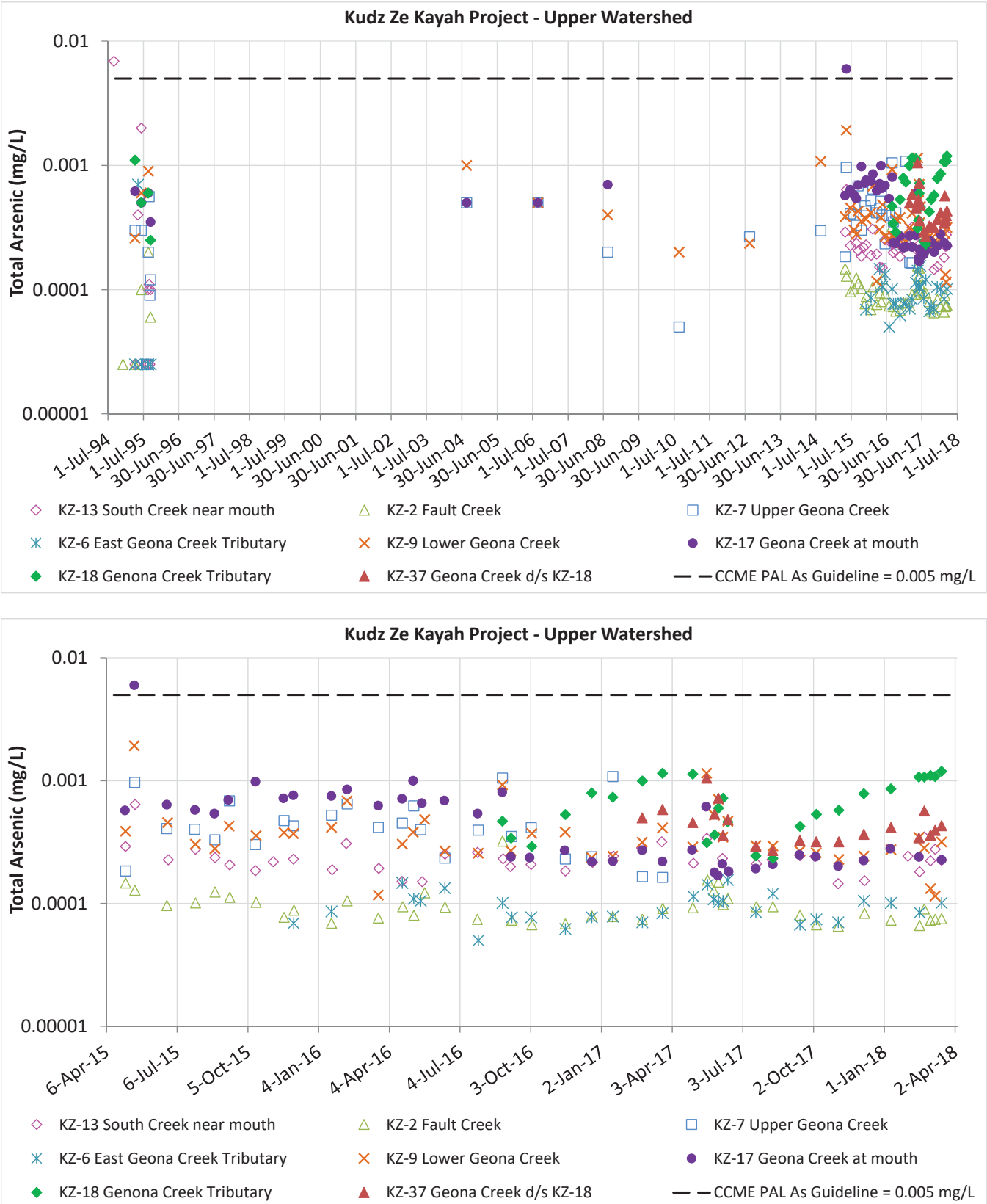


Figure C-7: Temporal Variation in Total Arsenic Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)

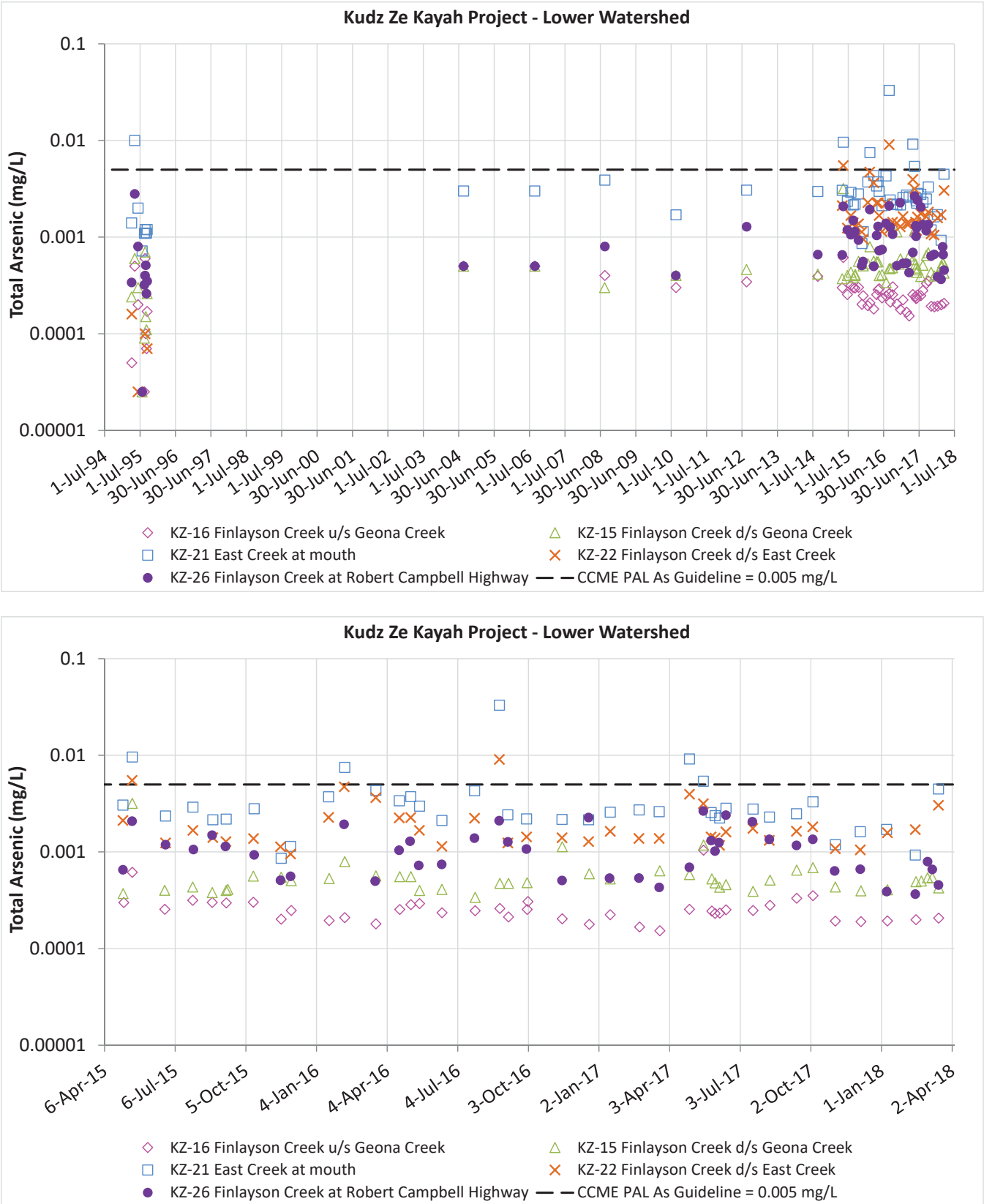
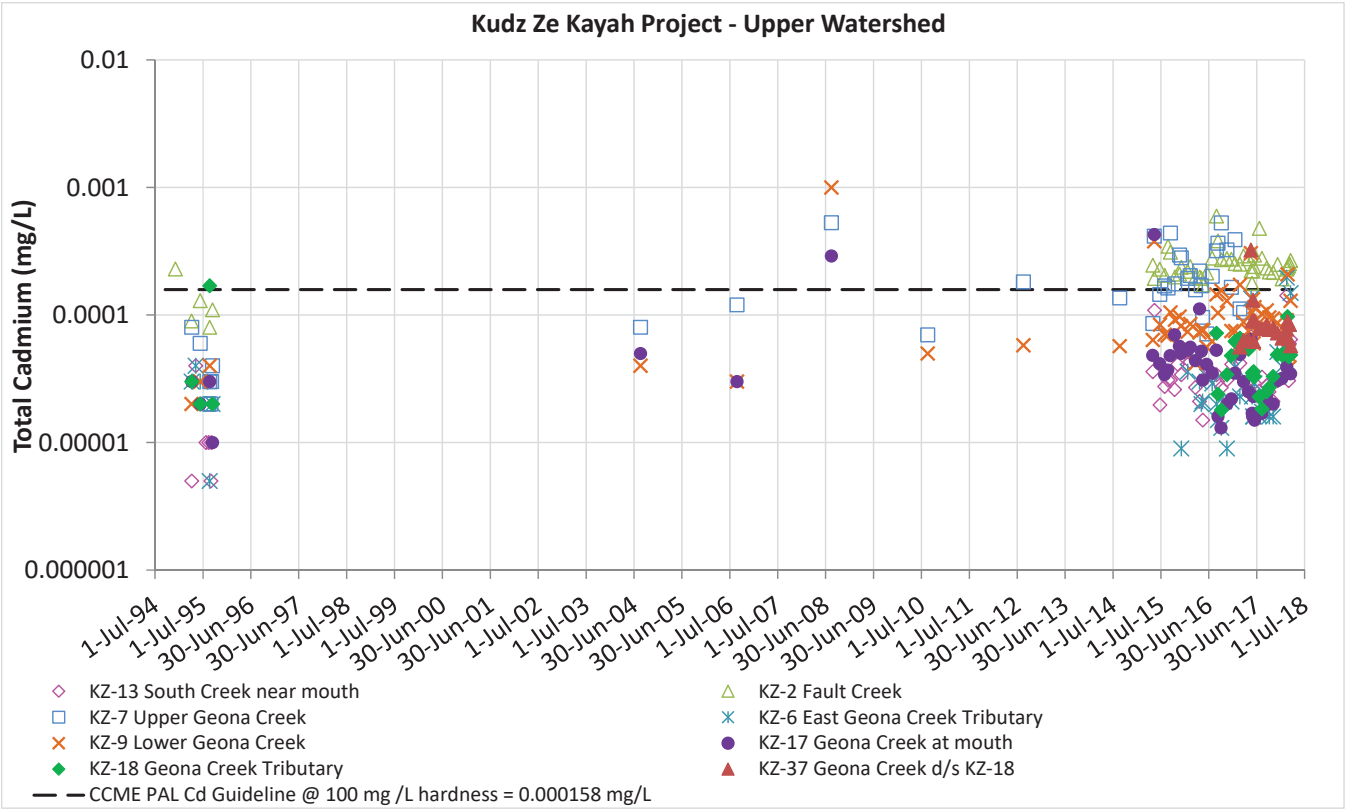


Figure C-8: Temporal Variation in Total Arsenic Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



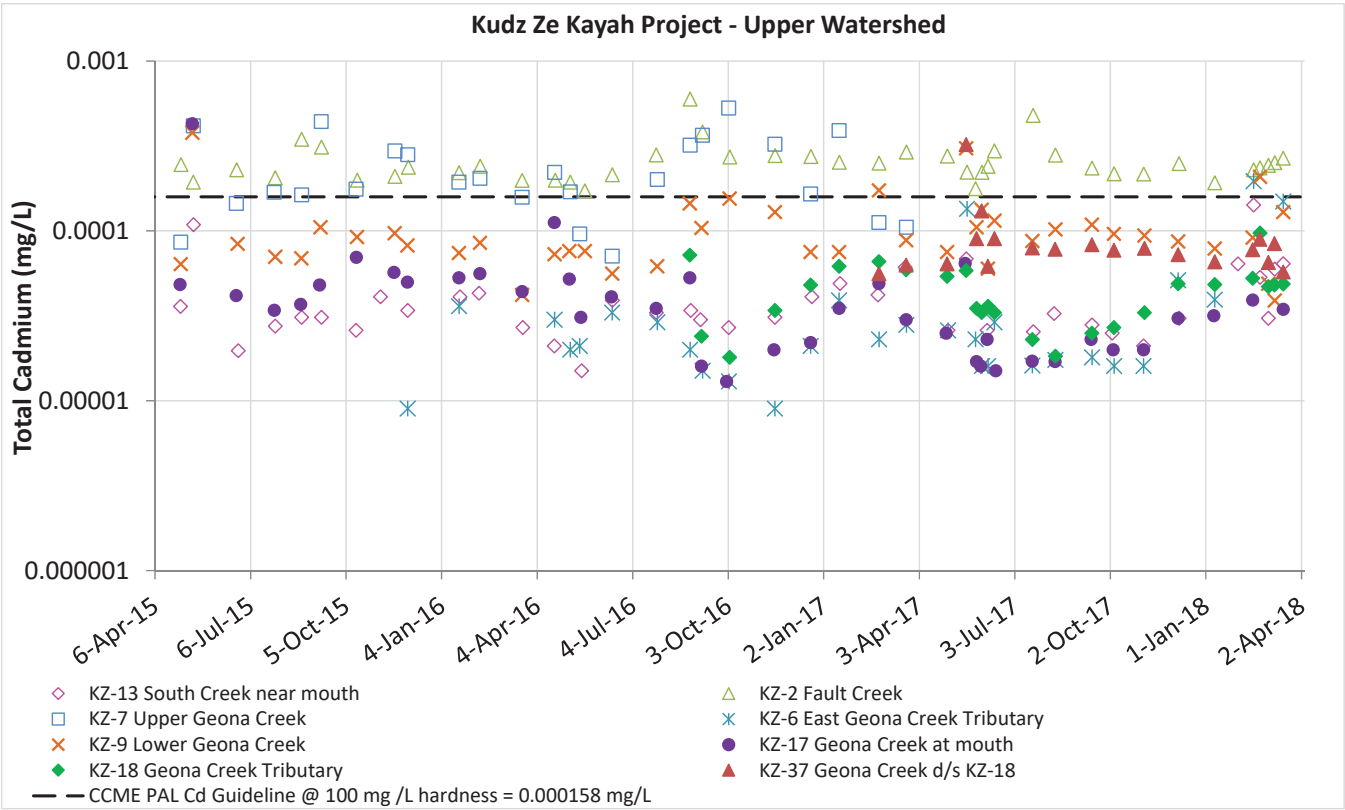
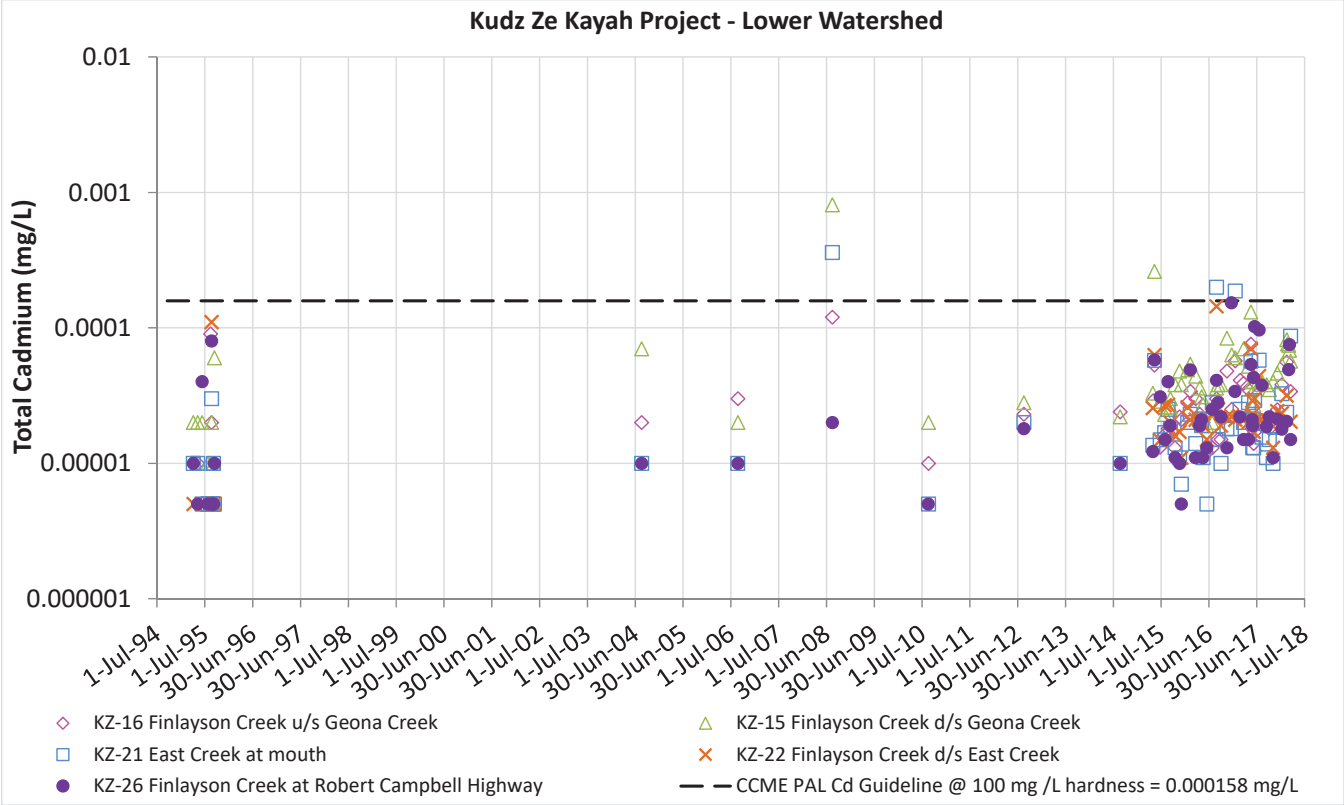


Figure C-9: Temporal Variation in Total Cadmium Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



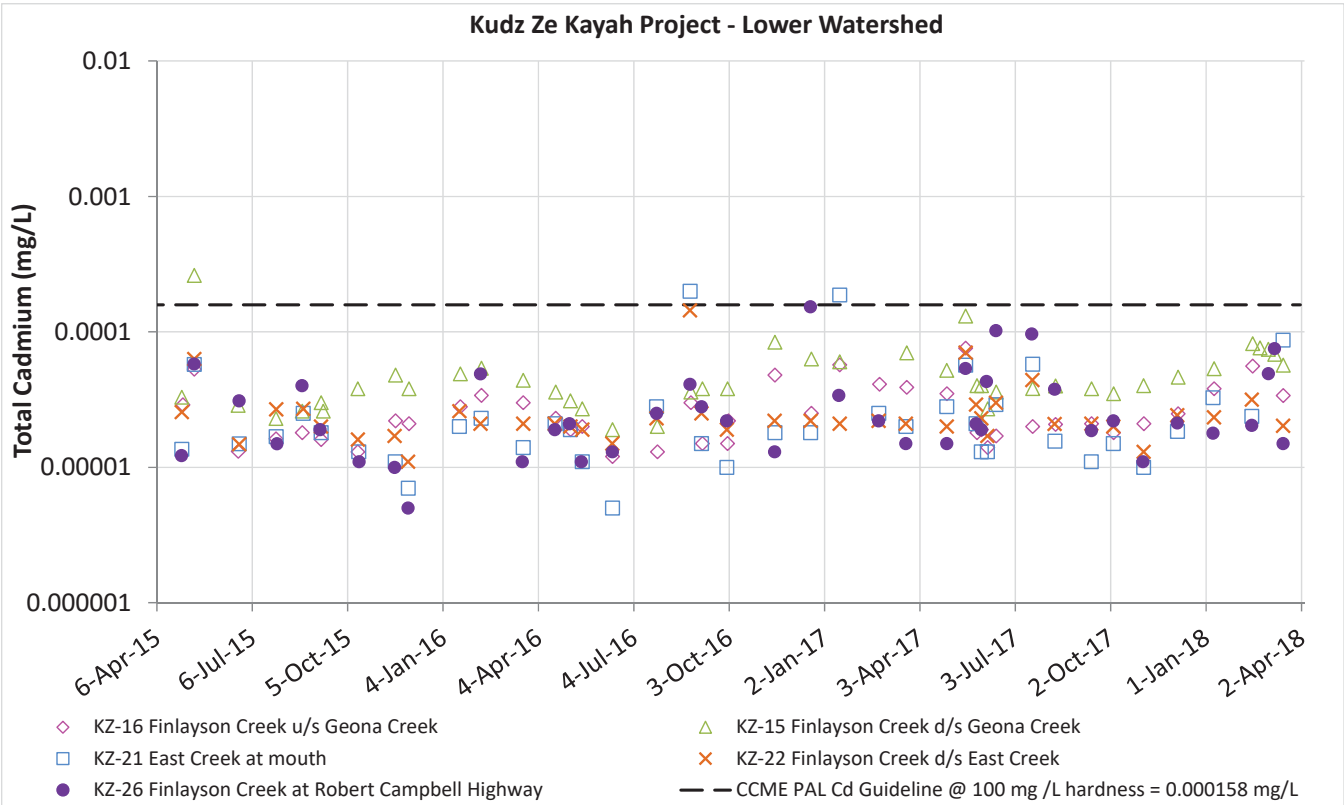


Figure C-10: Temporal Variation in Total Cadmium Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)

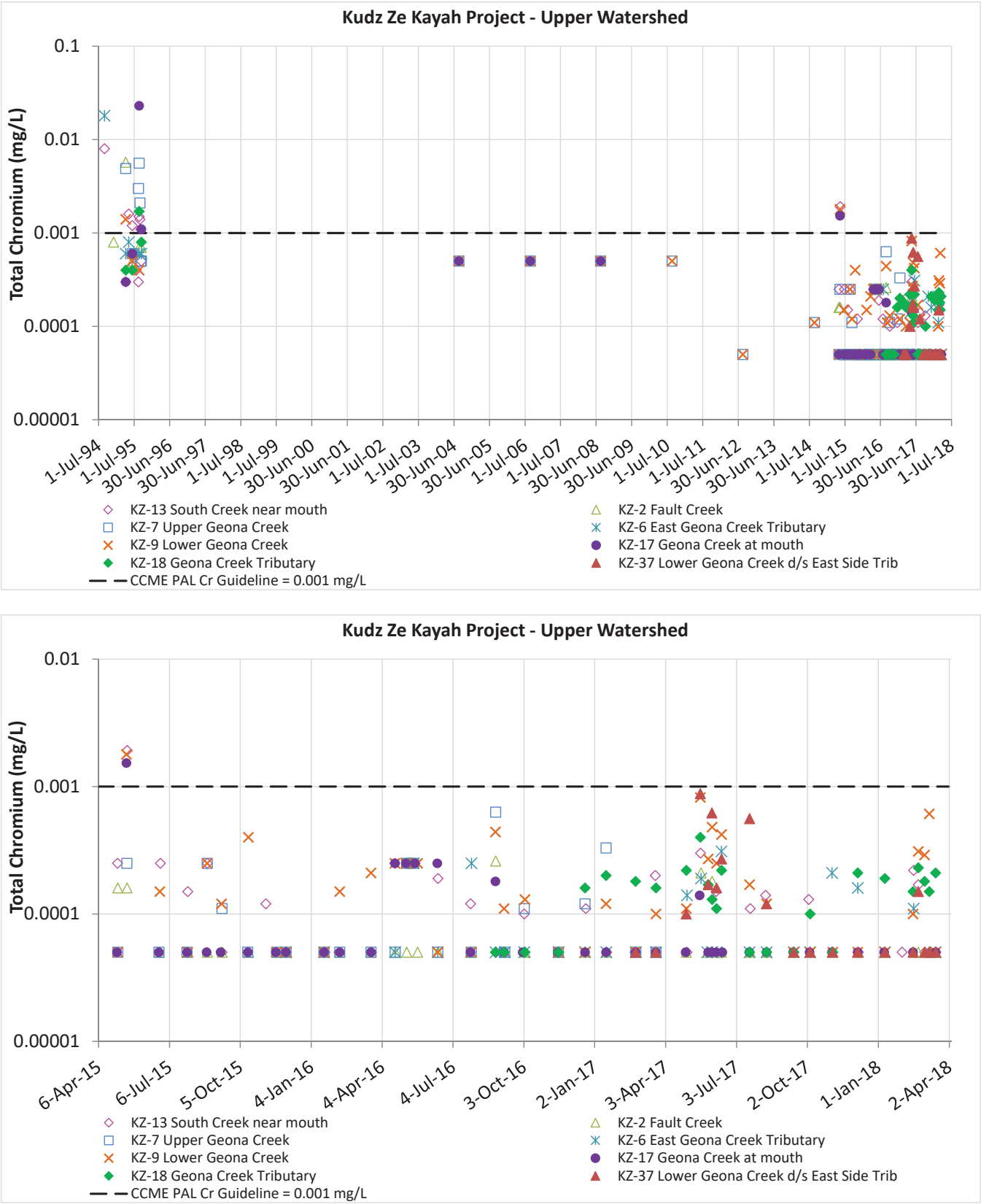


Figure C-11: Temporal Variation in Total Chromium Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)

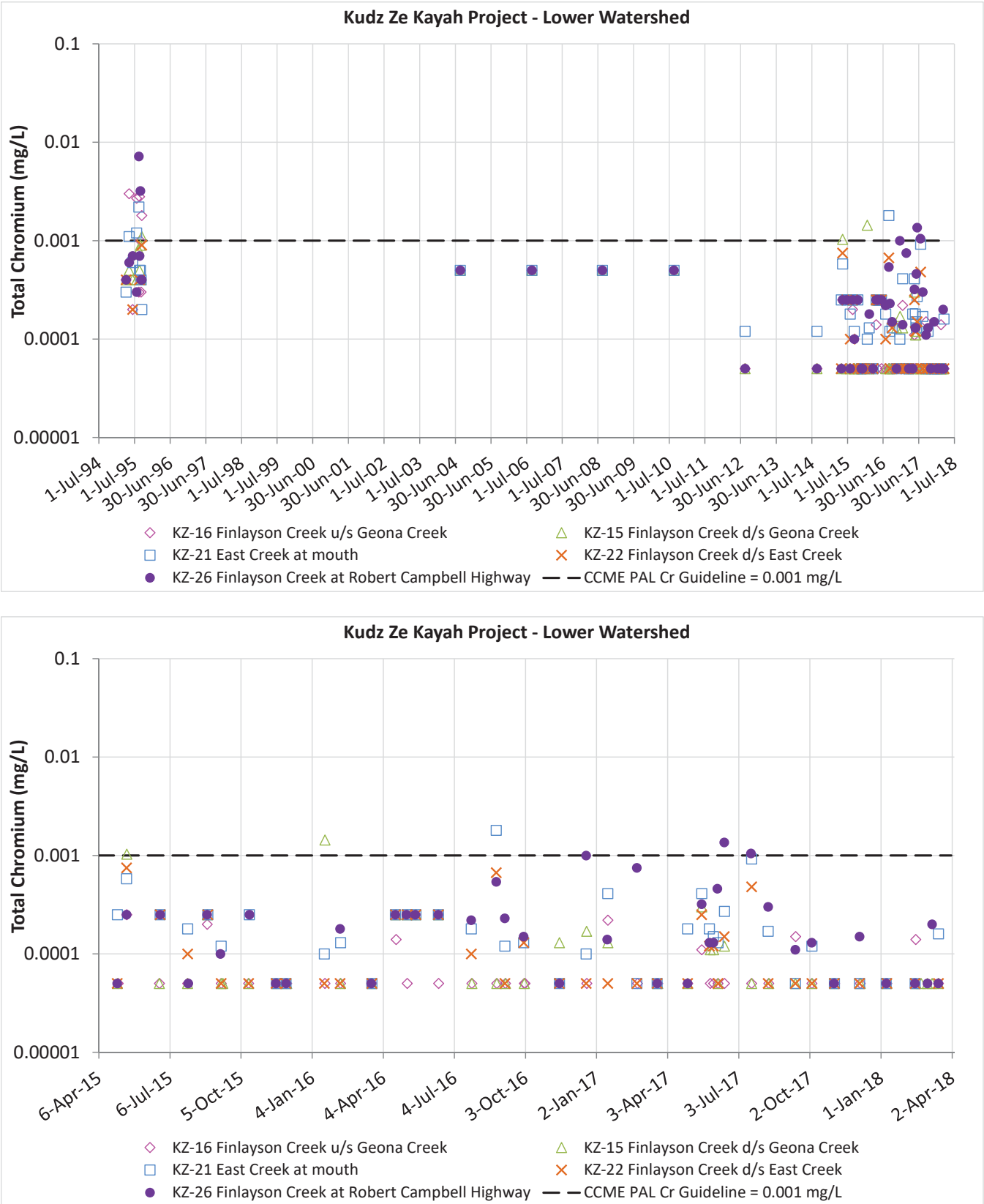
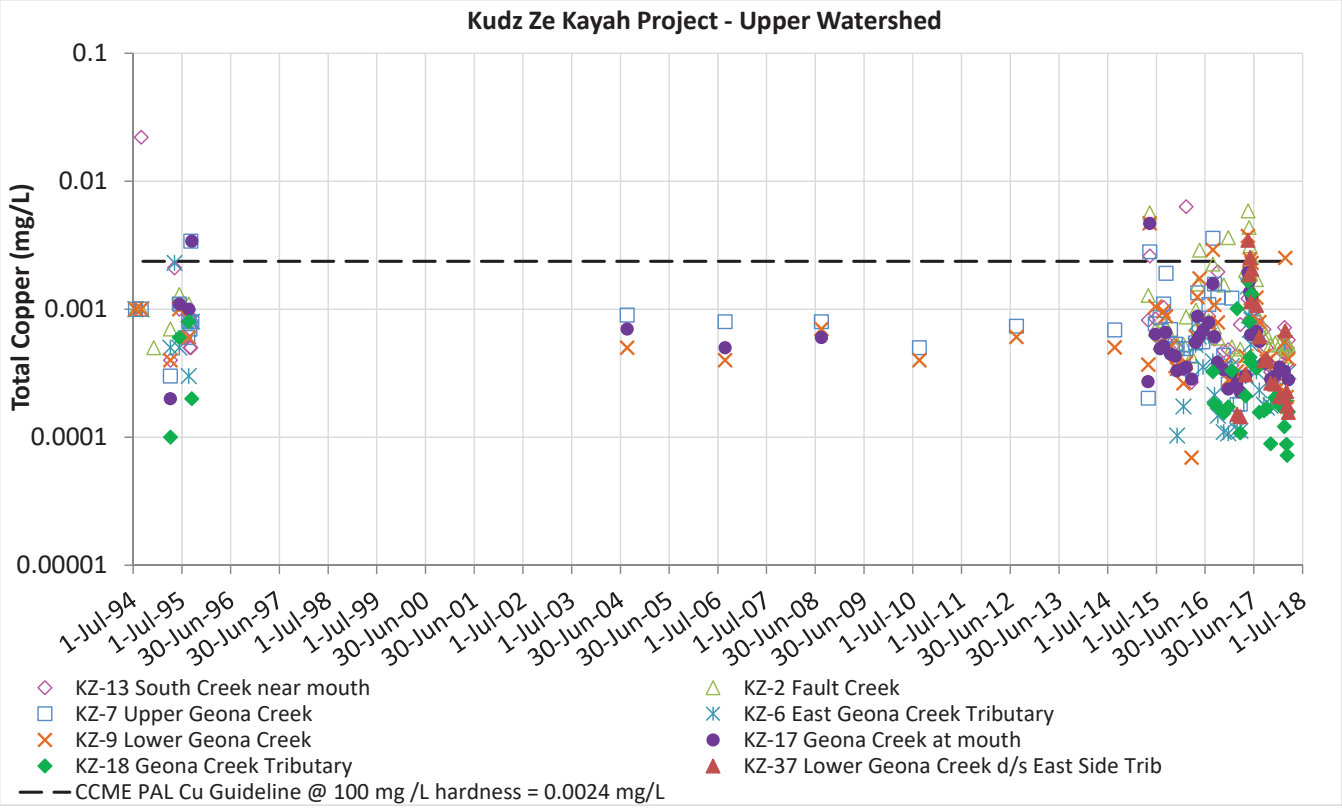


Figure C-12: Temporal Variation in Total Chromium Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



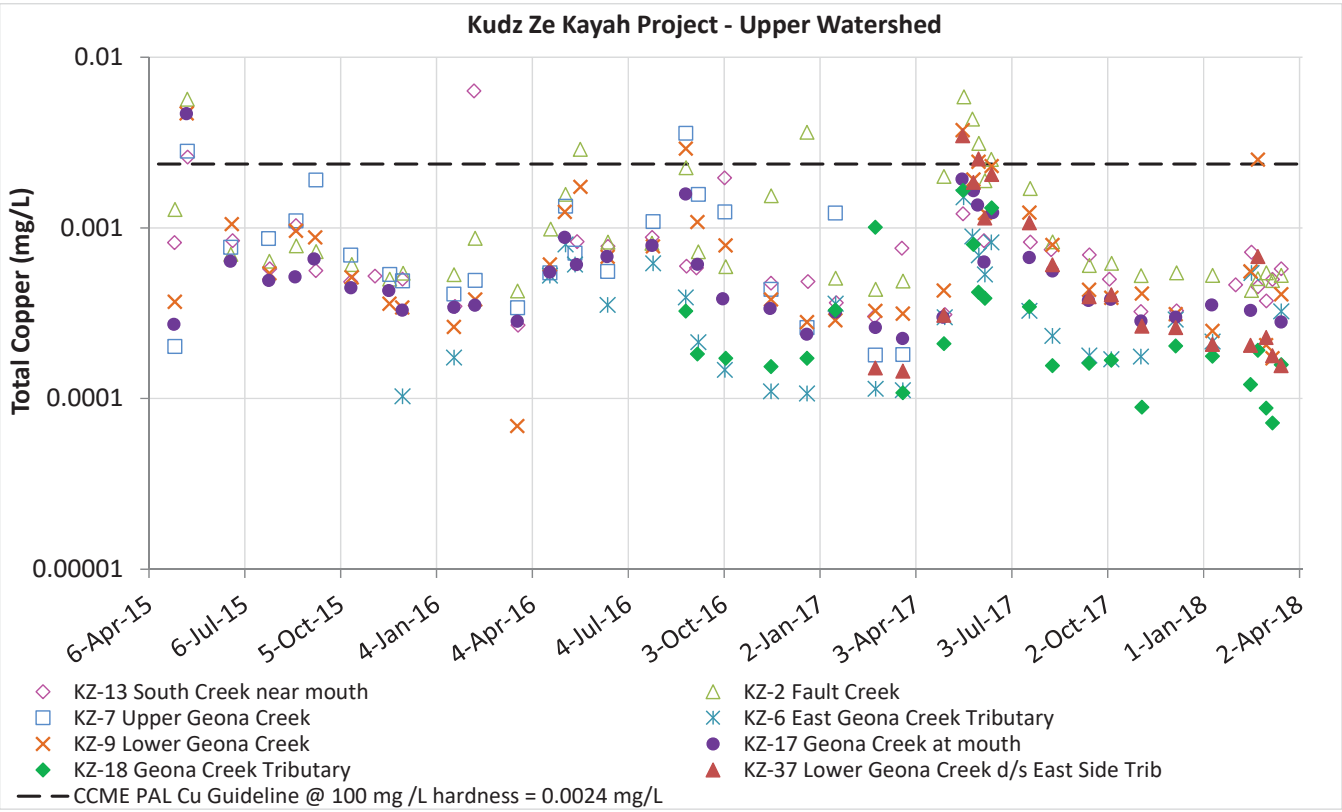


Figure C-13: Temporal Variation in Total Copper Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)

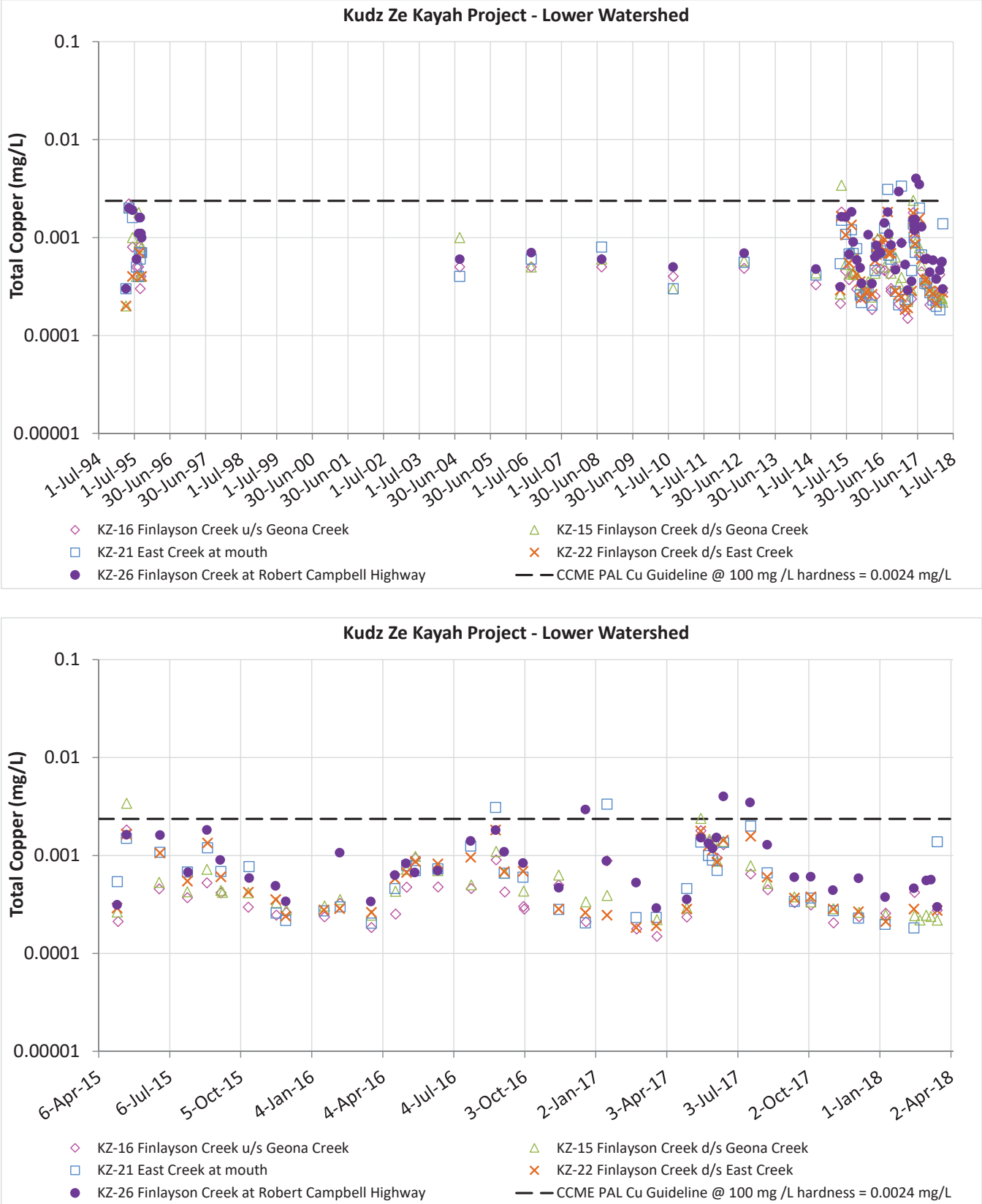
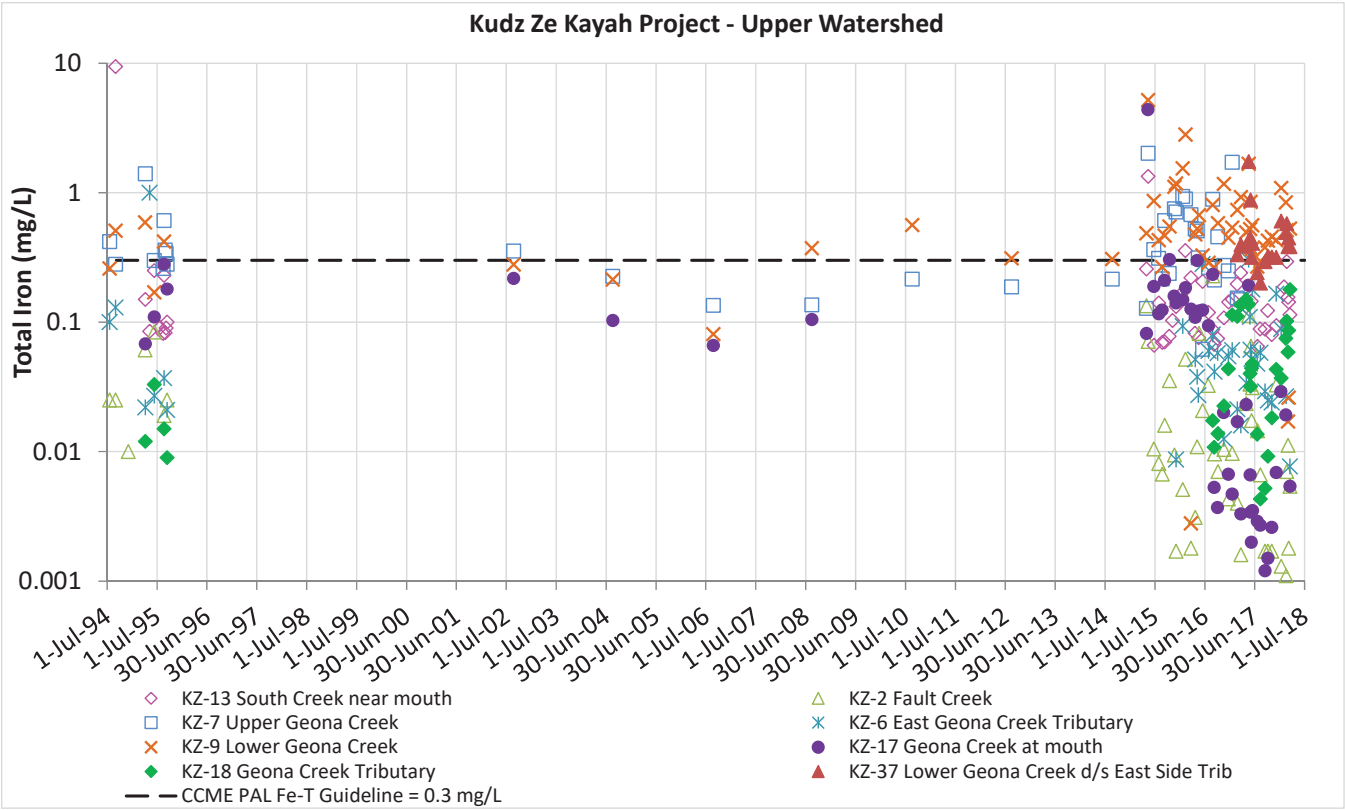


Figure C-14: Temporal Variation in Total Copper Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



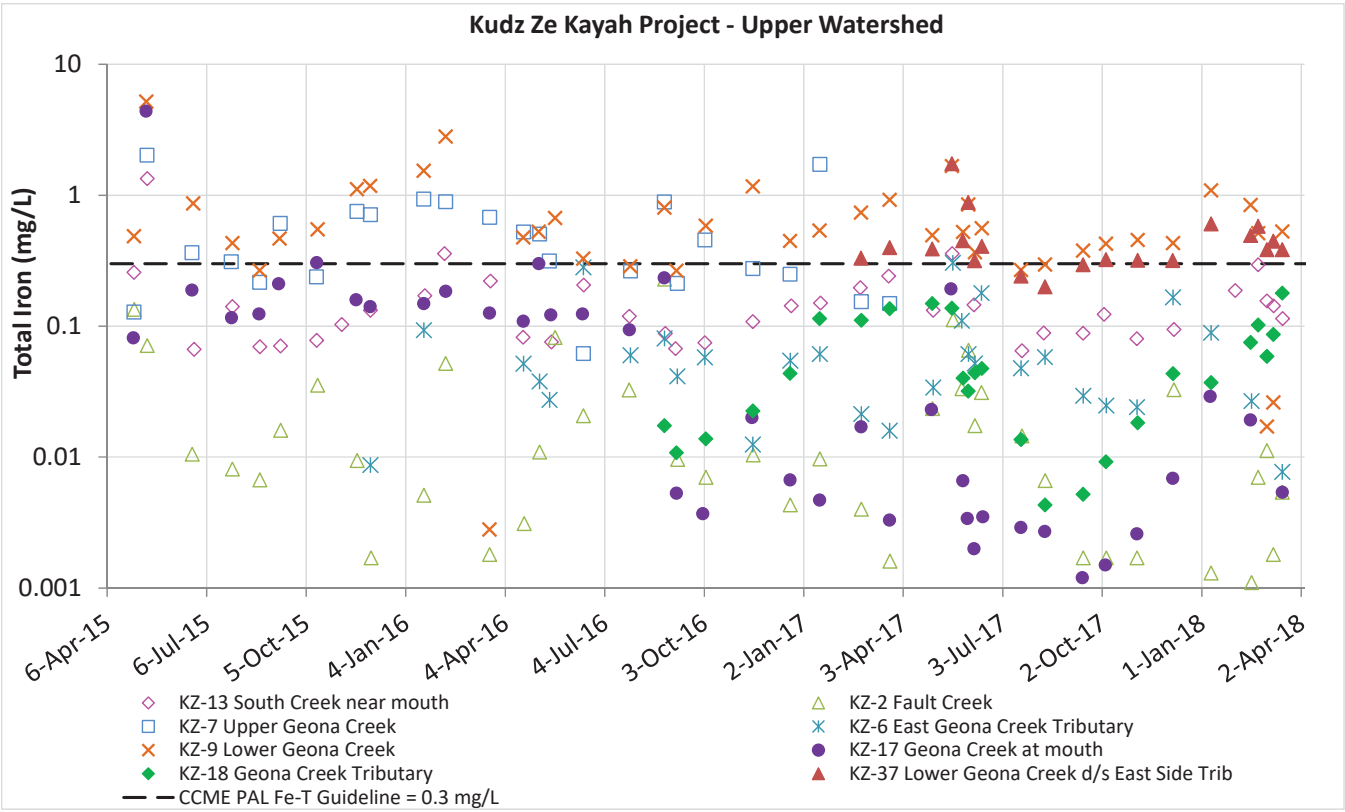
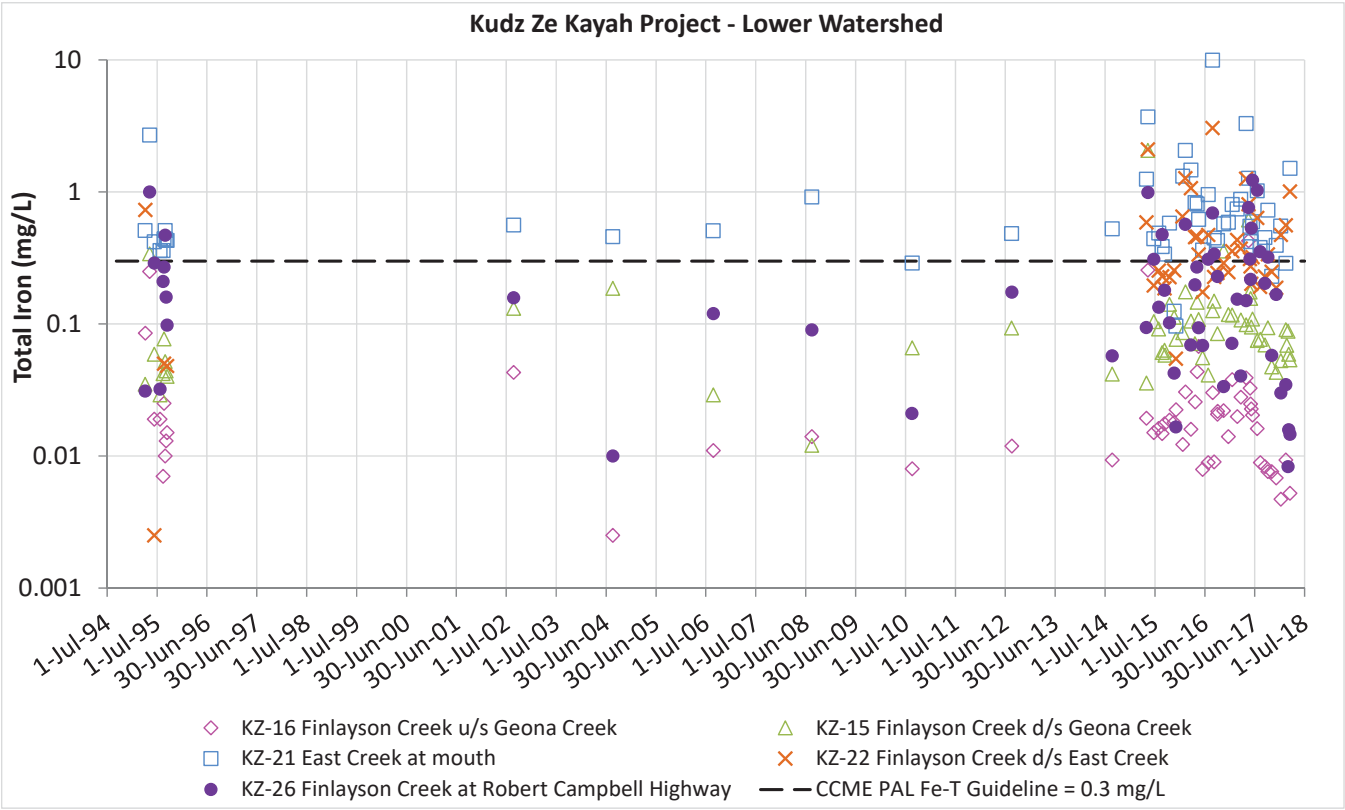


Figure C-15: Temporal Variation in Total Iron Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



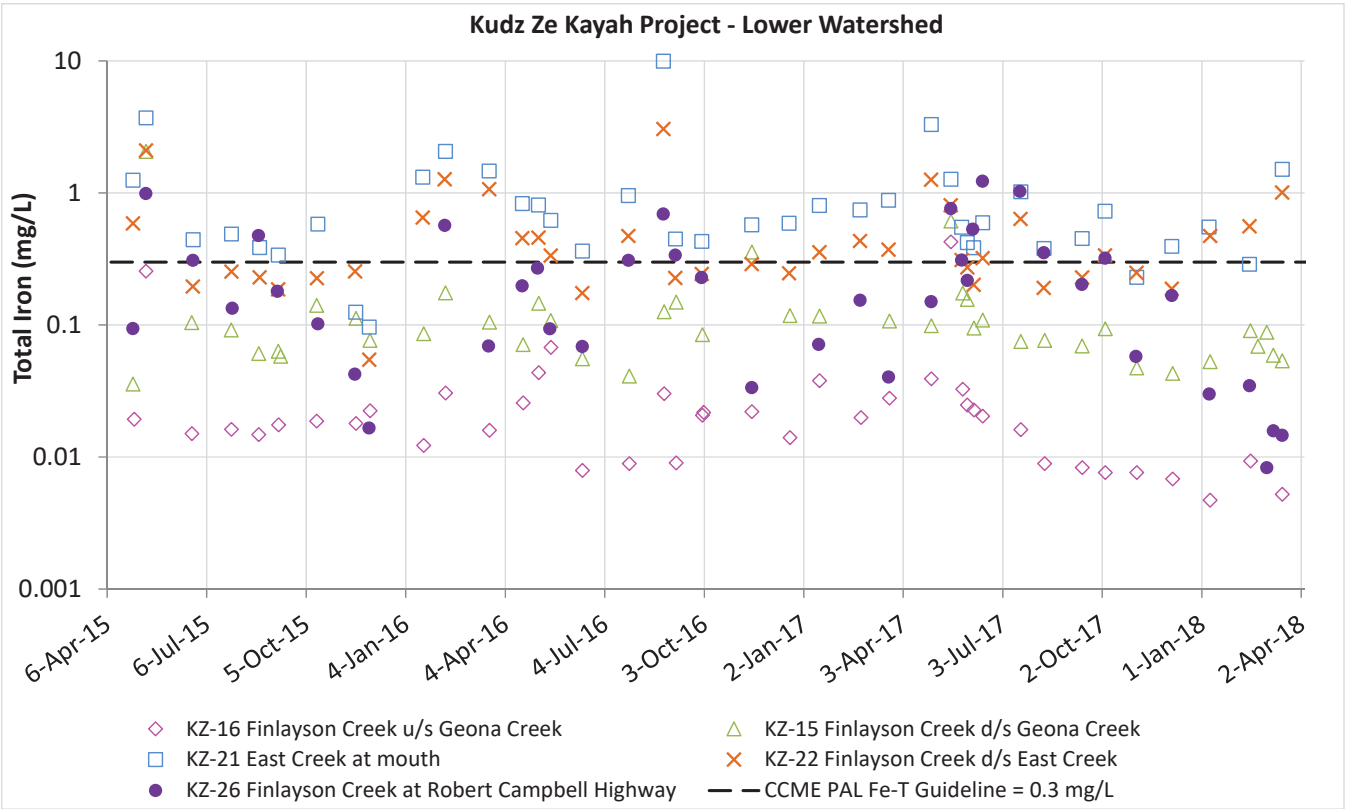
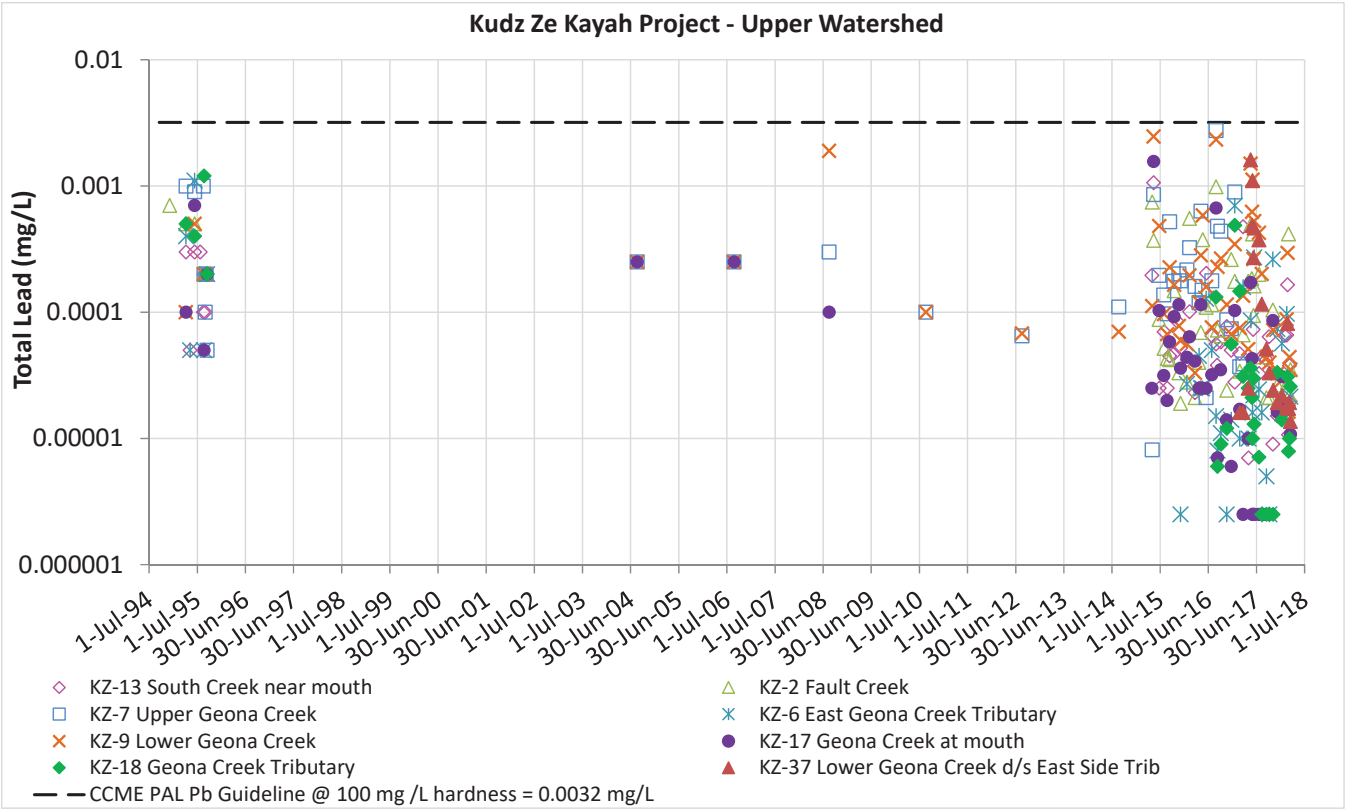


Figure C-16: Temporal Variation in Total Iron Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



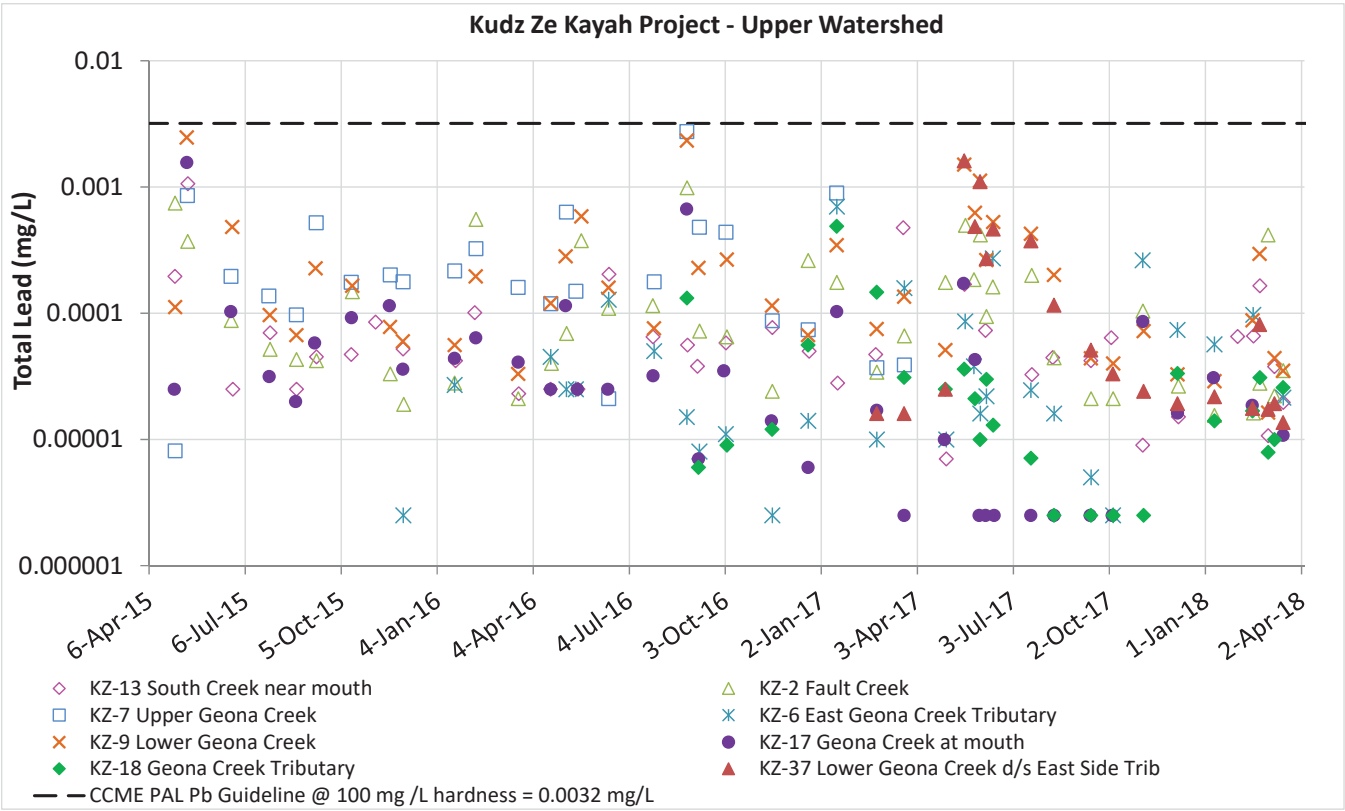
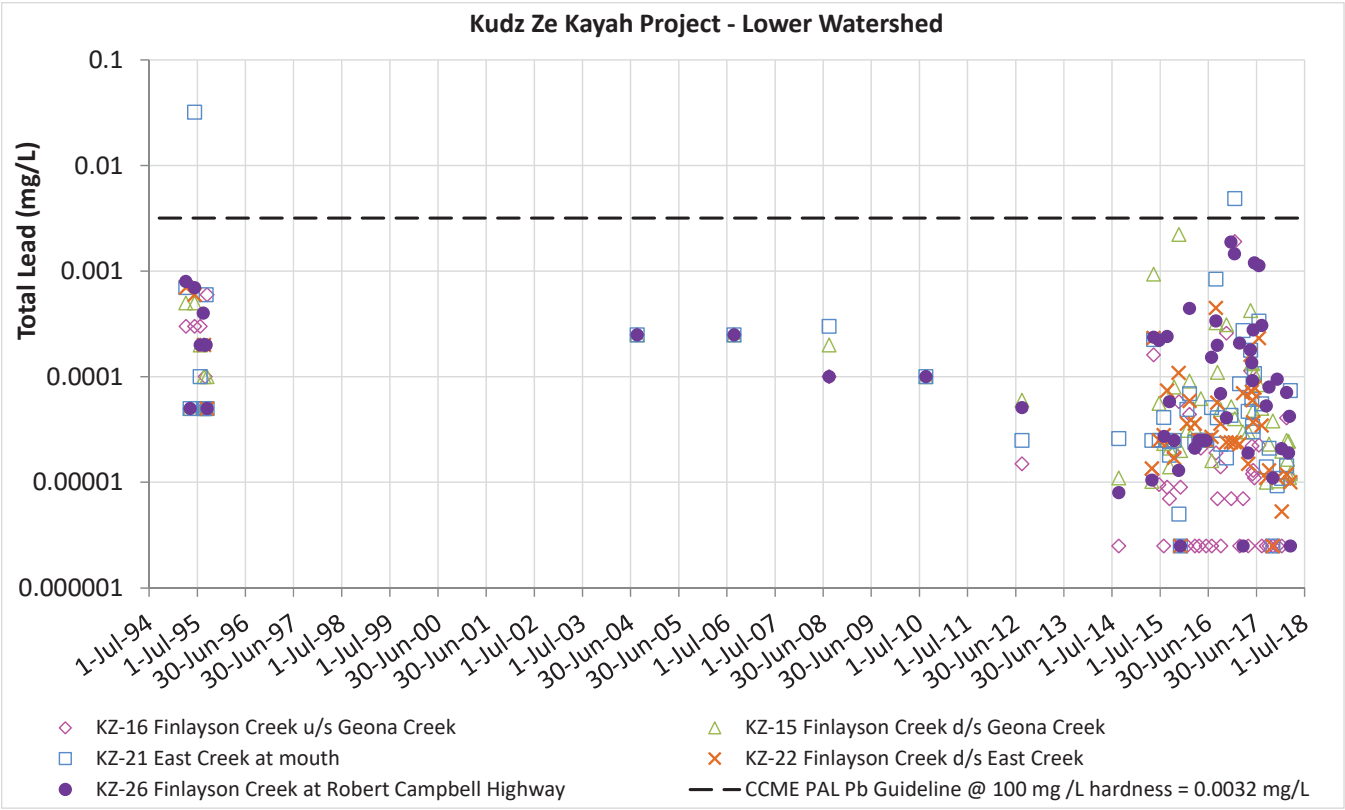


Figure C-17: Temporal Variation in Total Lead Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



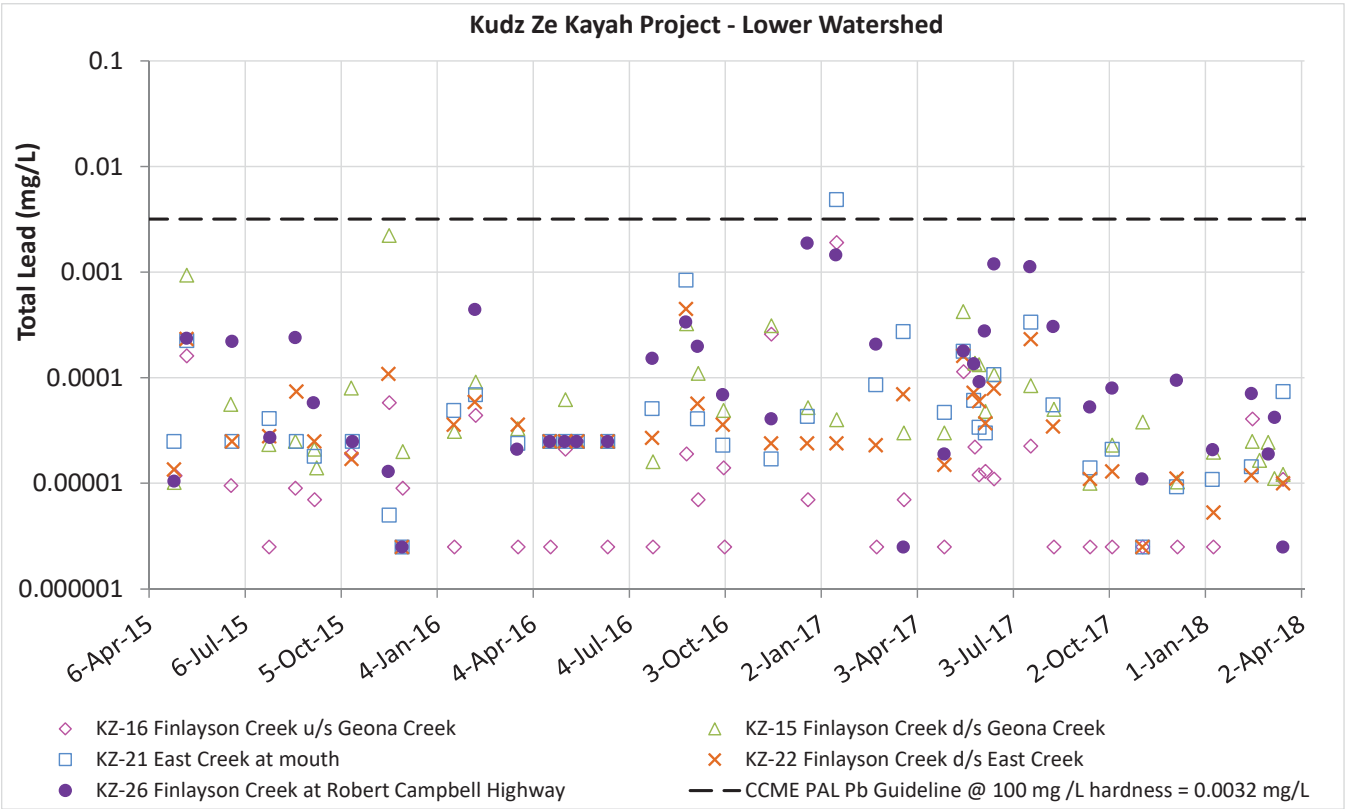


Figure C-18: Temporal Variation in Total Lead Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)

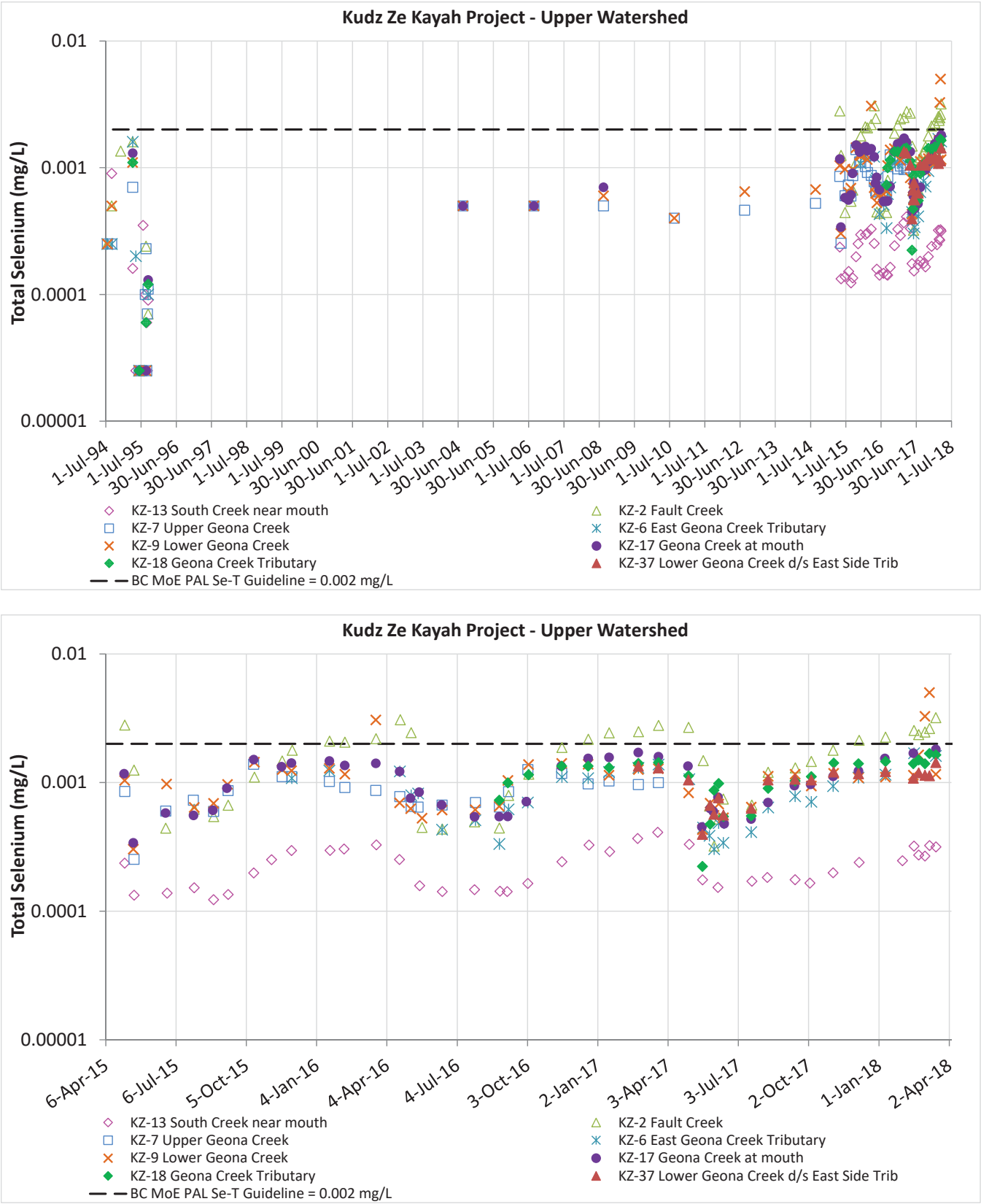
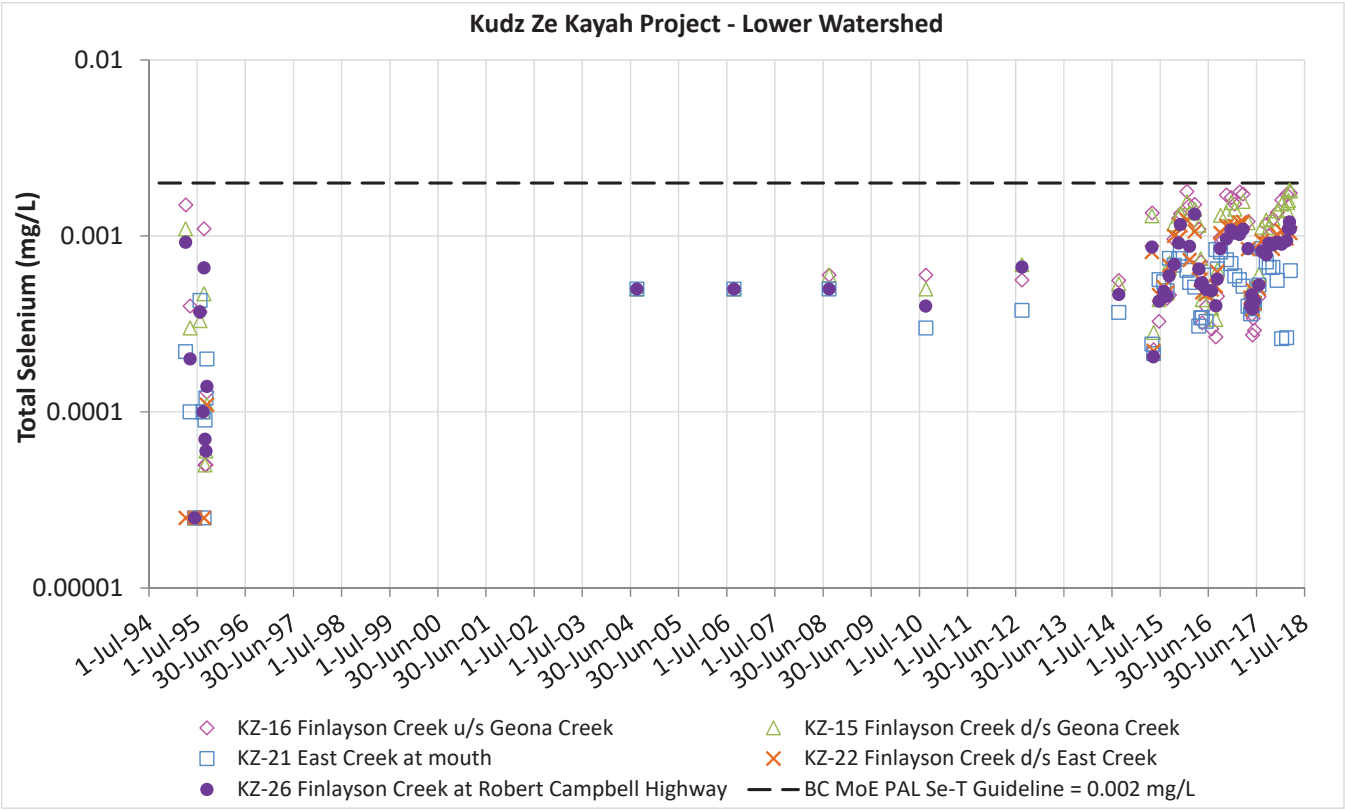


Figure C-19: Temporal Variation in Total Selenium Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



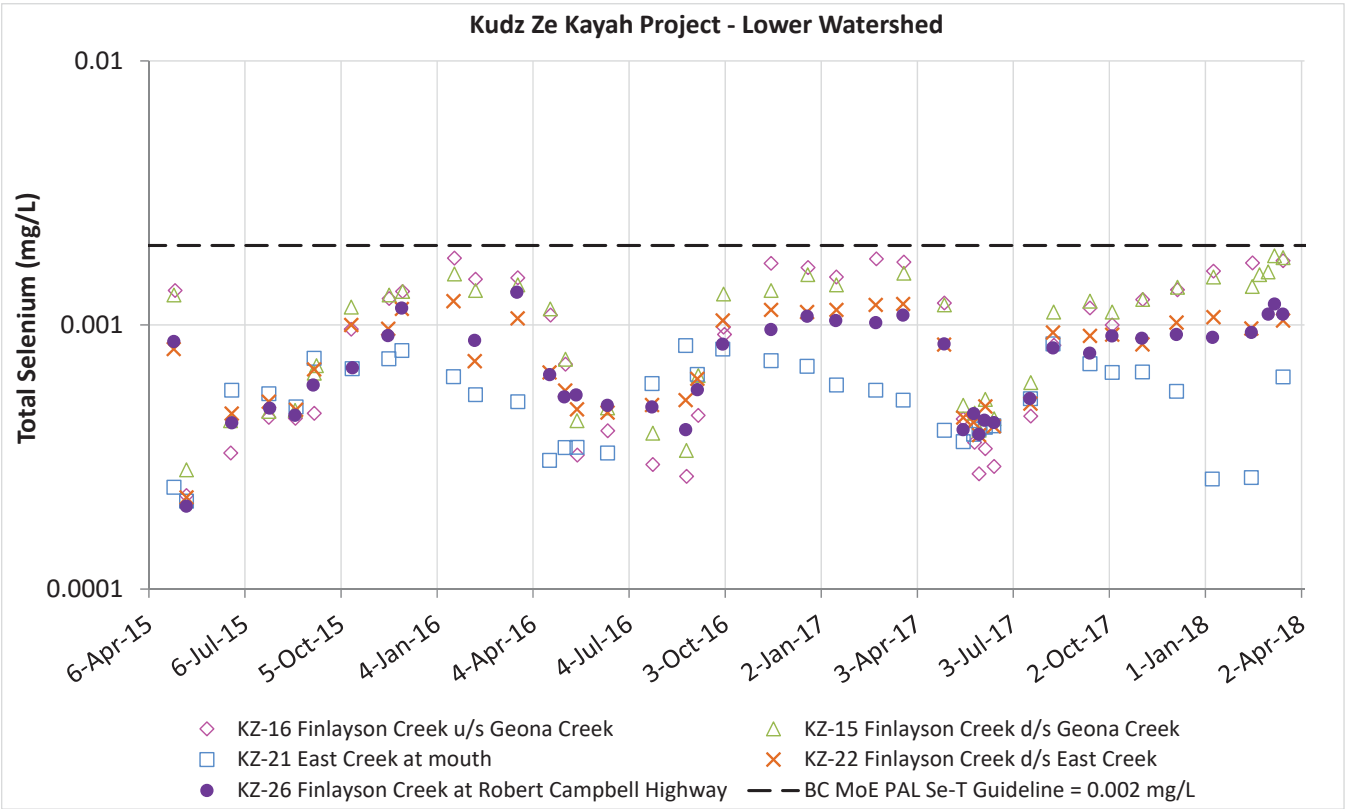
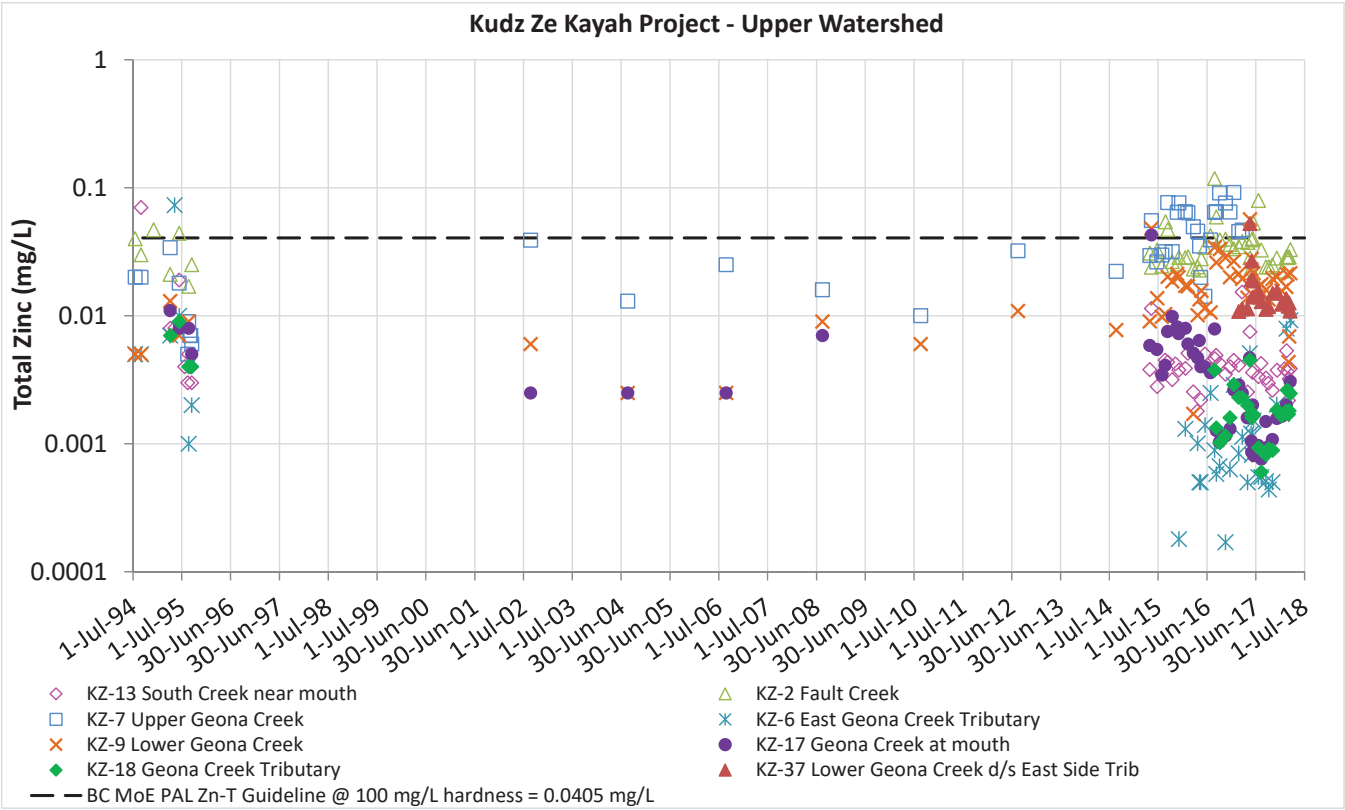


Figure C-20: Temporal Variation in Total Selenium Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



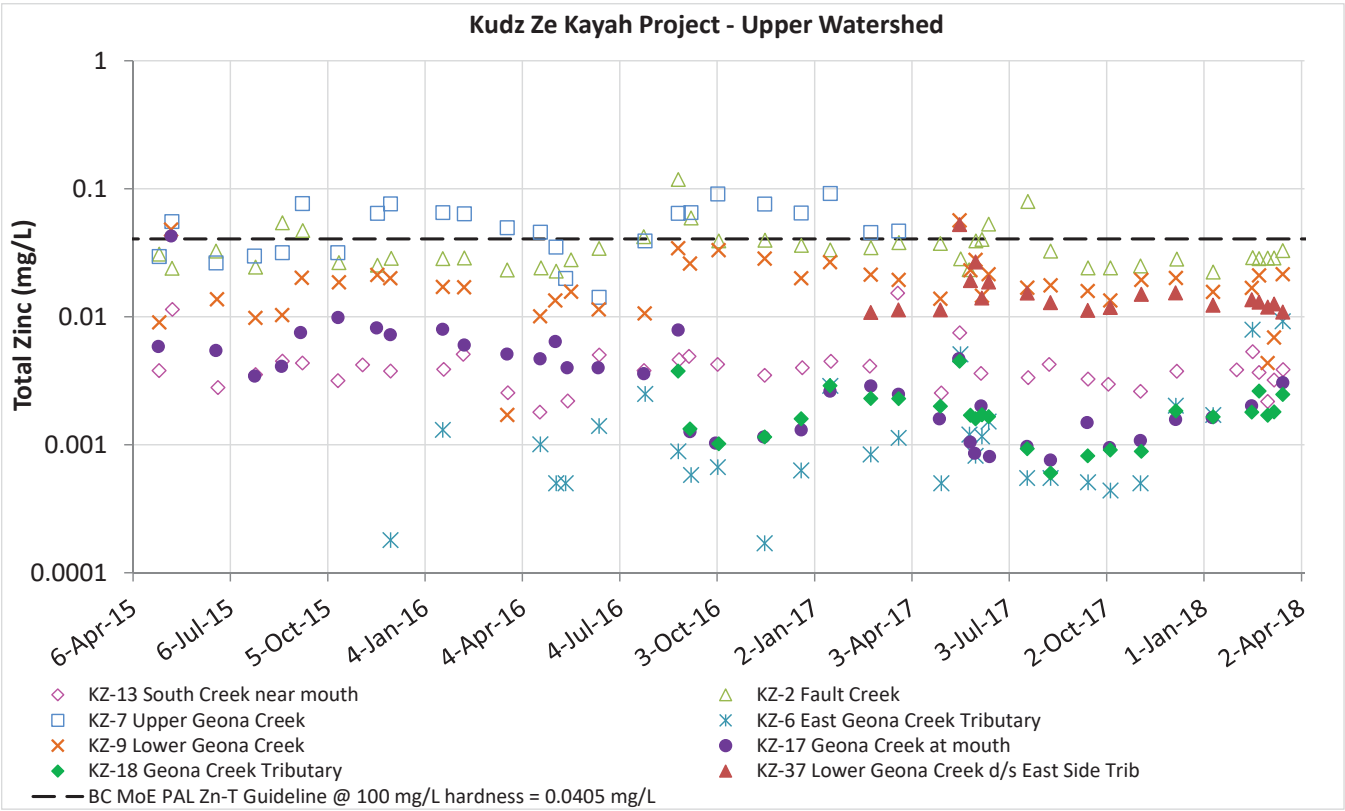
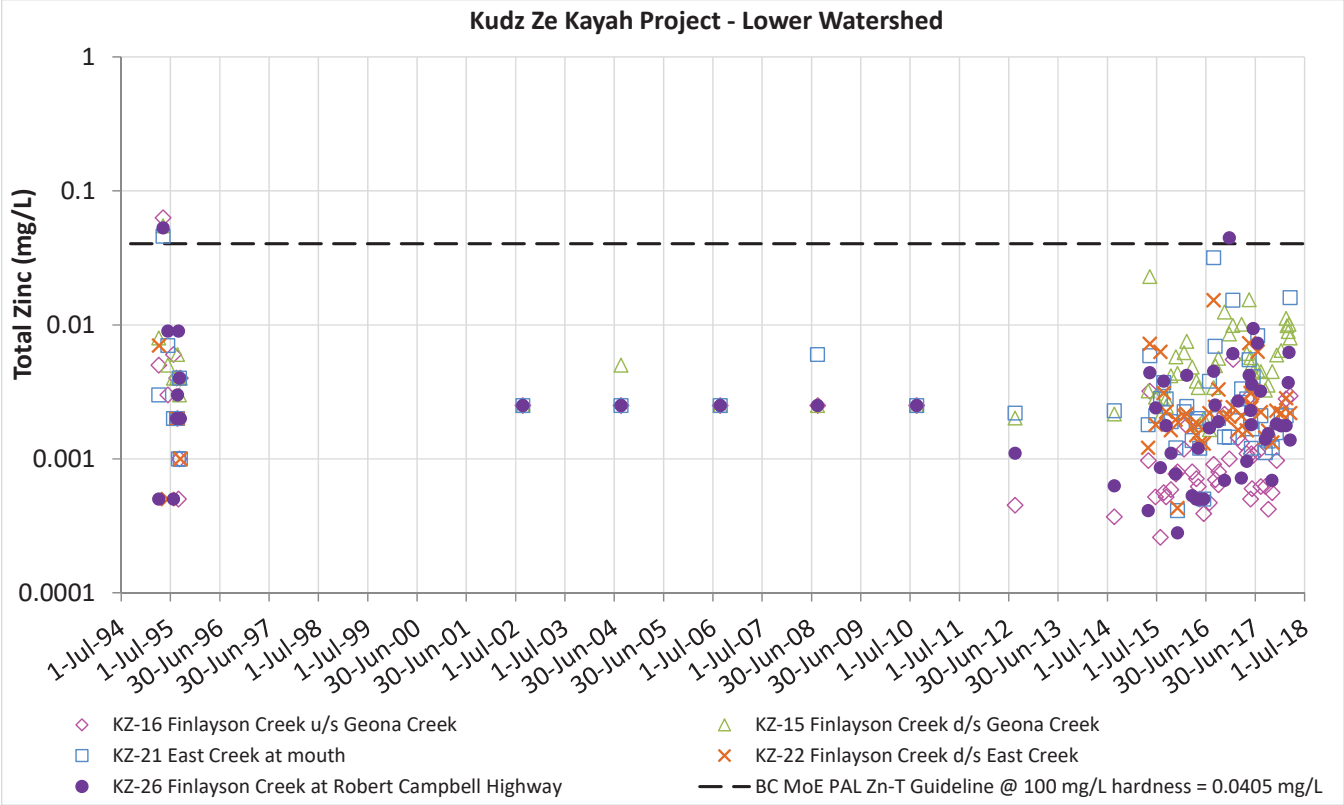


Figure C-21: Temporal Variation in Total Zinc Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



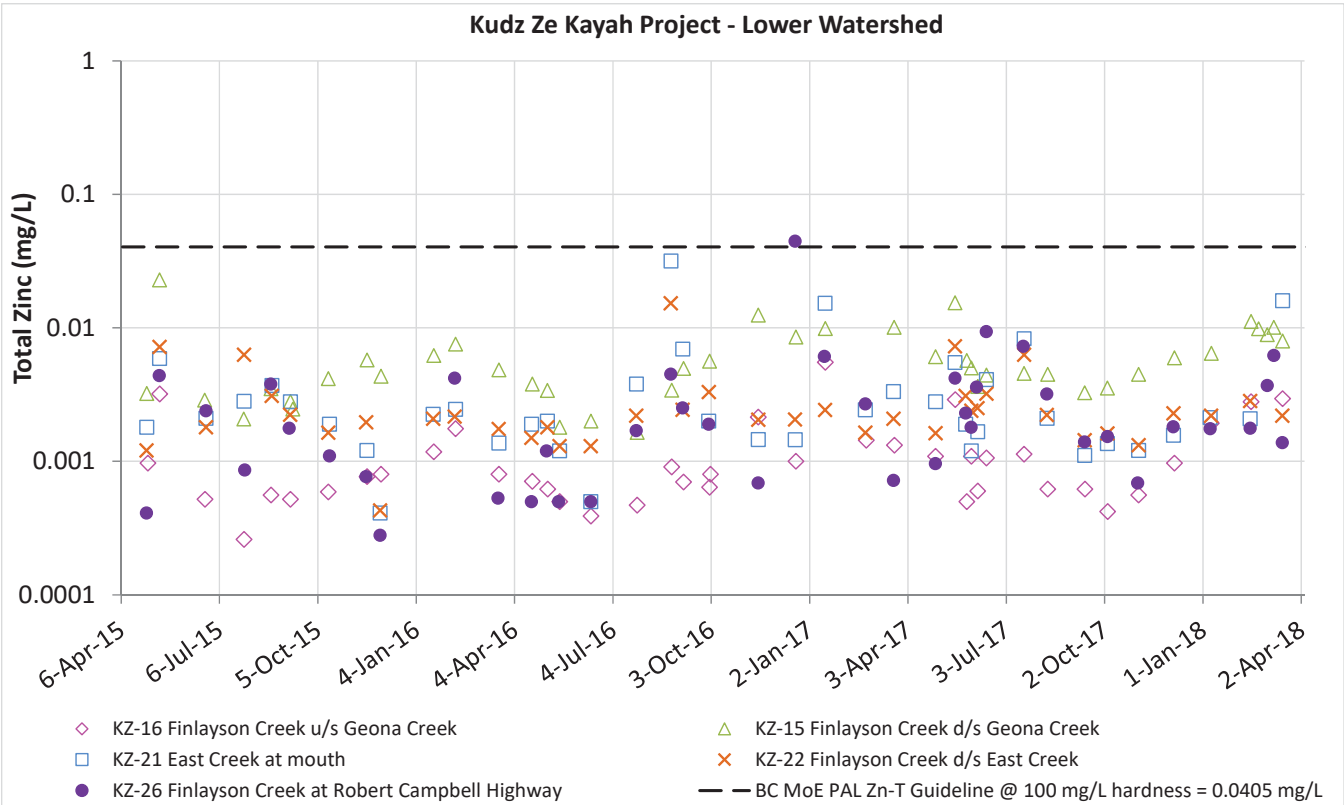
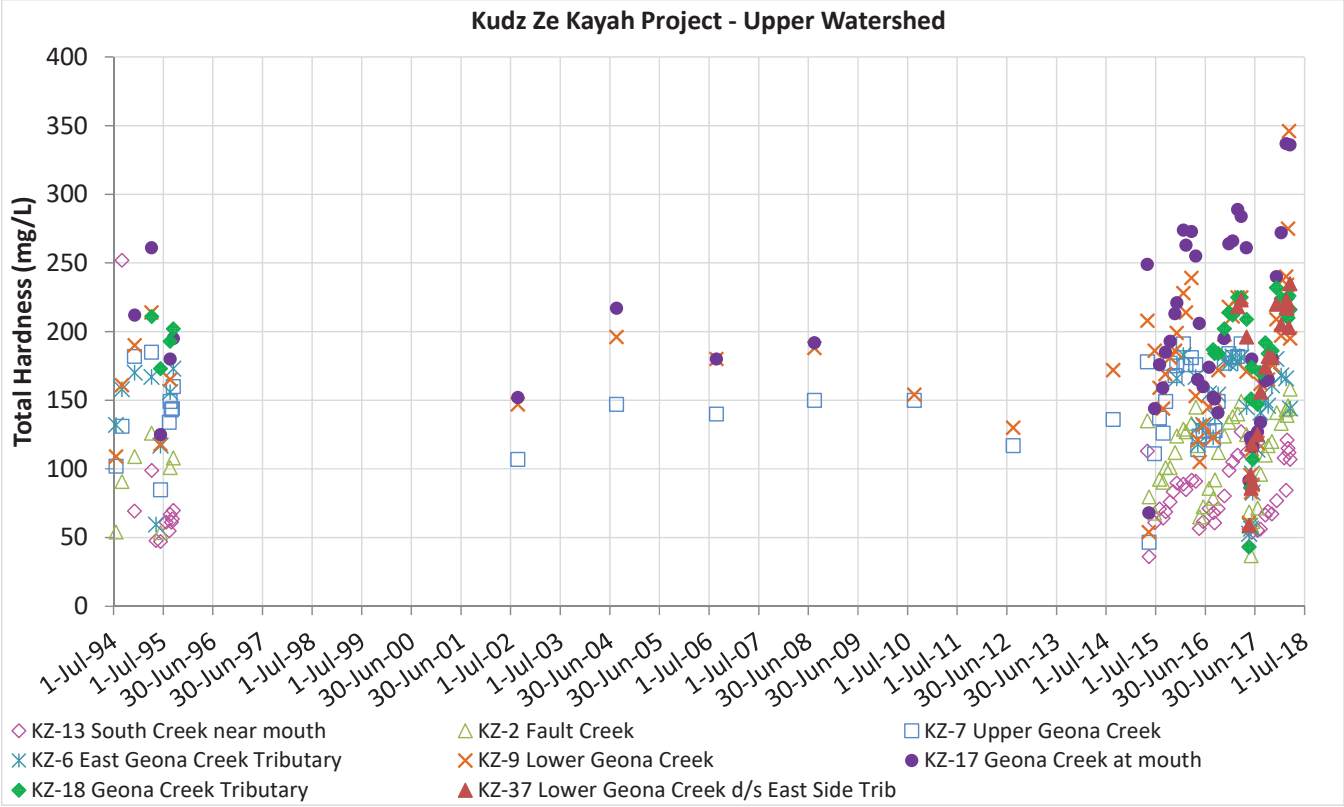


Figure C-22: Temporal Variation in Total Zinc Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)



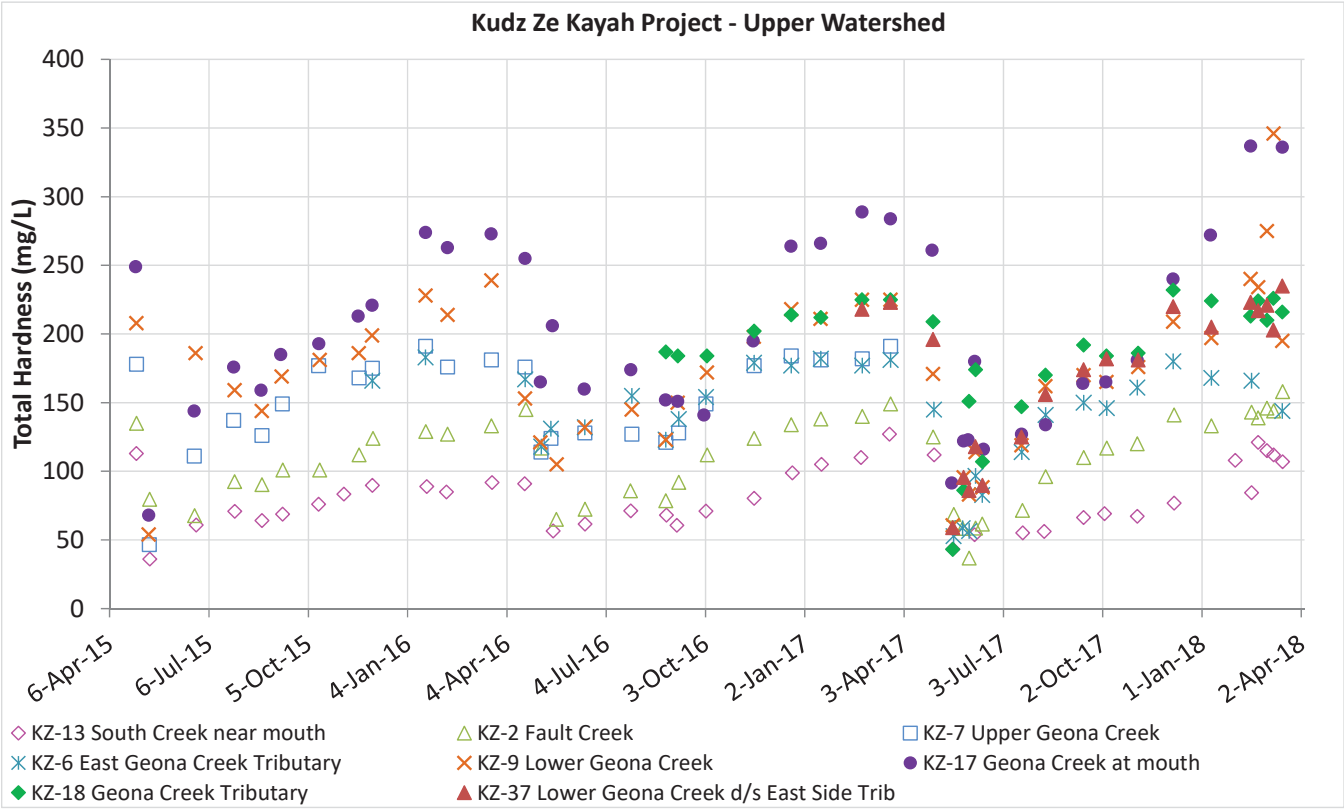


Figure C-23: Temporal Variation in Total Hardness Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)

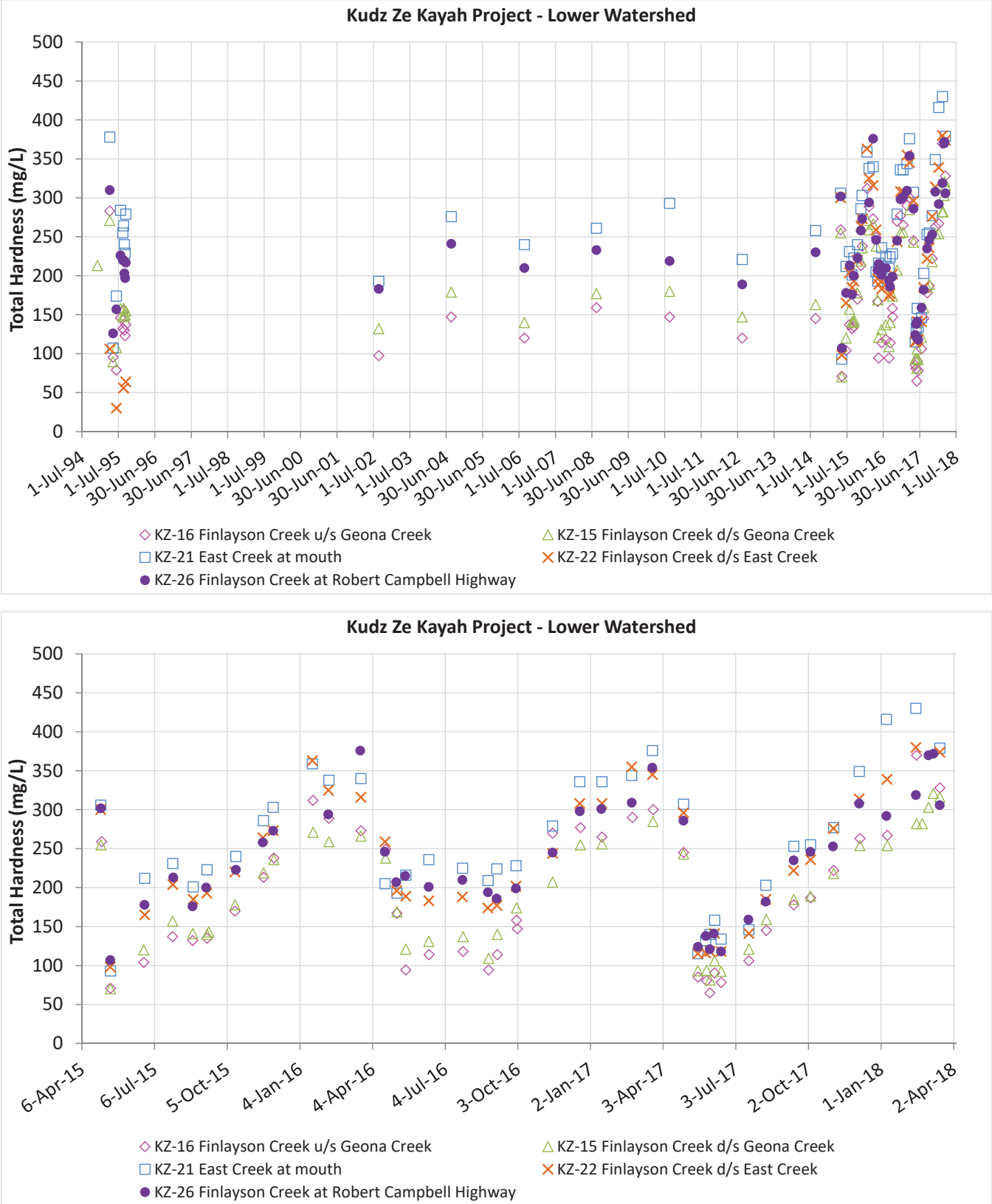


Figure C-24: Temporal Variation in Total Hardness Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)

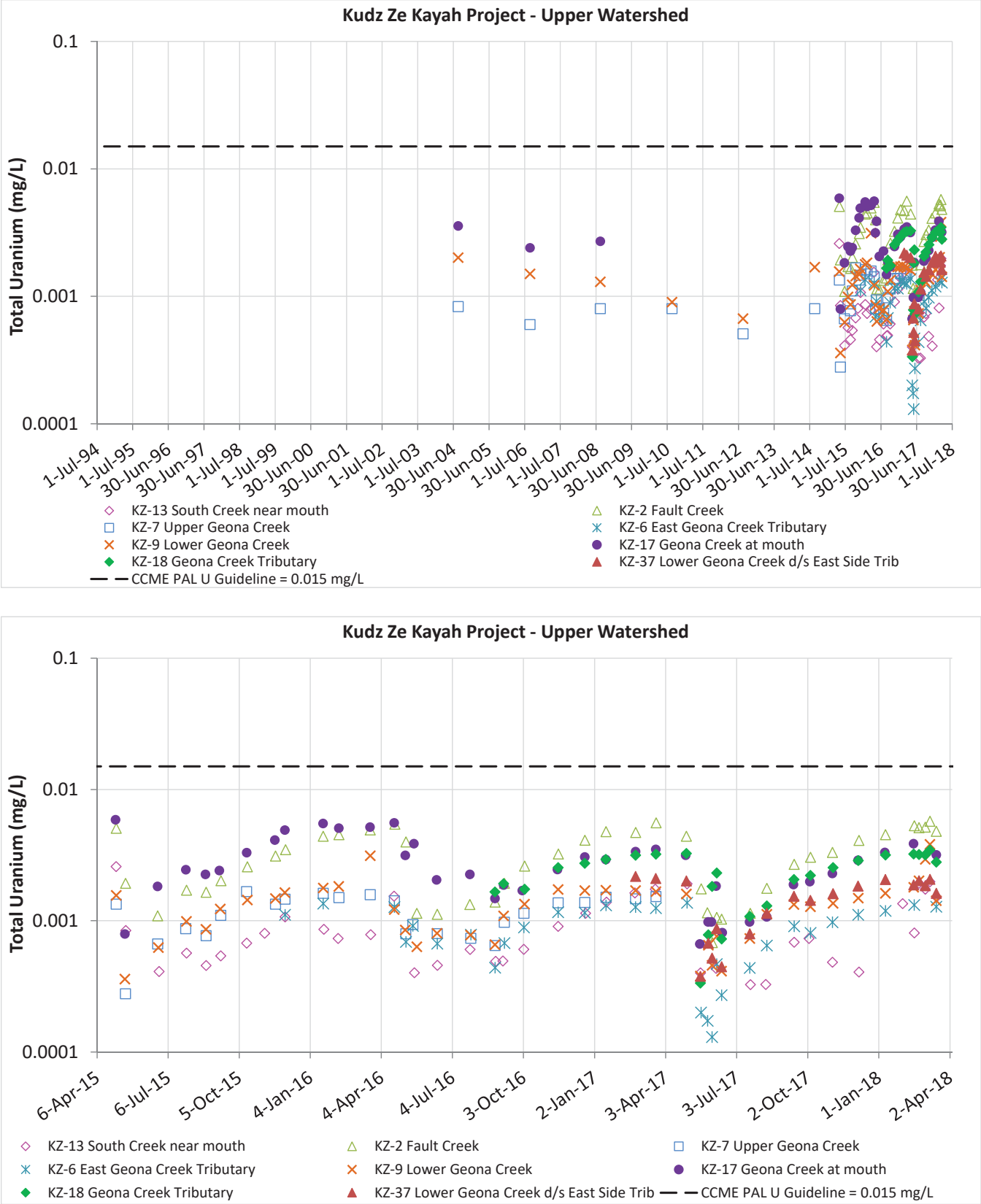


Figure C-25: Temporal Variation in Total Uranium Concentration in Upper Watershed (South, Fault, and Geona Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)

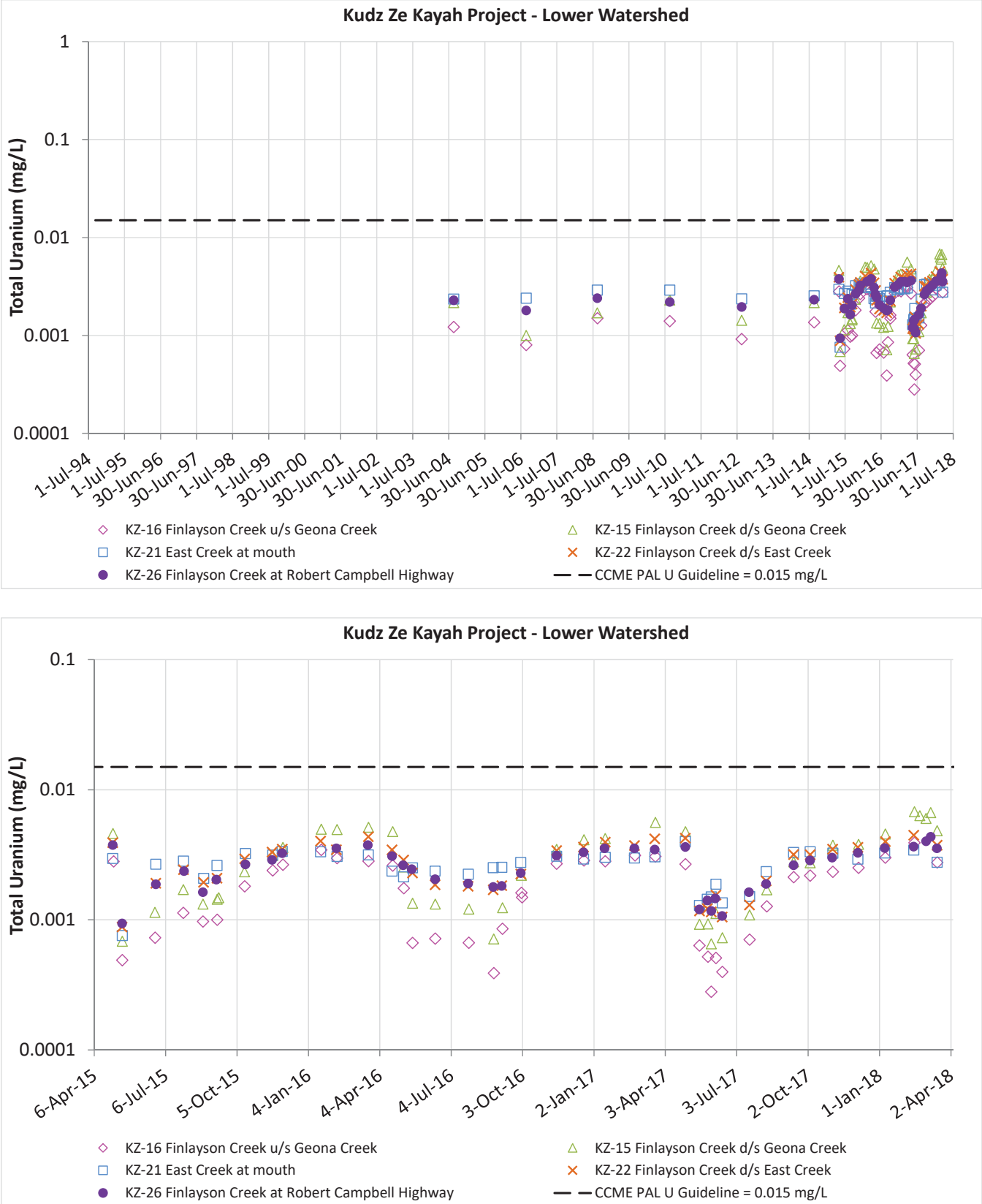


Figure C-26: Temporal Variation in Total Uranium Concentration in Lower Watershed (Finlayson and East Creeks) of Kudz Ze Kayah Project since 1994 (top) and since 2015 (bottom)

Page left intentionally blank

APPENDIX D.

August Historic and 2015-2017 Surface Water Graphs

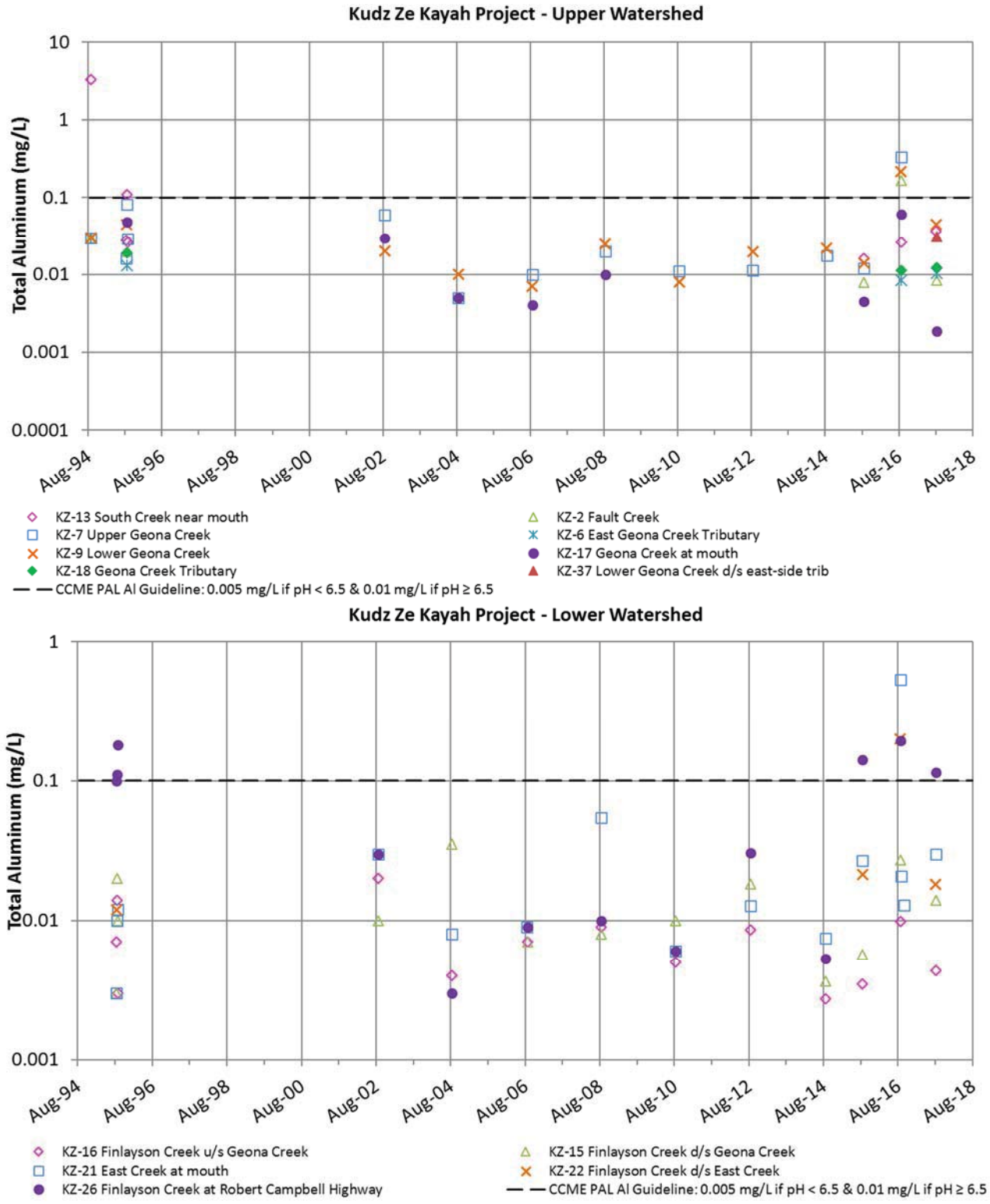


Figure D-1: Variation in Total Aluminum Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

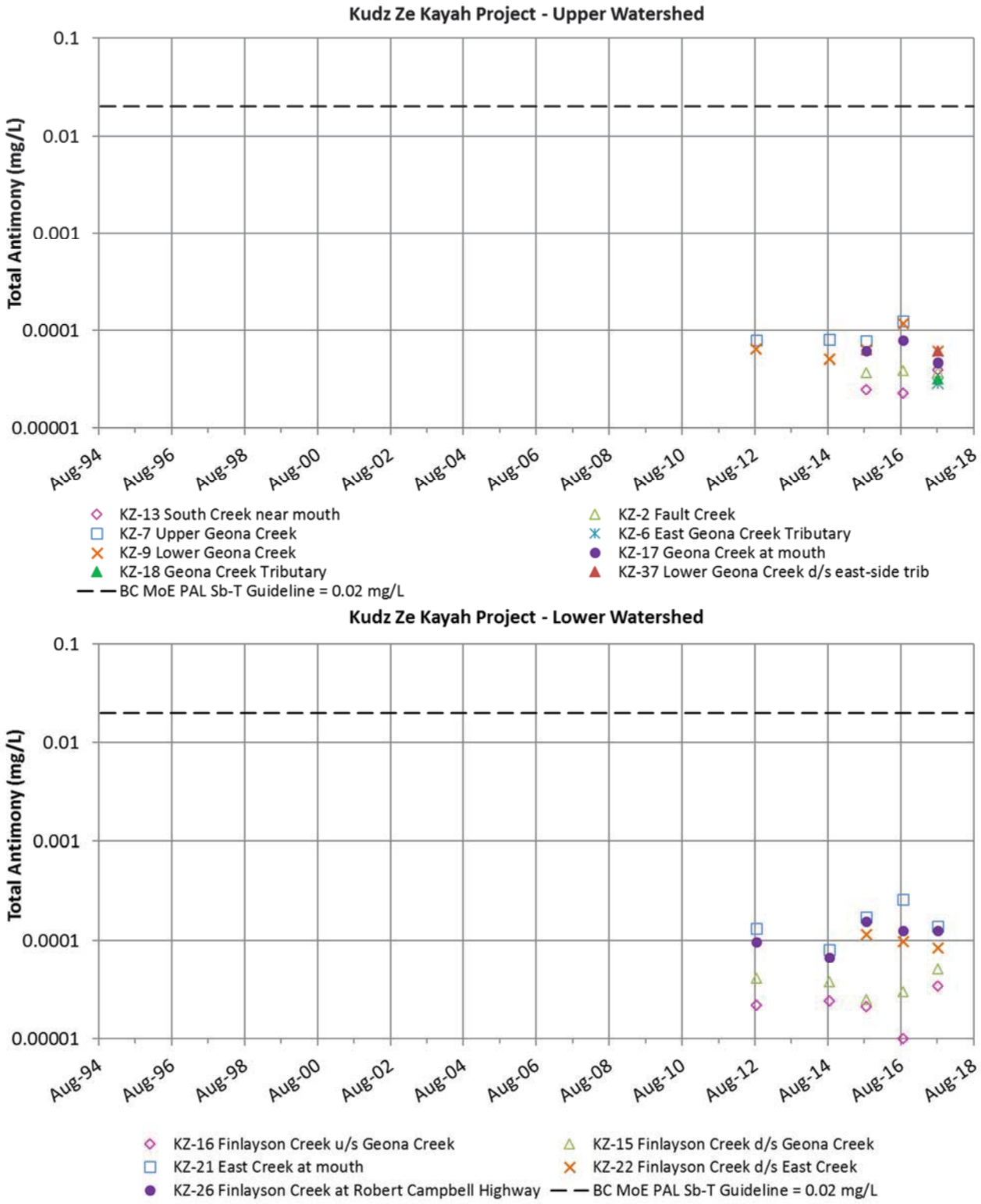


Figure D-2: Variation in Total Antimony Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

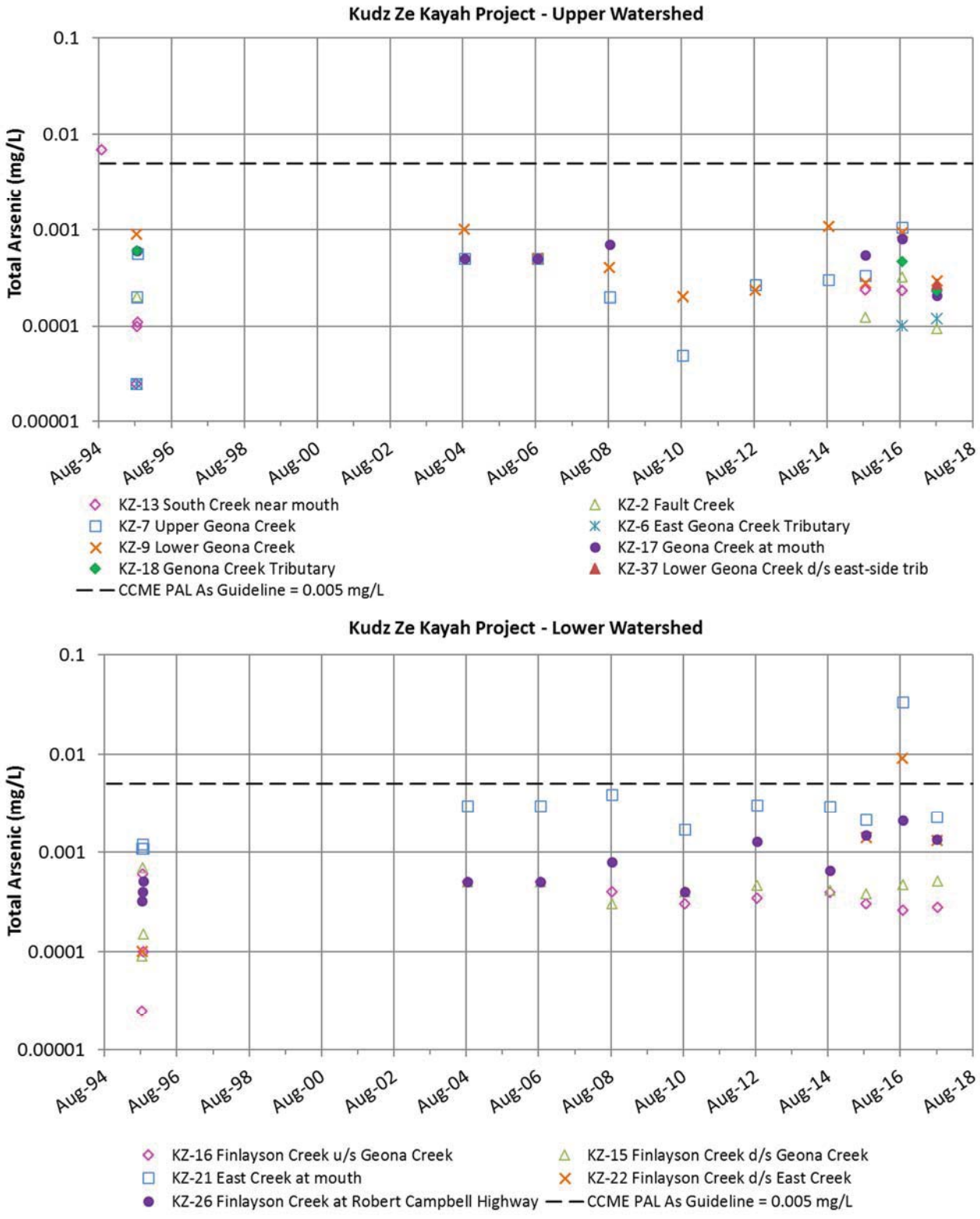


Figure D-3: Variation in Total Arsenic Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

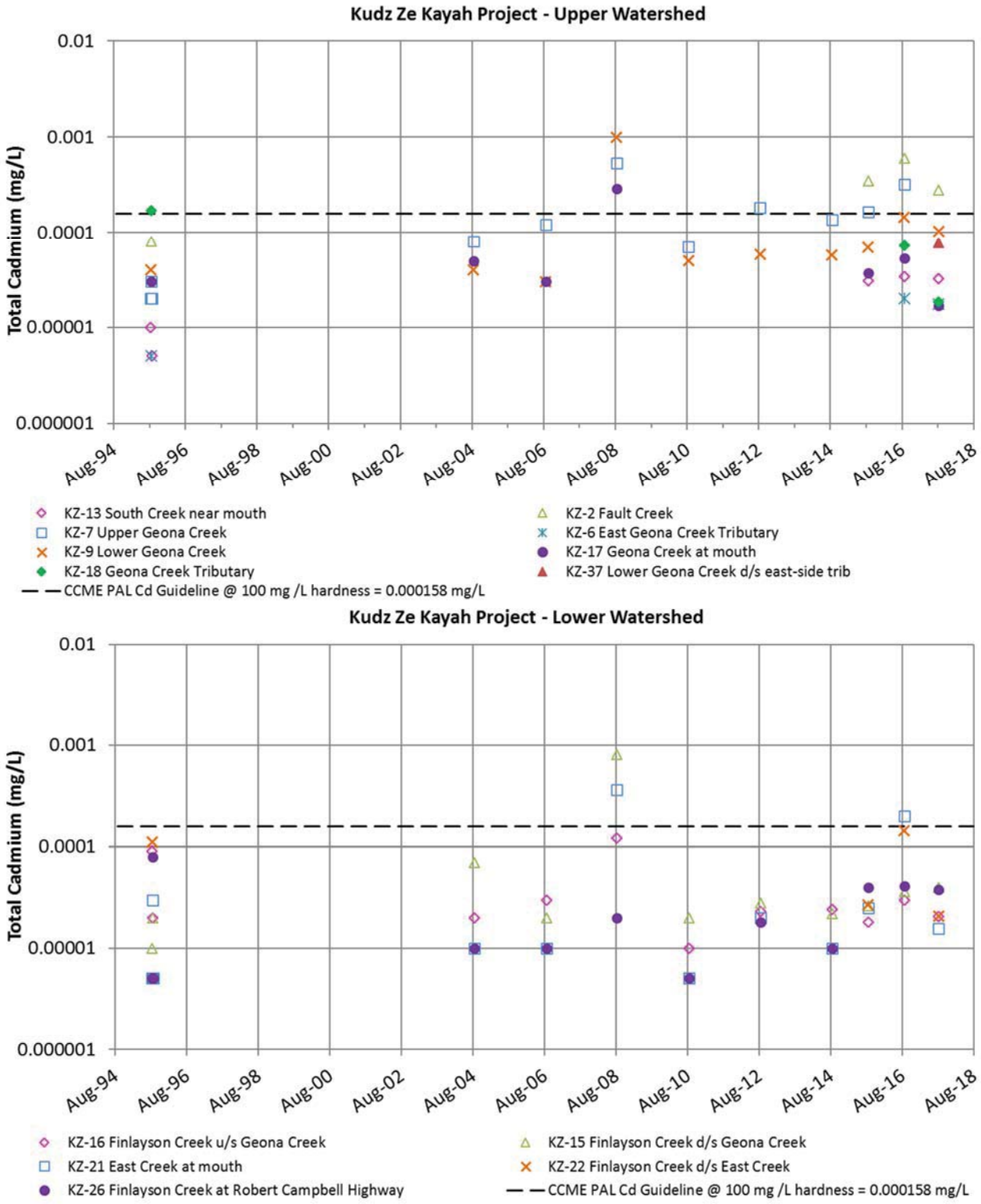


Figure D-4: Variation in Total Cadmium Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

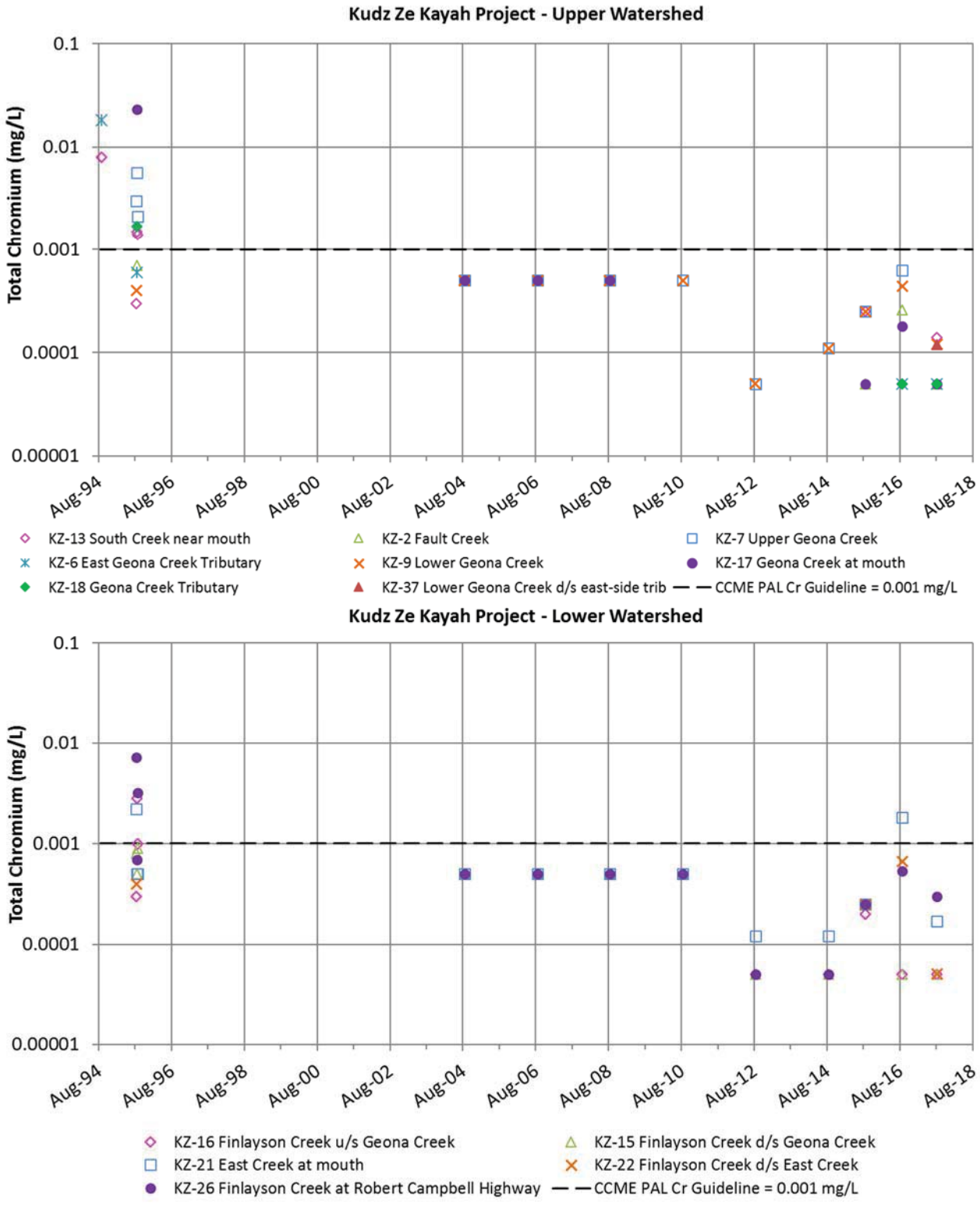


Figure D-5: Variation in Total Chromium Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

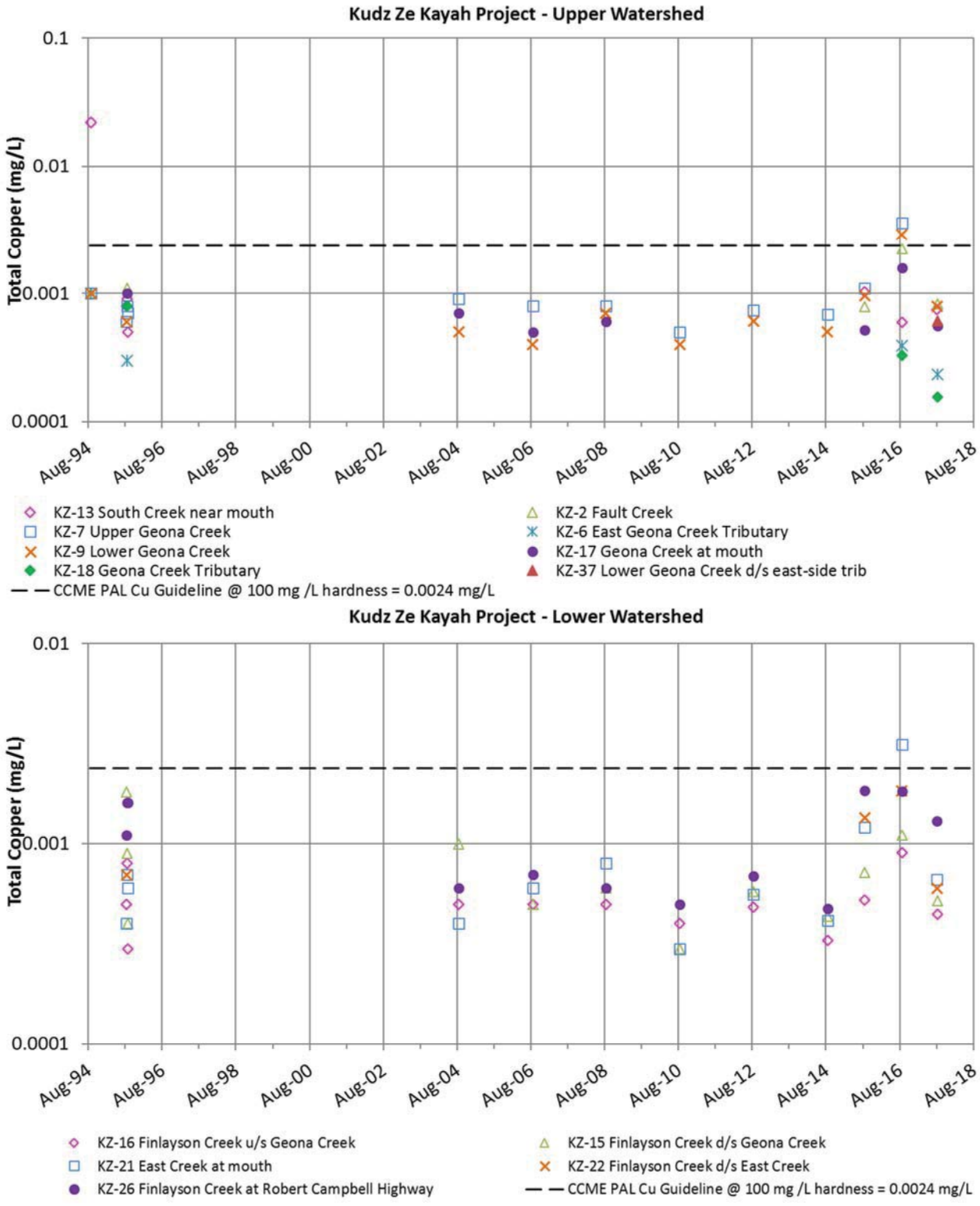


Figure D-6: Variation in Total Copper Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

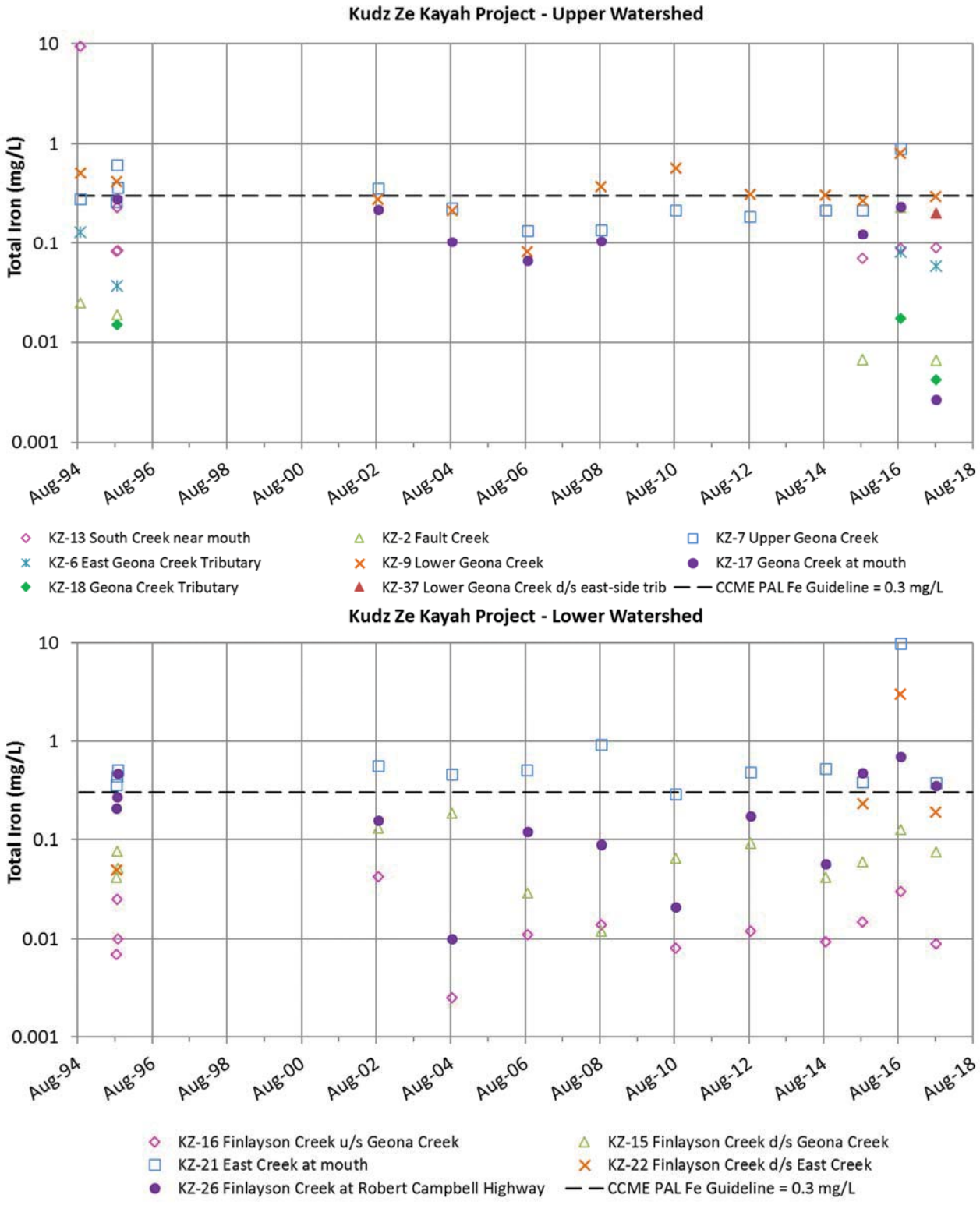


Figure D-7: Variation in Total Iron Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

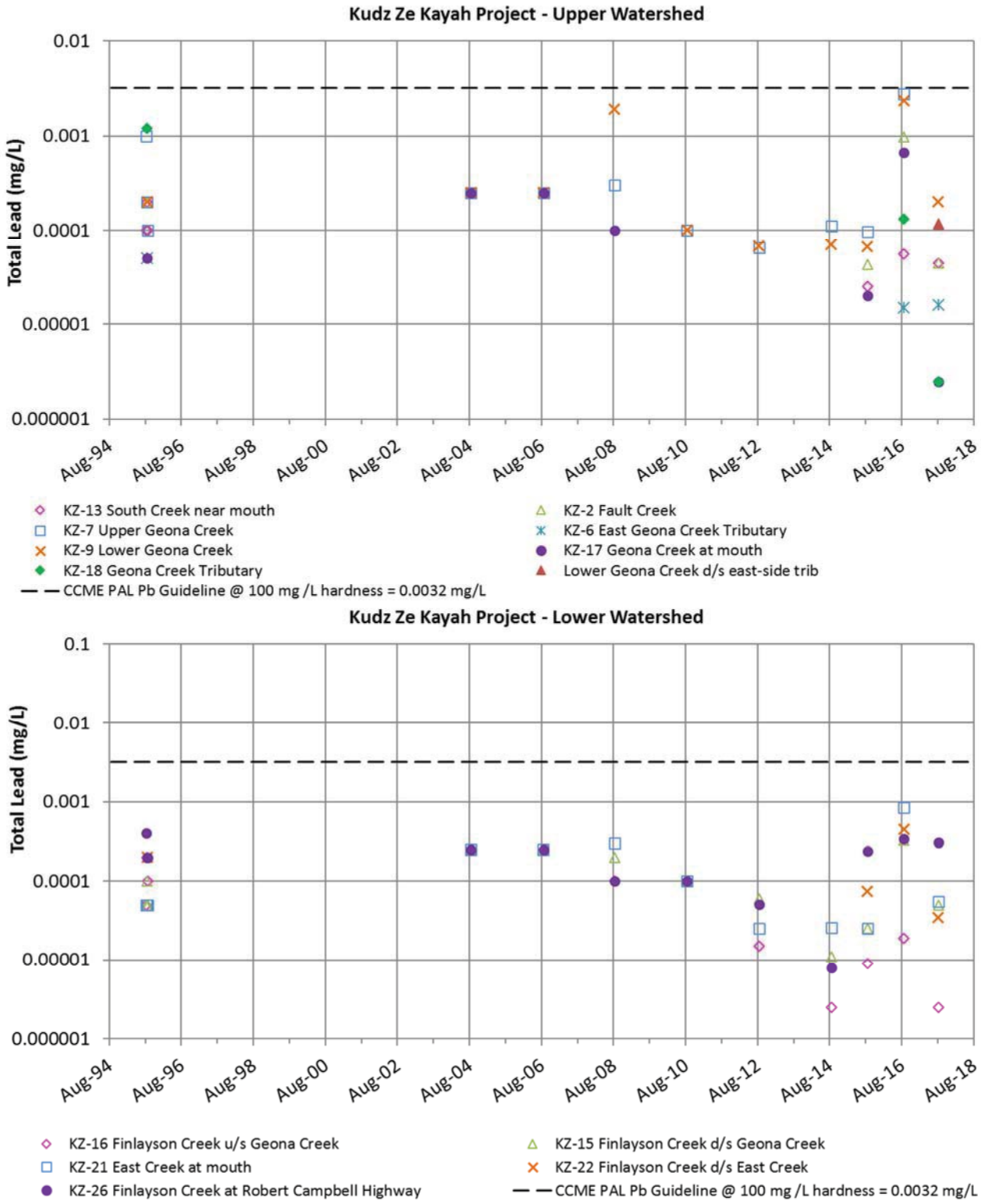


Figure D-8: Variation in Total Lead Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

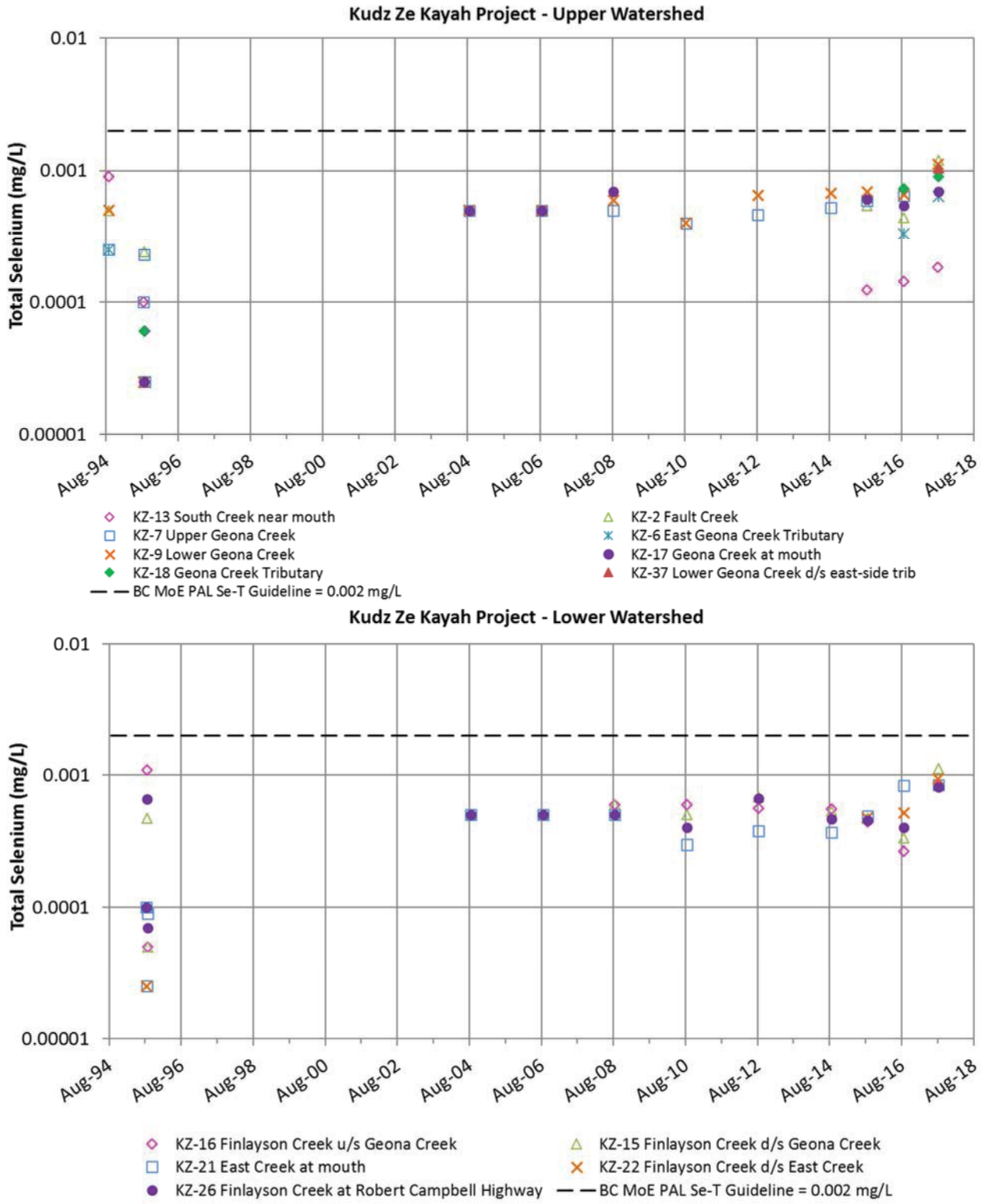


Figure D-9: Variation in Total Selenium Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

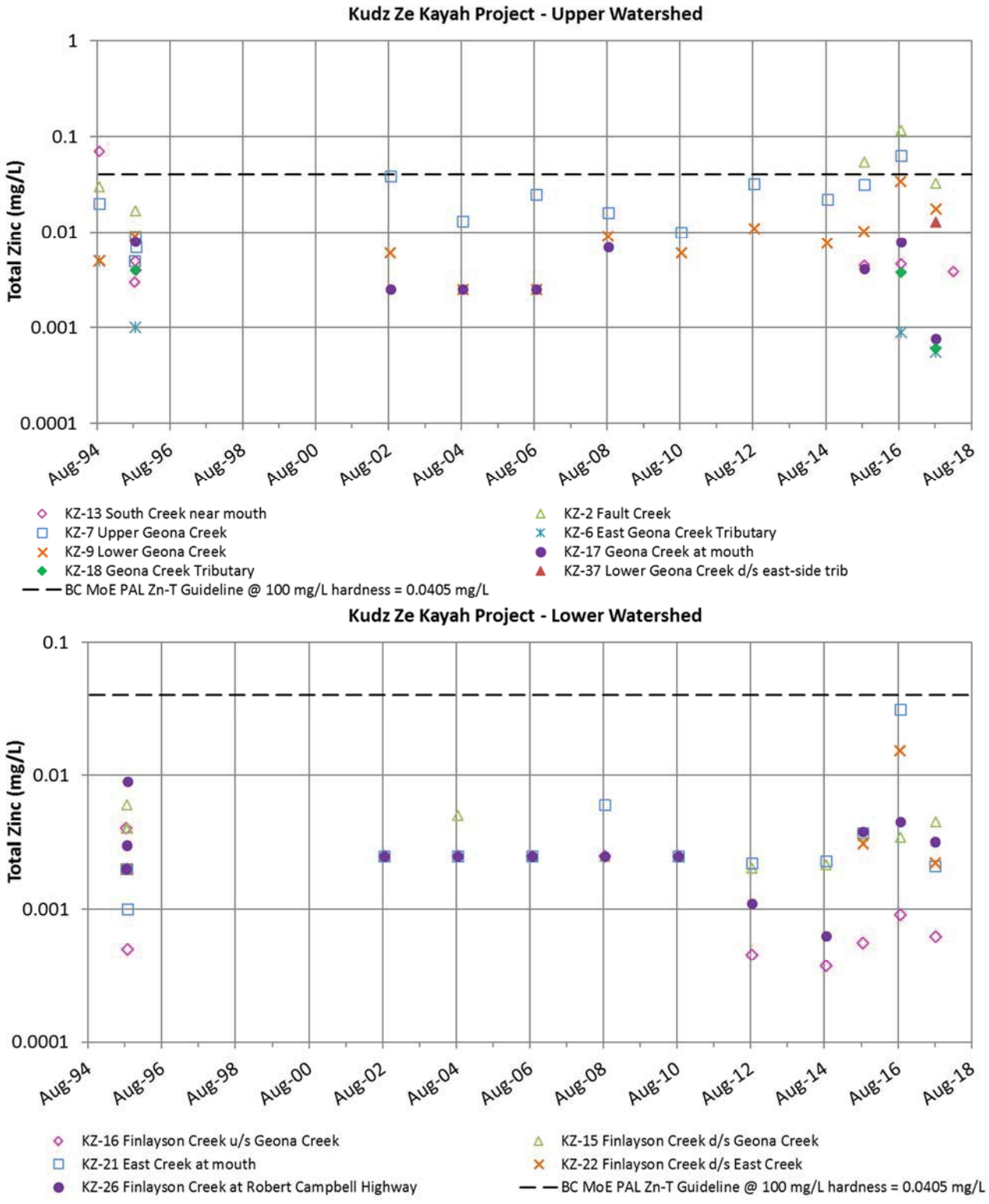


Figure D-10: Variation in Total Zinc Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

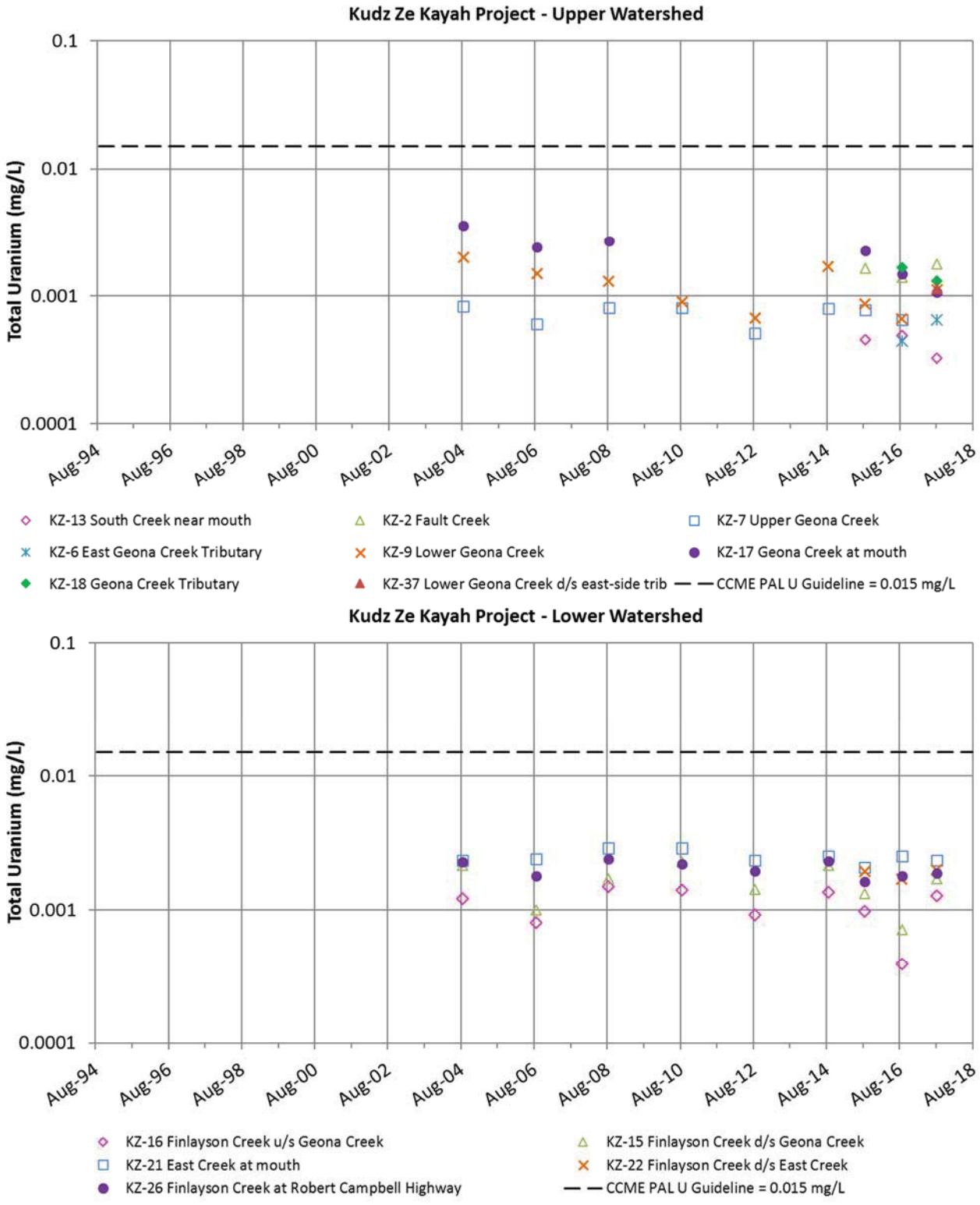


Figure D-11: Variation in Total Uranium Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in August since 1994

APPENDIX E.

Five Samples in 30 Days May and June 2017 Surface Water Plots

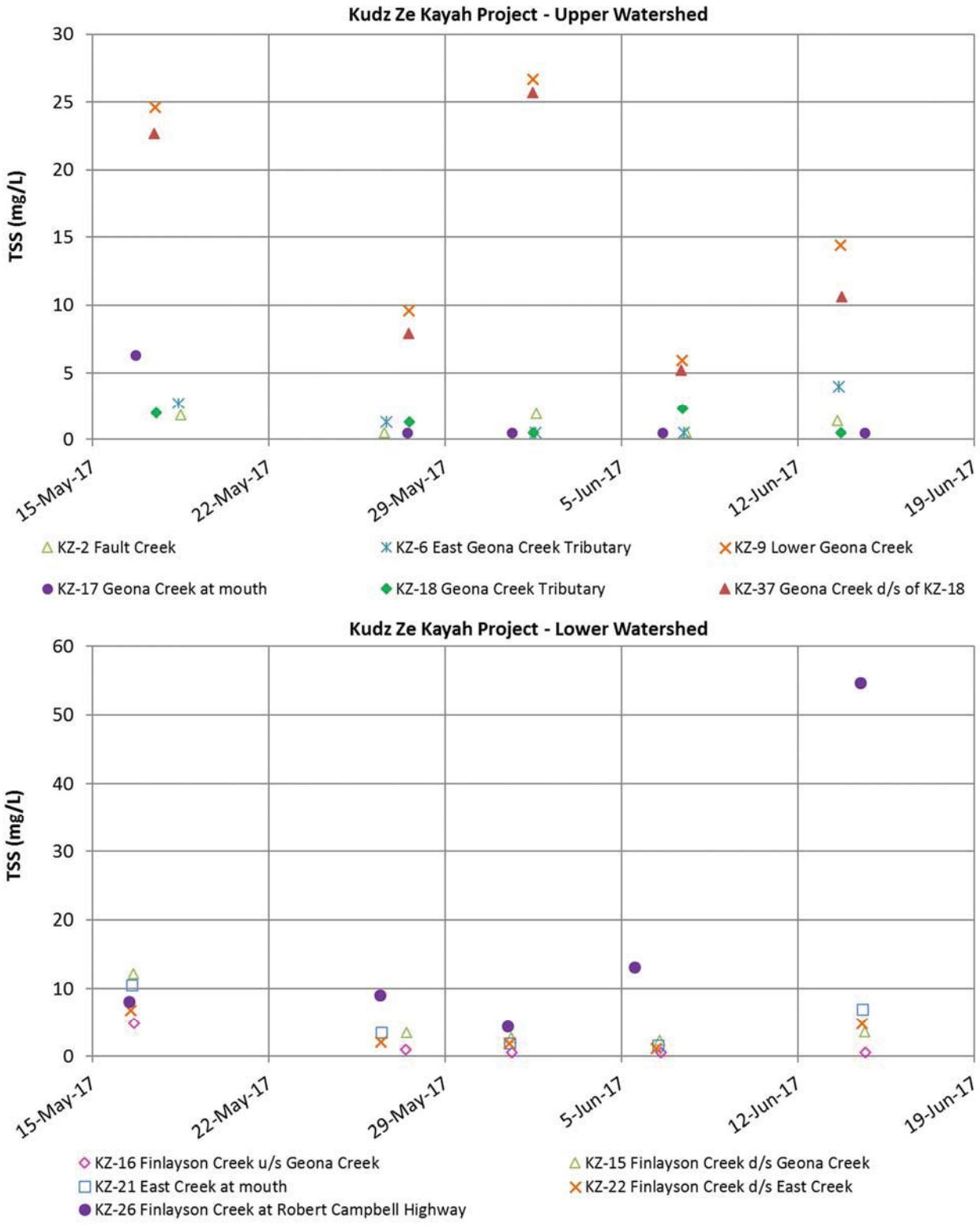


Figure E-1: Variation in Total Suspended Solids (TSS) Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in May-June 2017

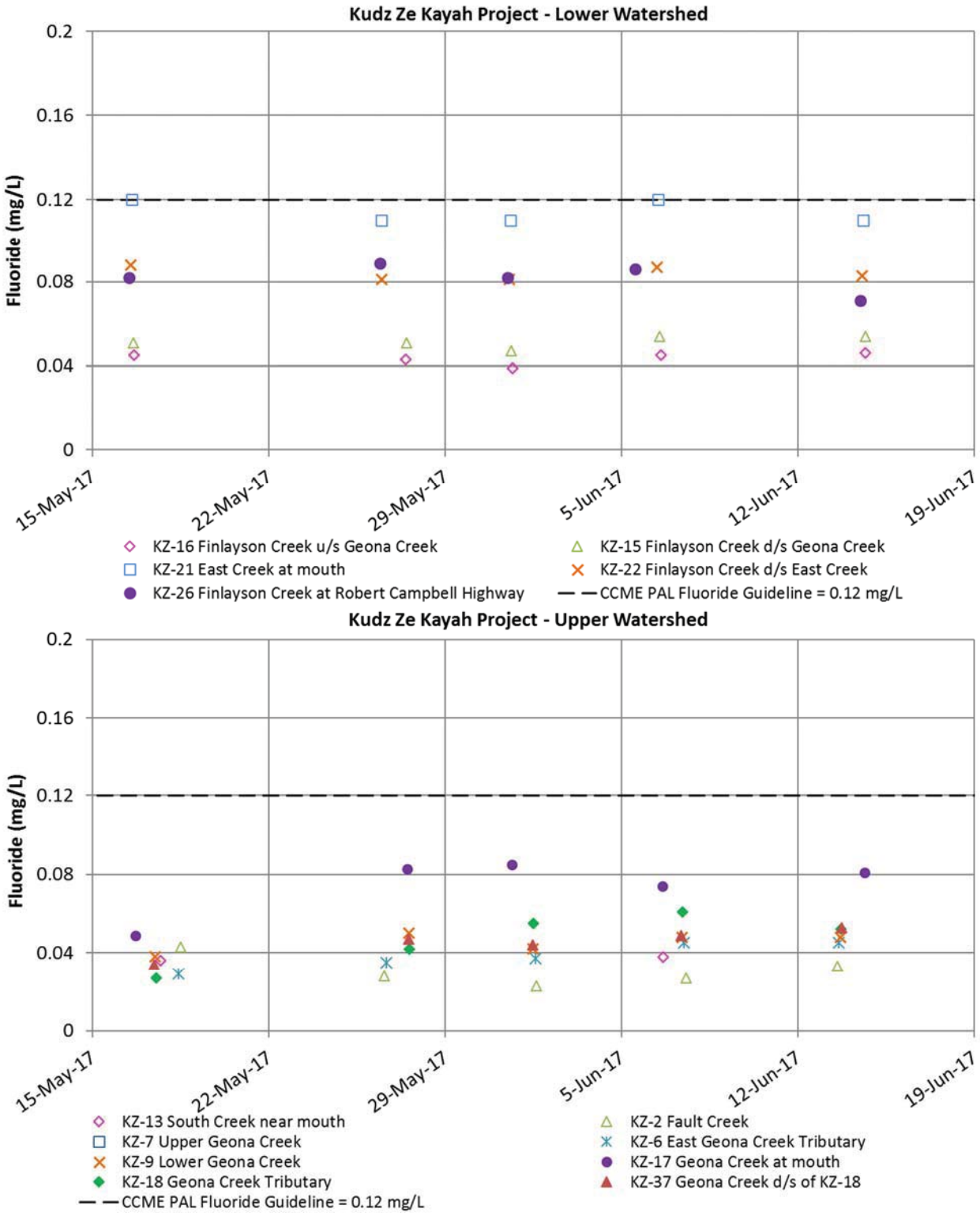


Figure E-2: Variation in Total Fluoride Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in May-June 2017

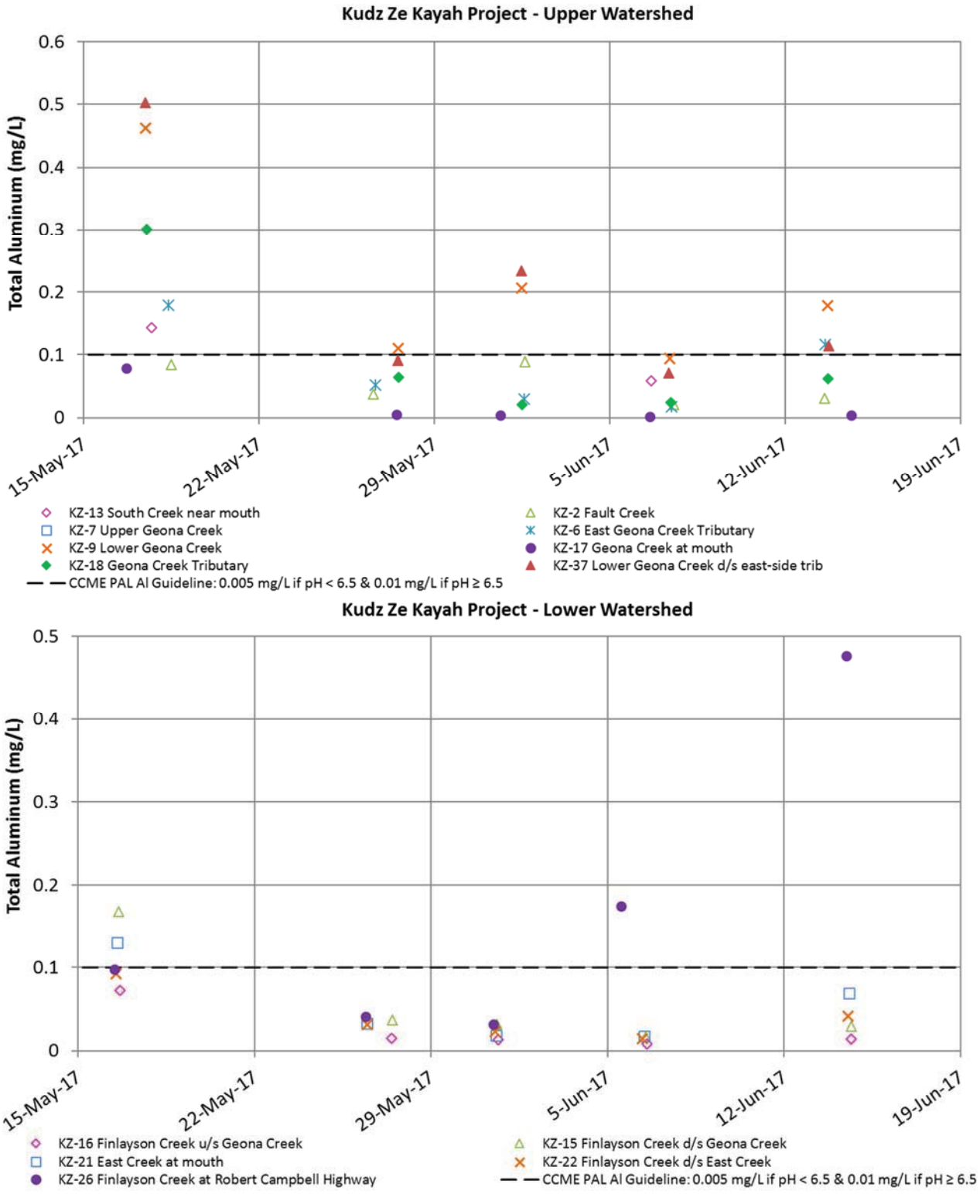


Figure E-3: Variation in Total Aluminum Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in May-June 2017

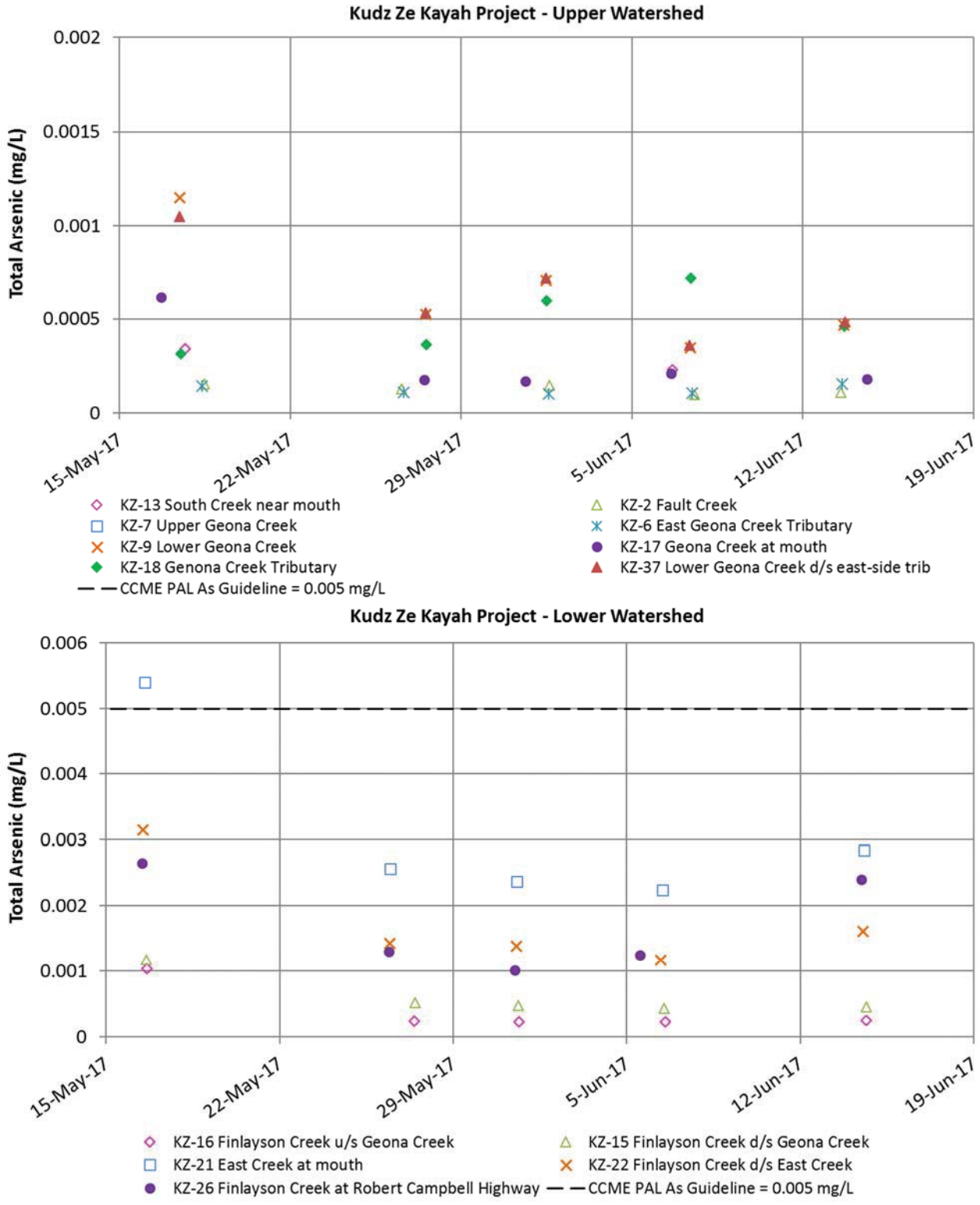


Figure E-4: Variation in Total Arsenic Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in May-June 2017

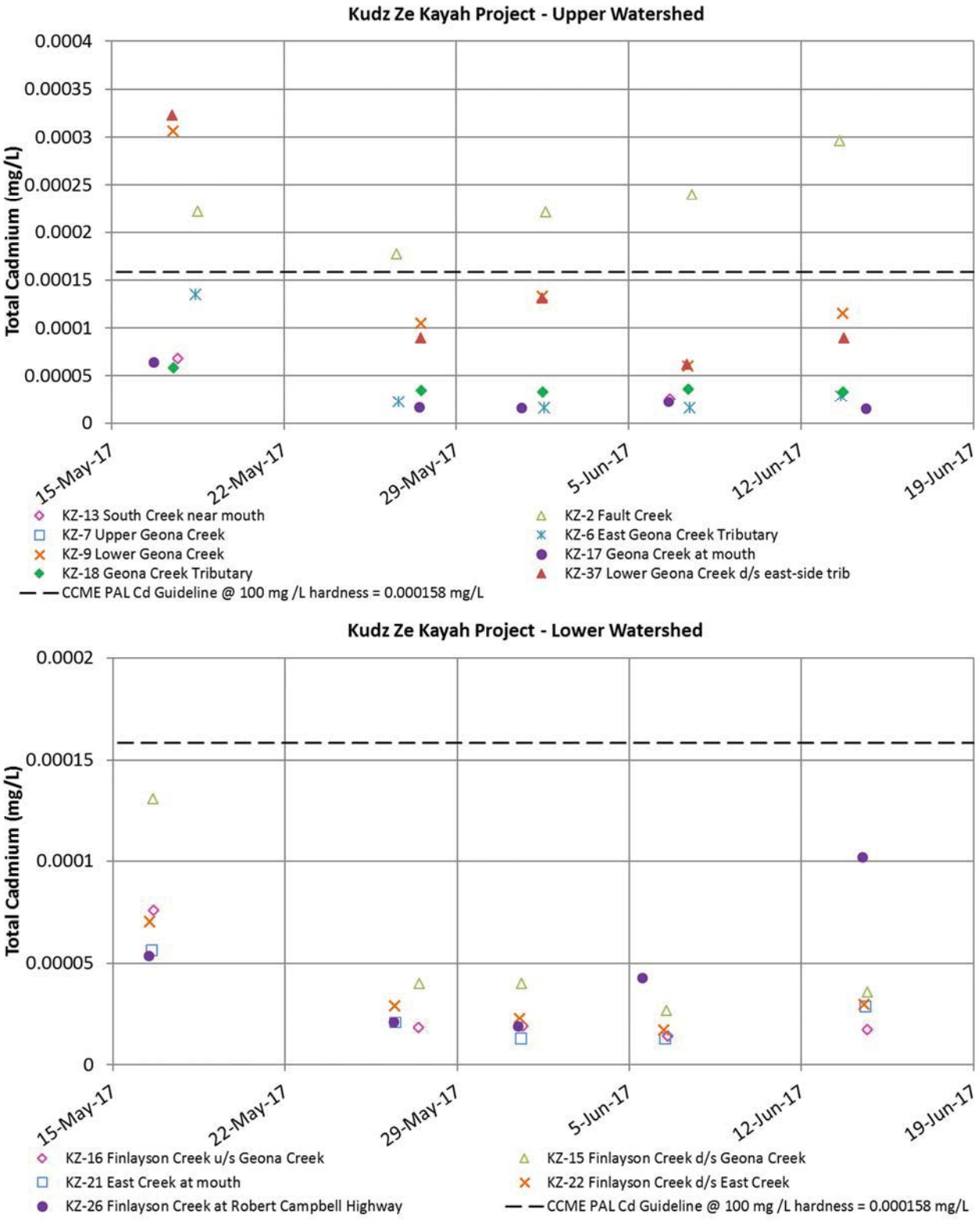


Figure E-5: Variation in Total Cadmium Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in May-June 2017

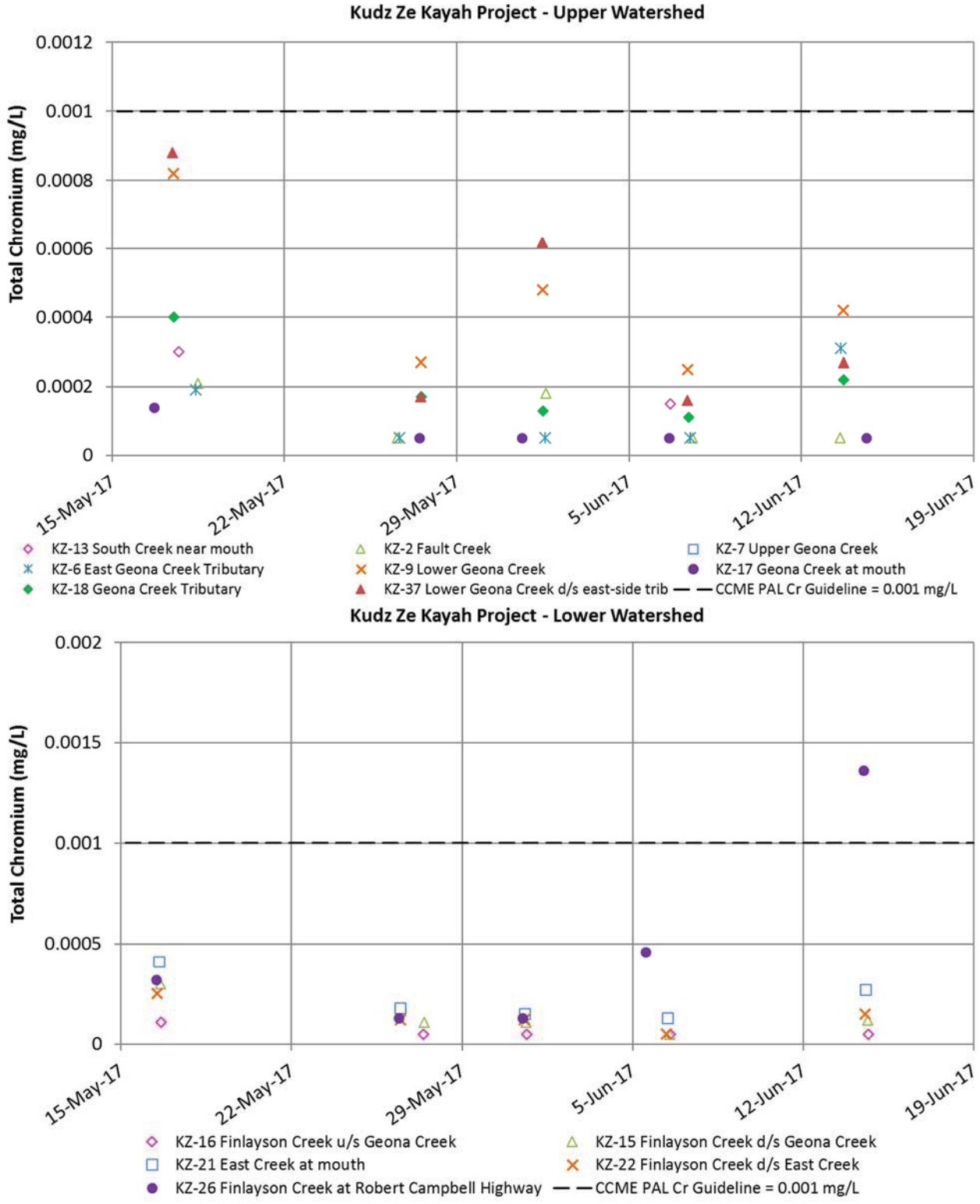


Figure E-6: Variation in Total Chromium Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in May-June 2017

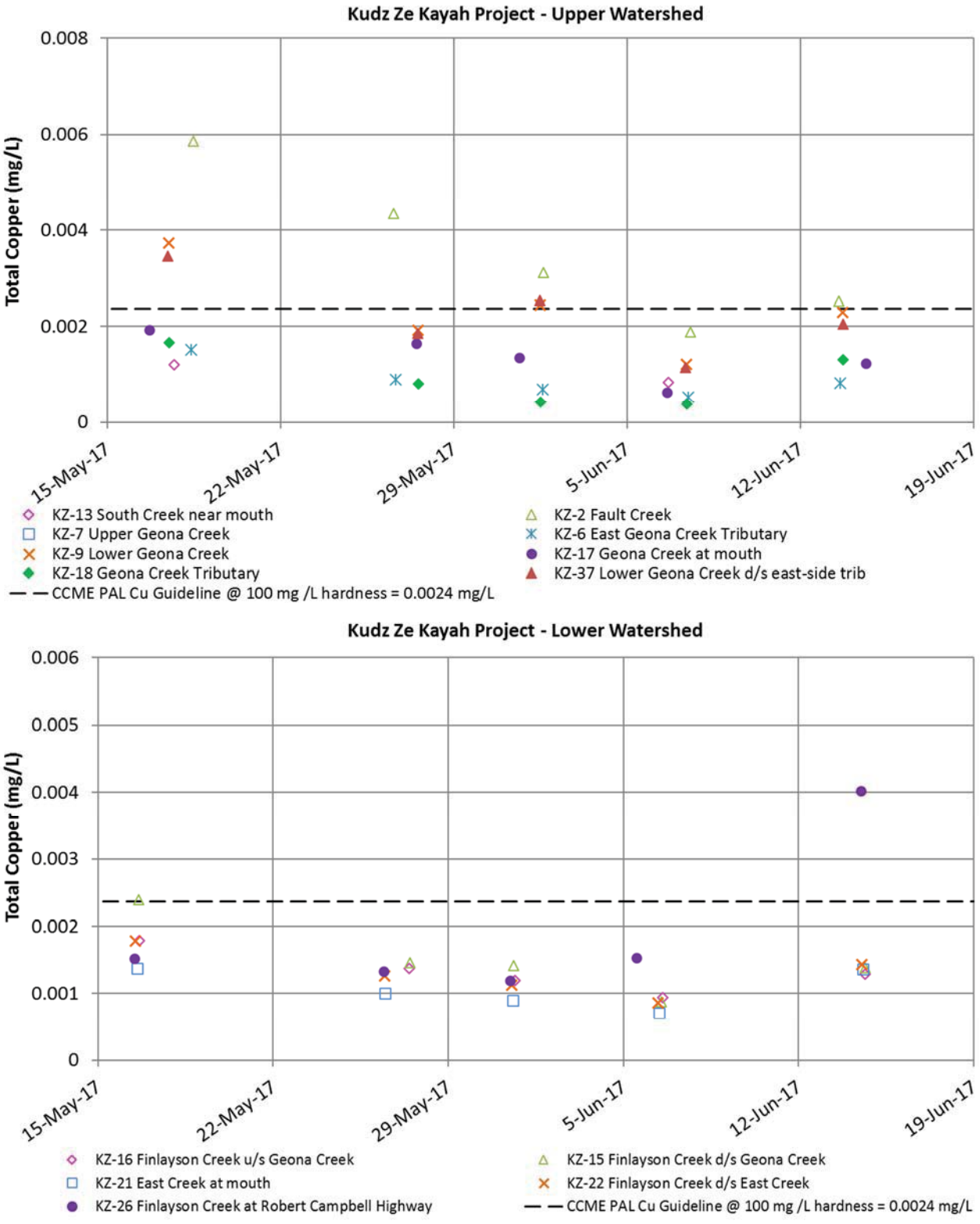


Figure E-7: Variation in Total Copper Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in May-June 2017

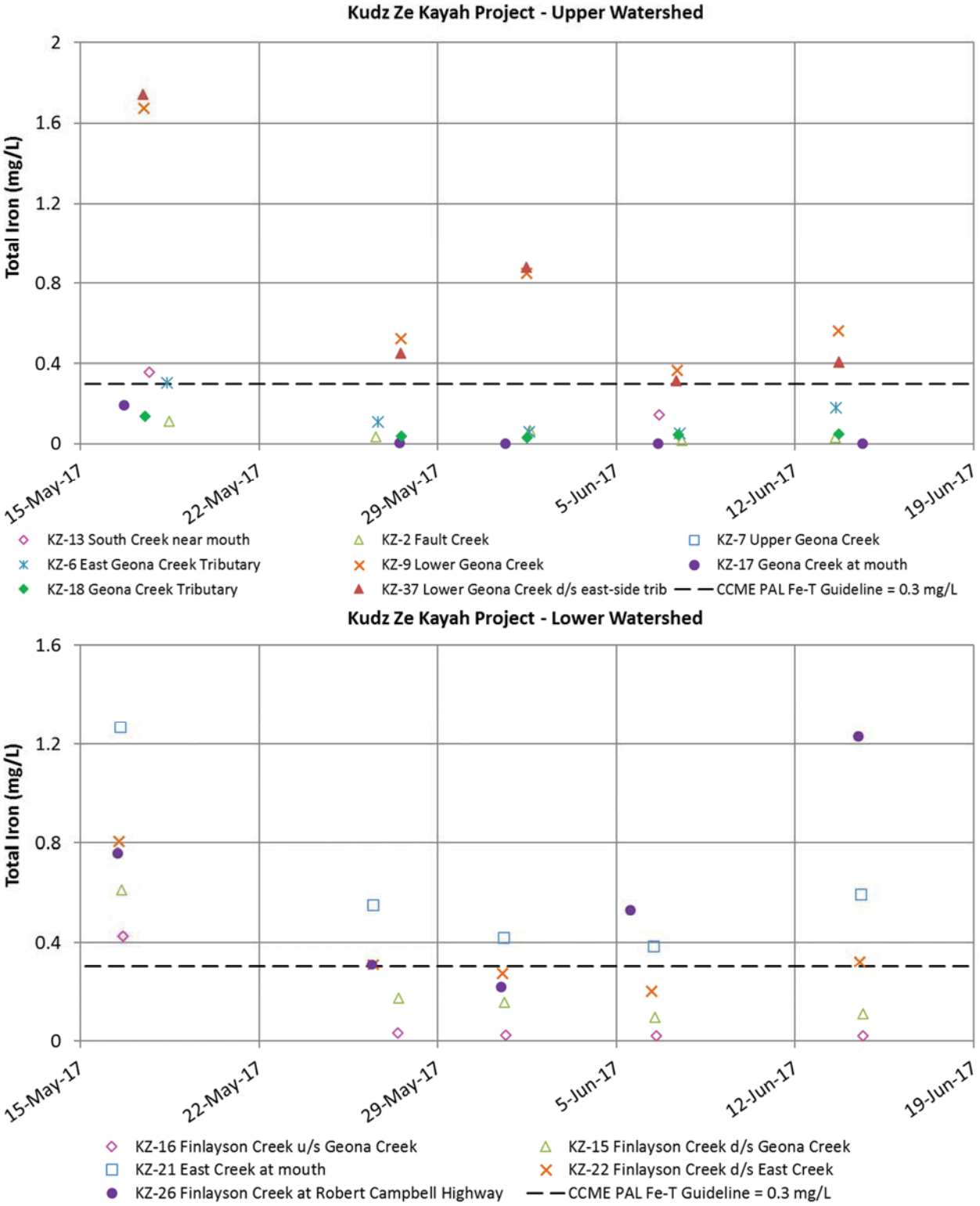


Figure E-8: Variation in Total Iron Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in May-June 2017

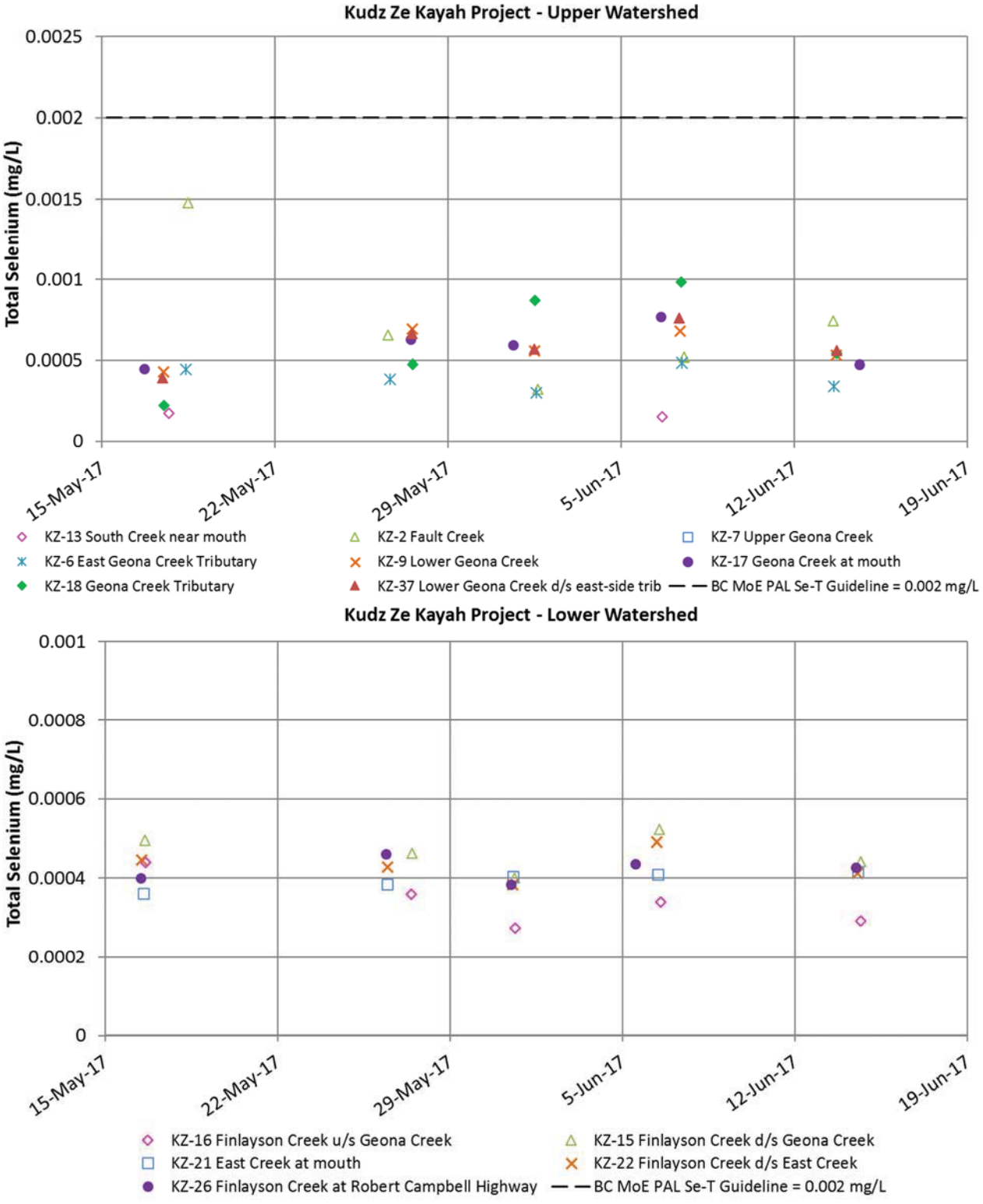


Figure E-9: Variation in Total Selenium Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in May-June 2017

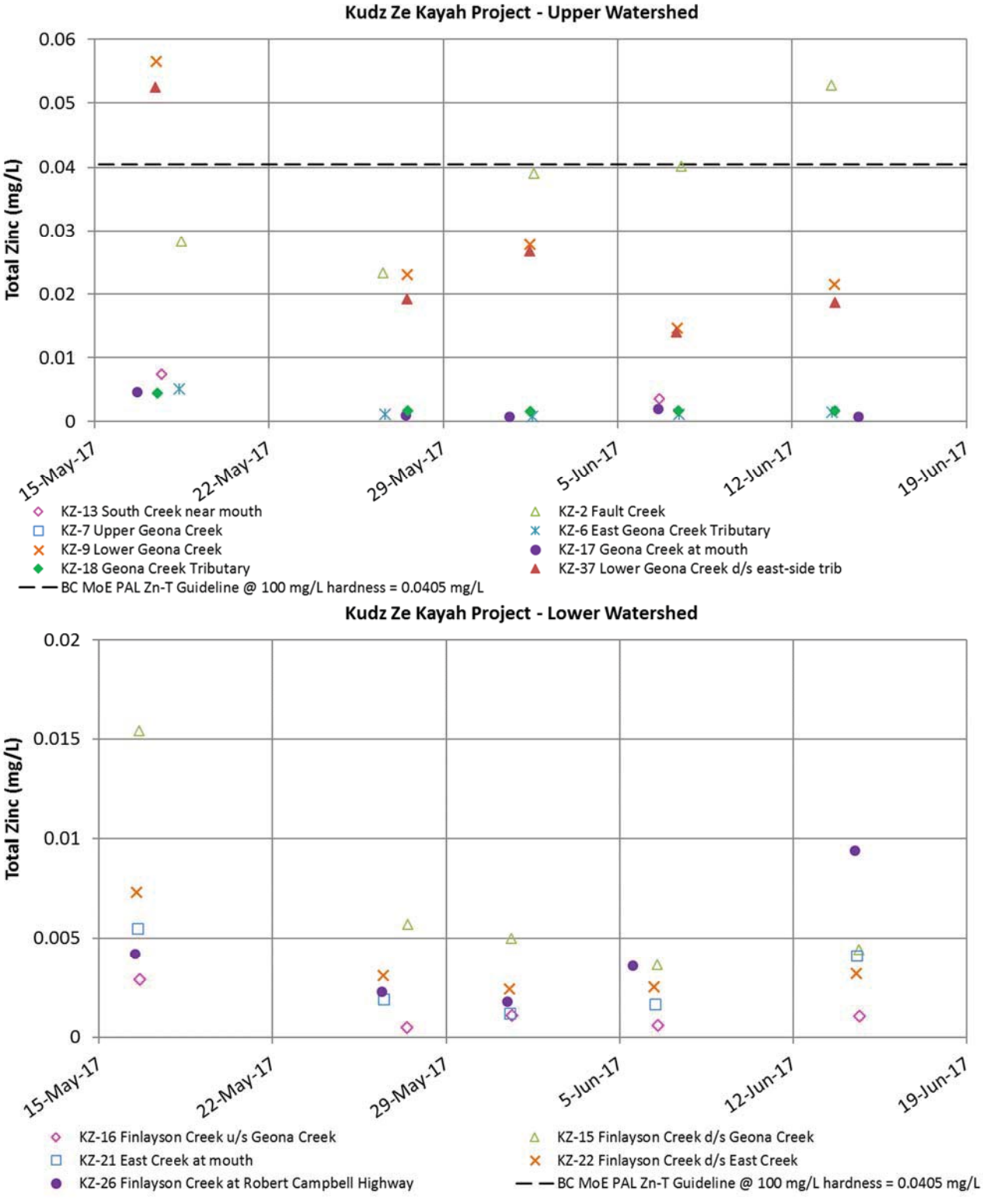
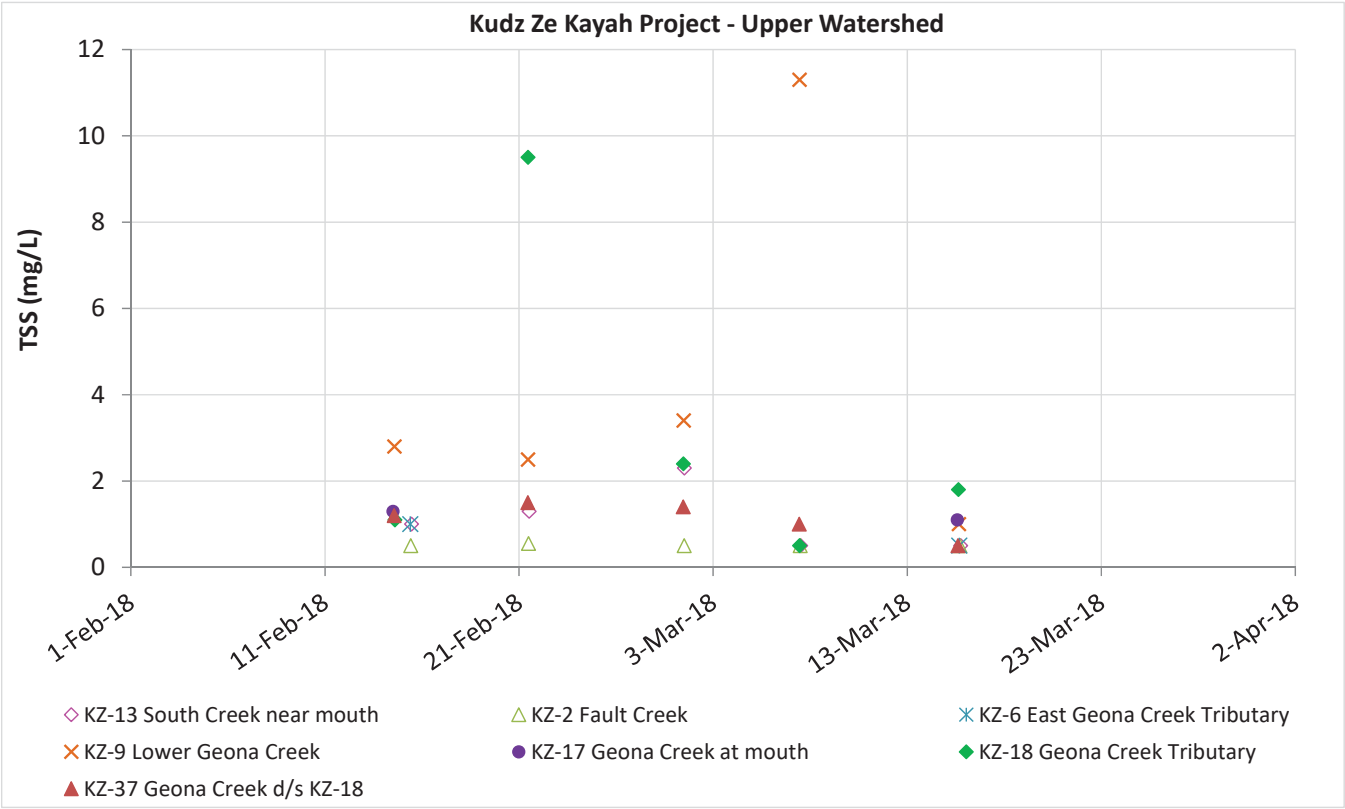


Figure E-10: Variation in Total Zinc Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in May-June 2017

Page left intentionally blank

APPENDIX F.

Five Samples in 30 Days February and March 2018 Surface Water Graphs



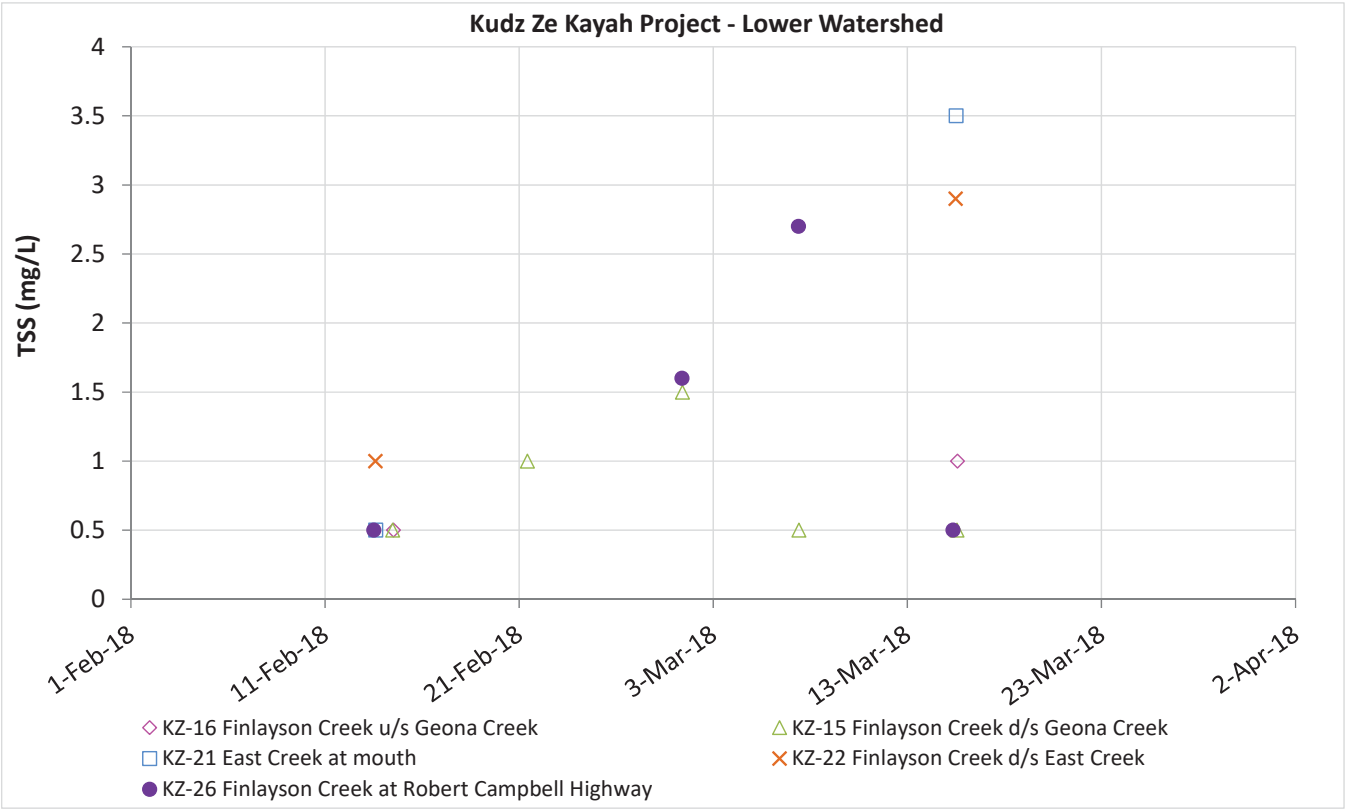
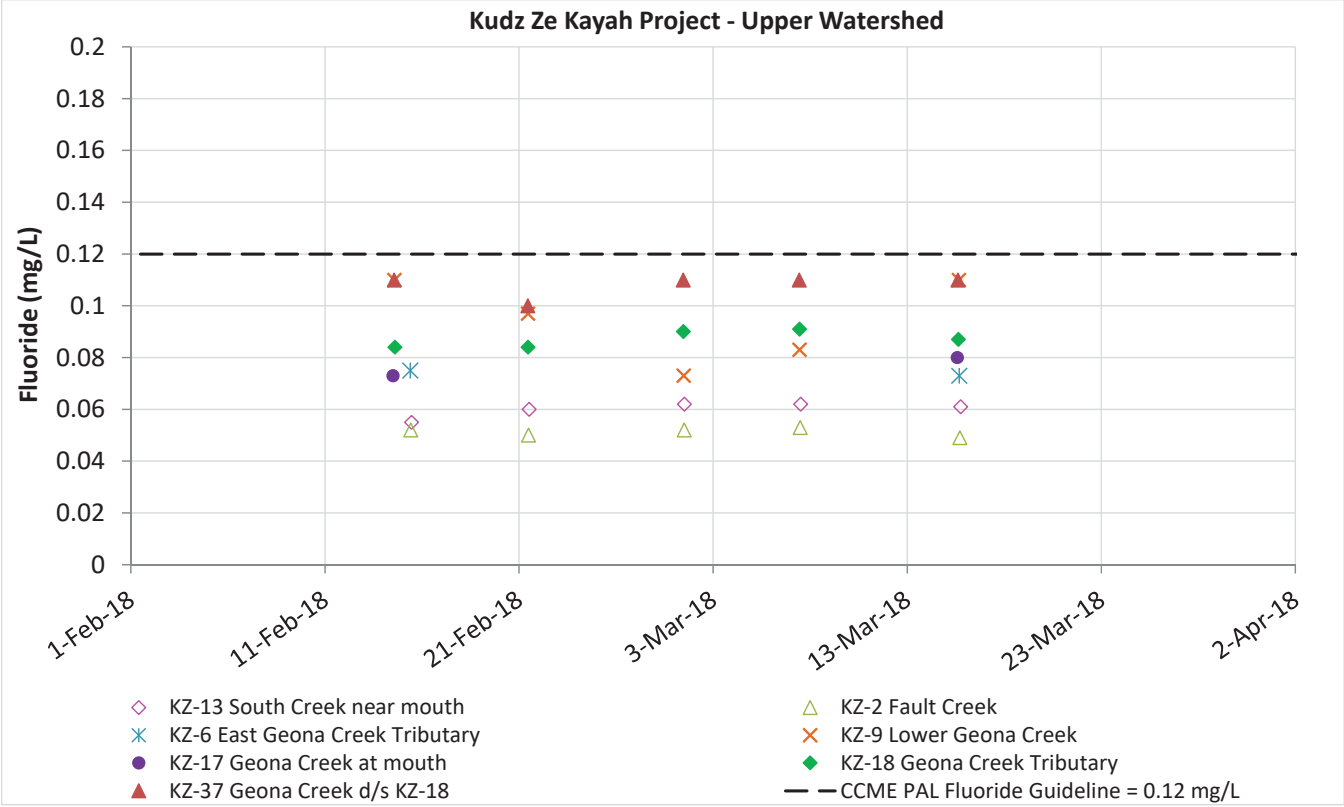


Figure F-1: Variation in Total Suspended Solids (TSS) Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in February-March 2018



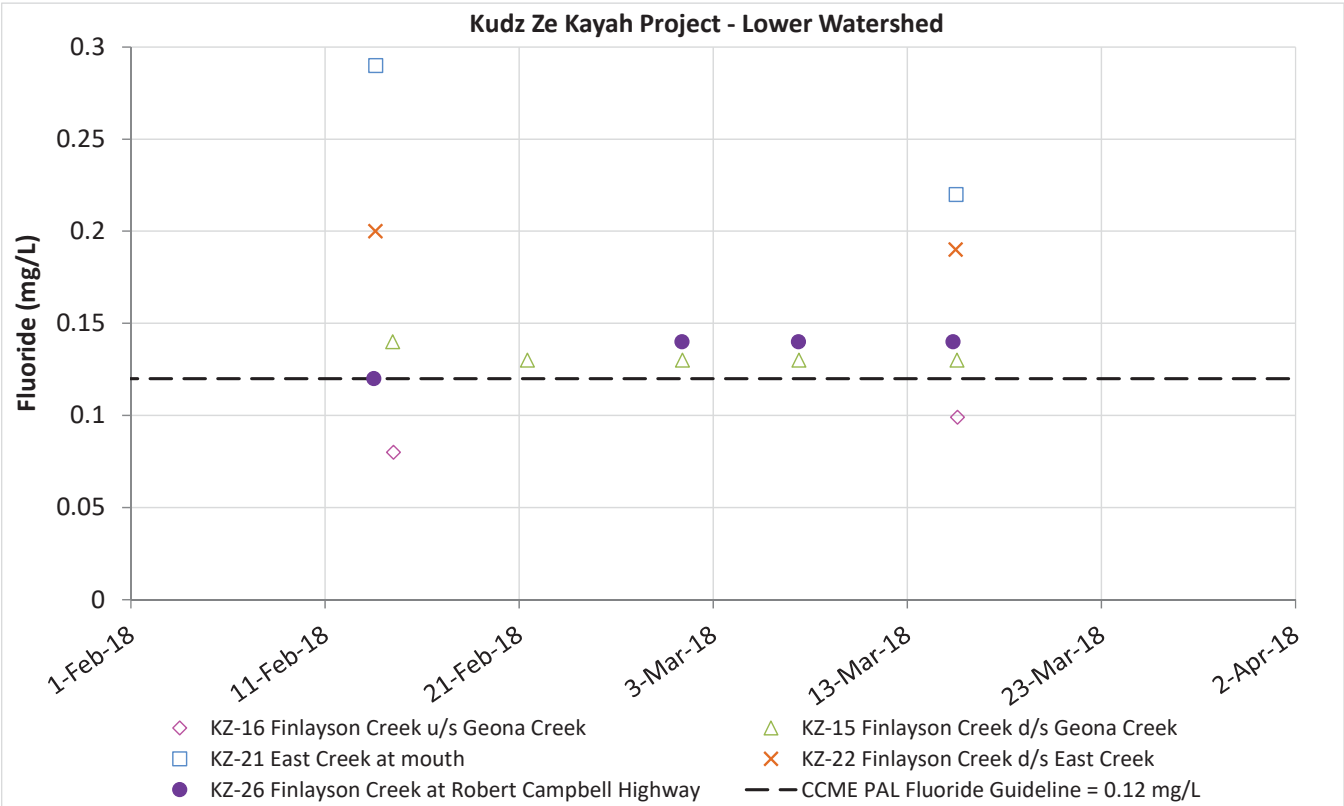
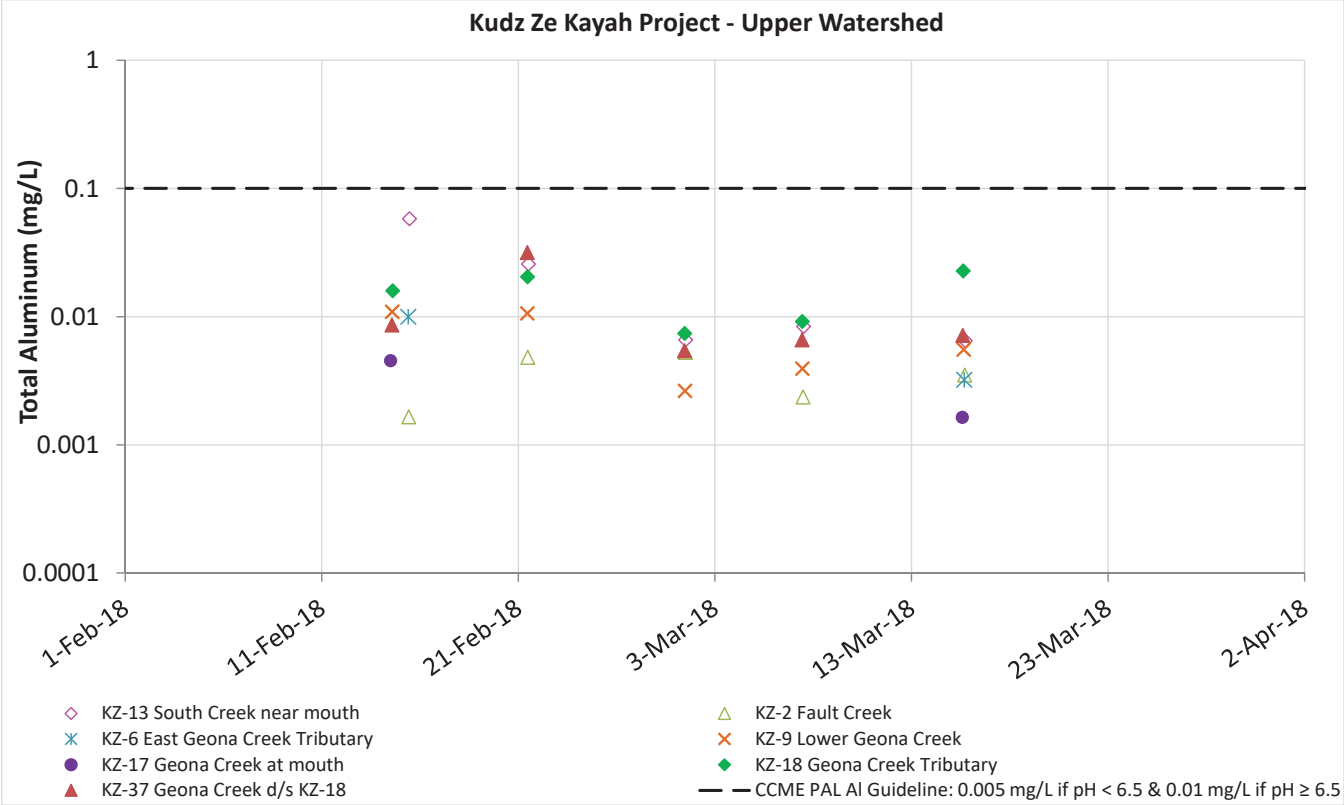


Figure F-2: Variation in Total Fluoride Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in February-March 2018



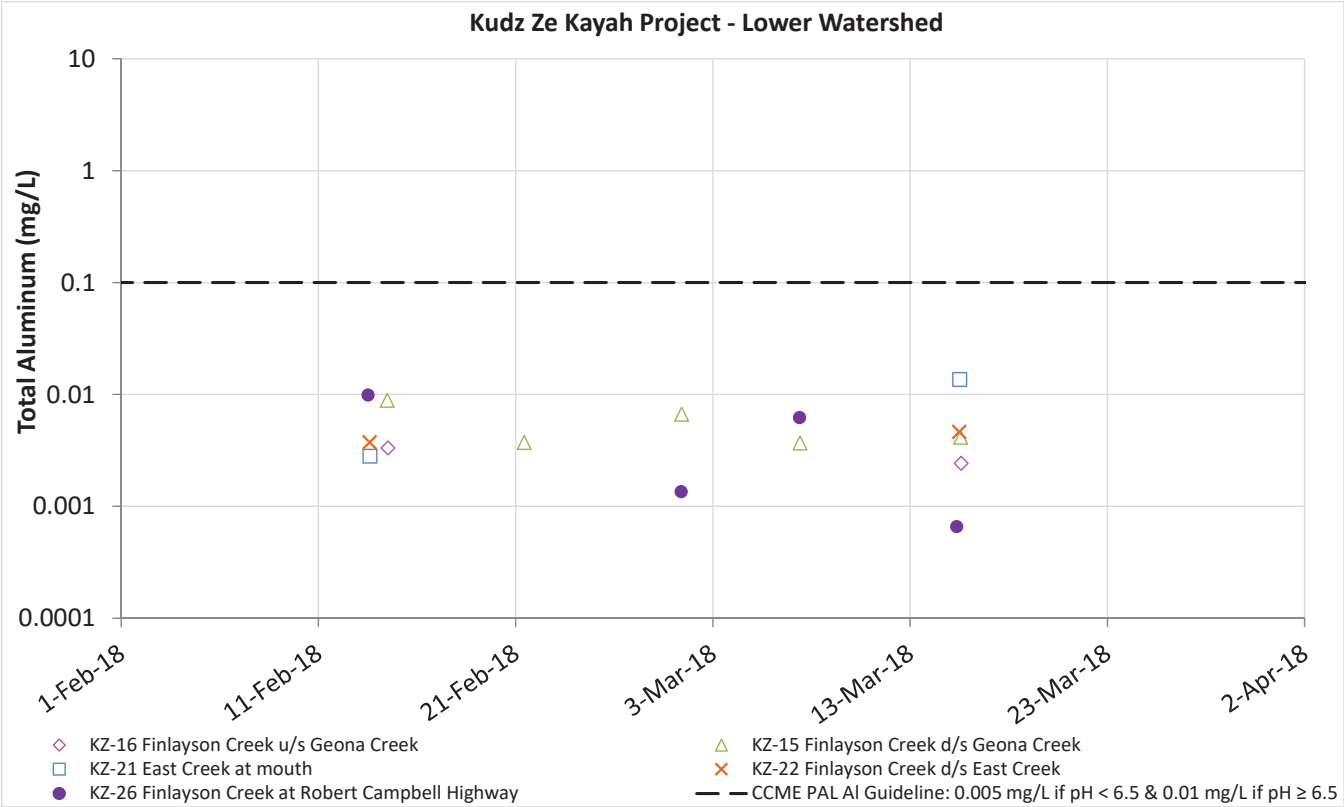
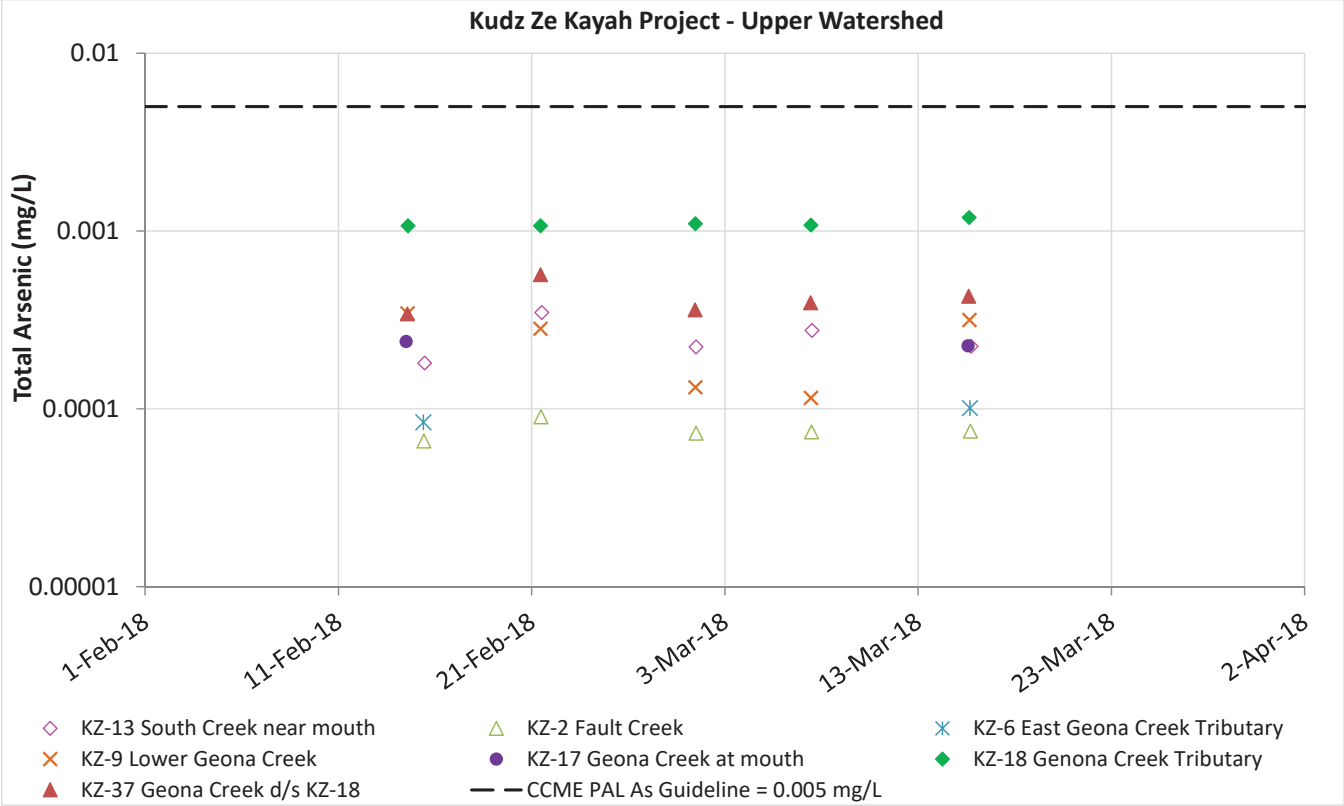


Figure F-3: Variation in Total Aluminum Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in February-March 2018



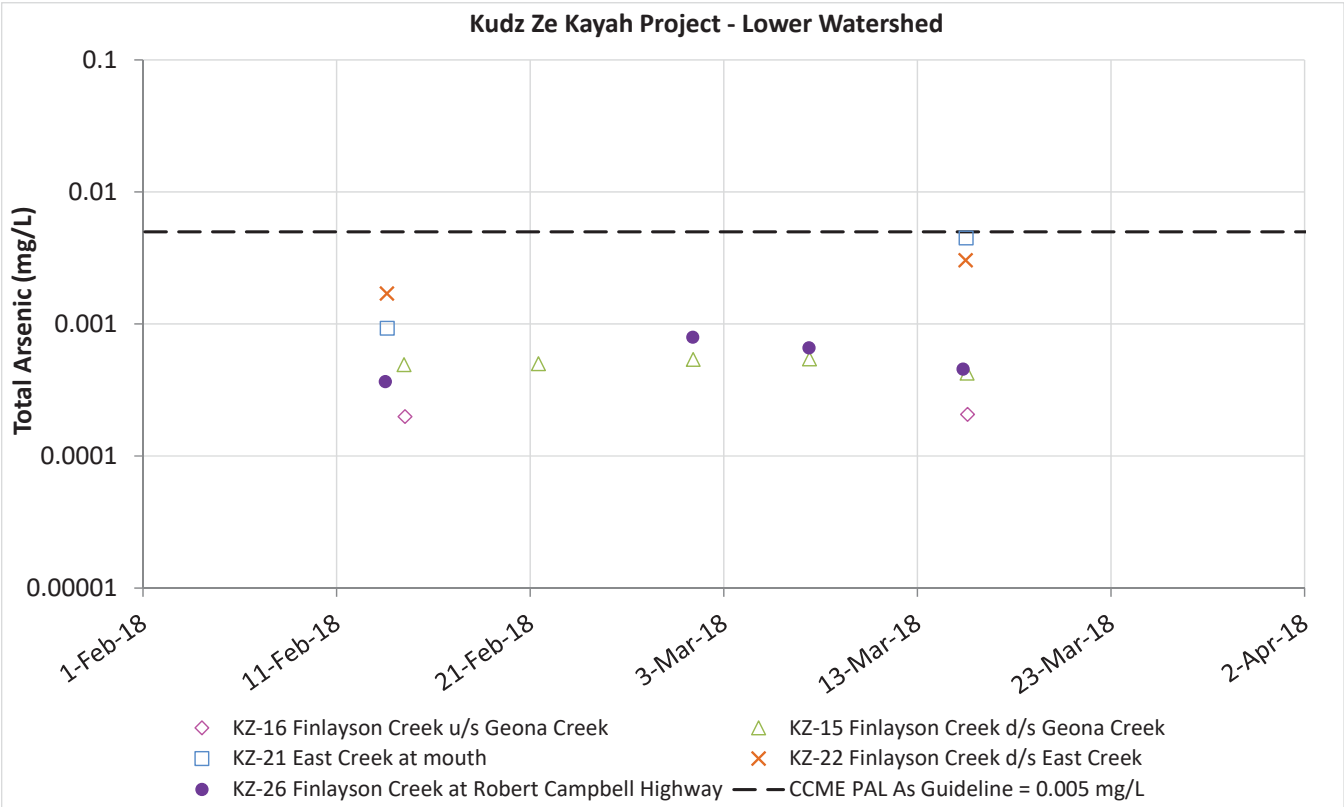


Figure F-4: Variation in Total Arsenic Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in February-March 2018

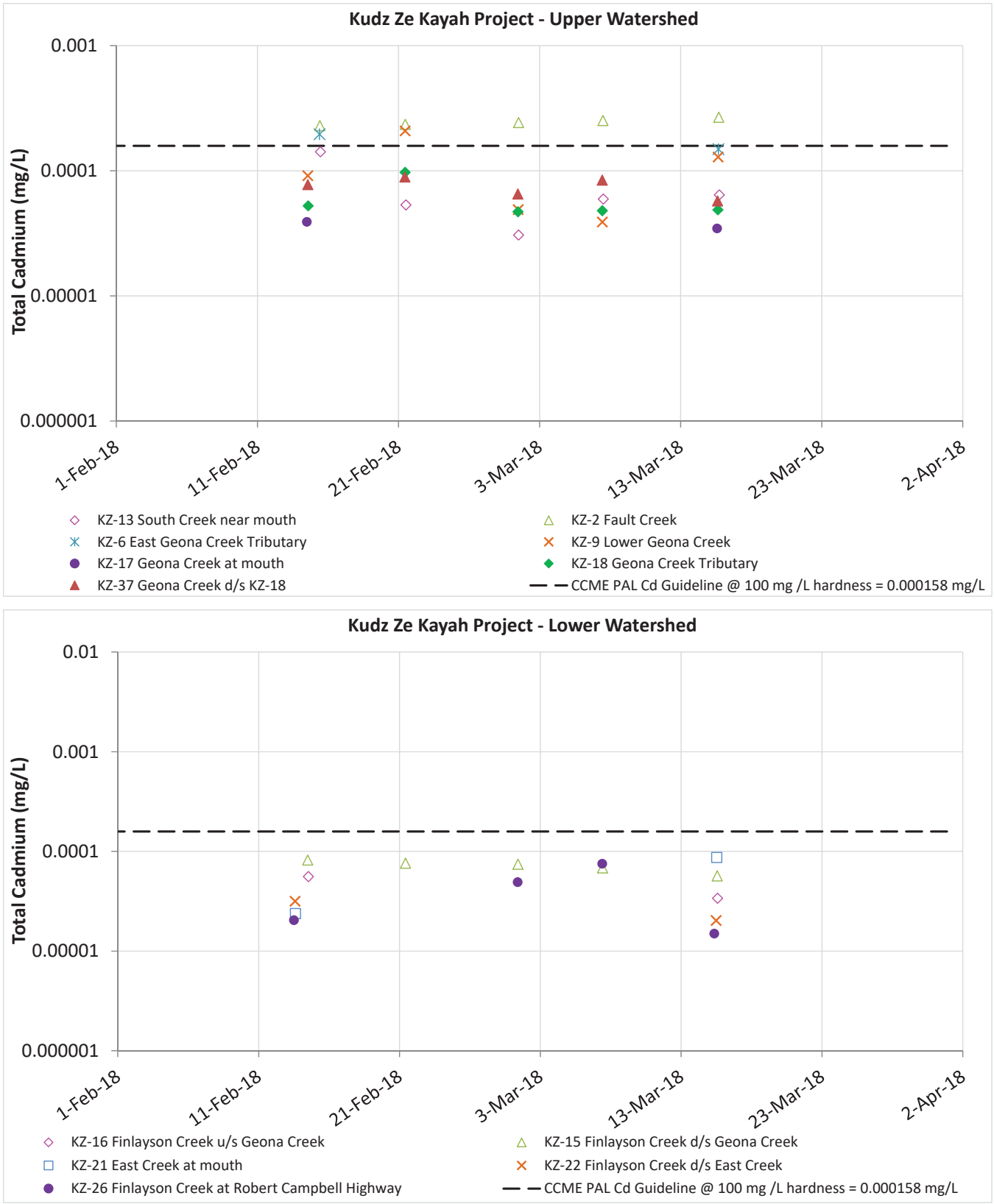


Figure F-5: Variation in Total Cadmium Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in February-March 2018

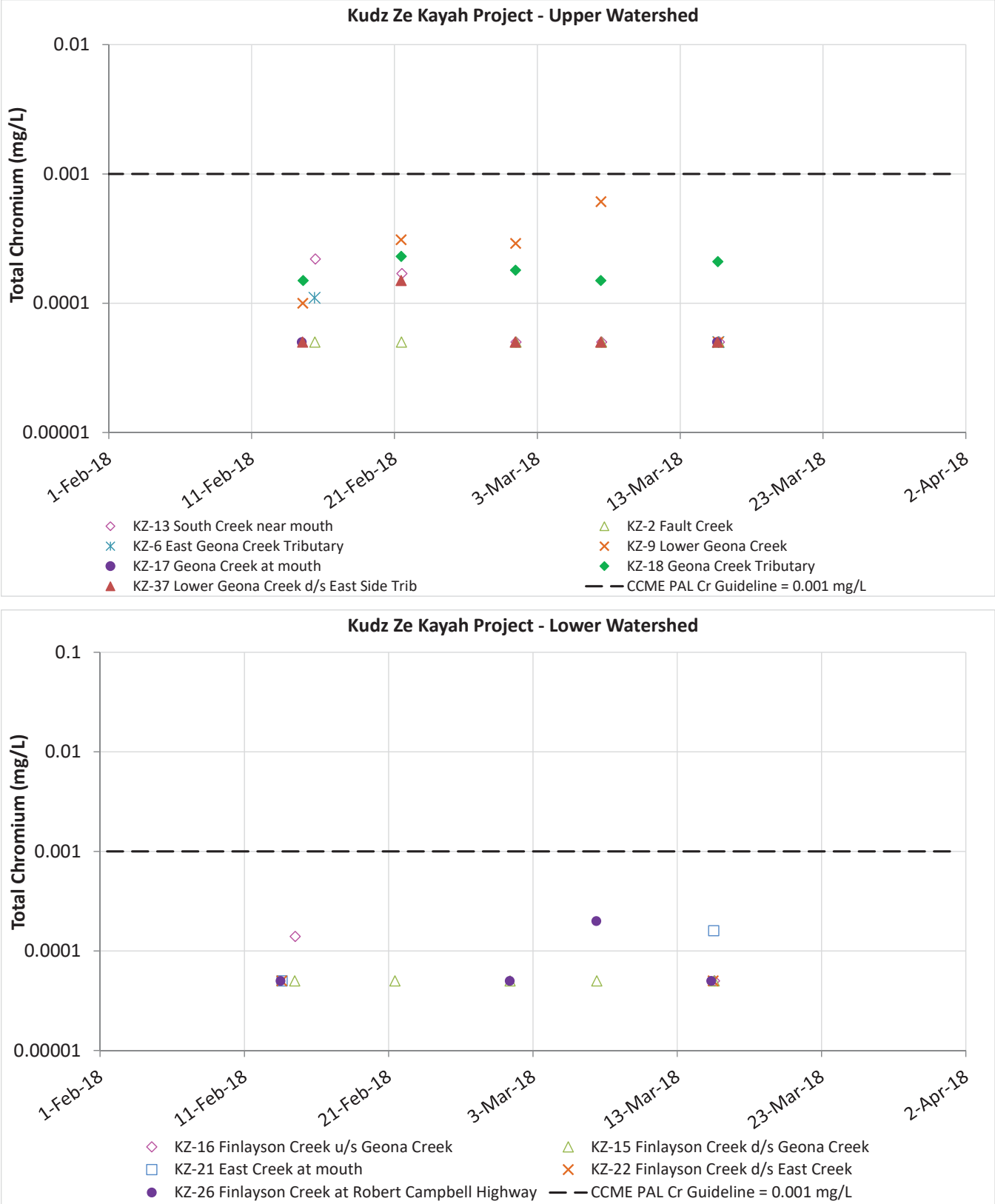
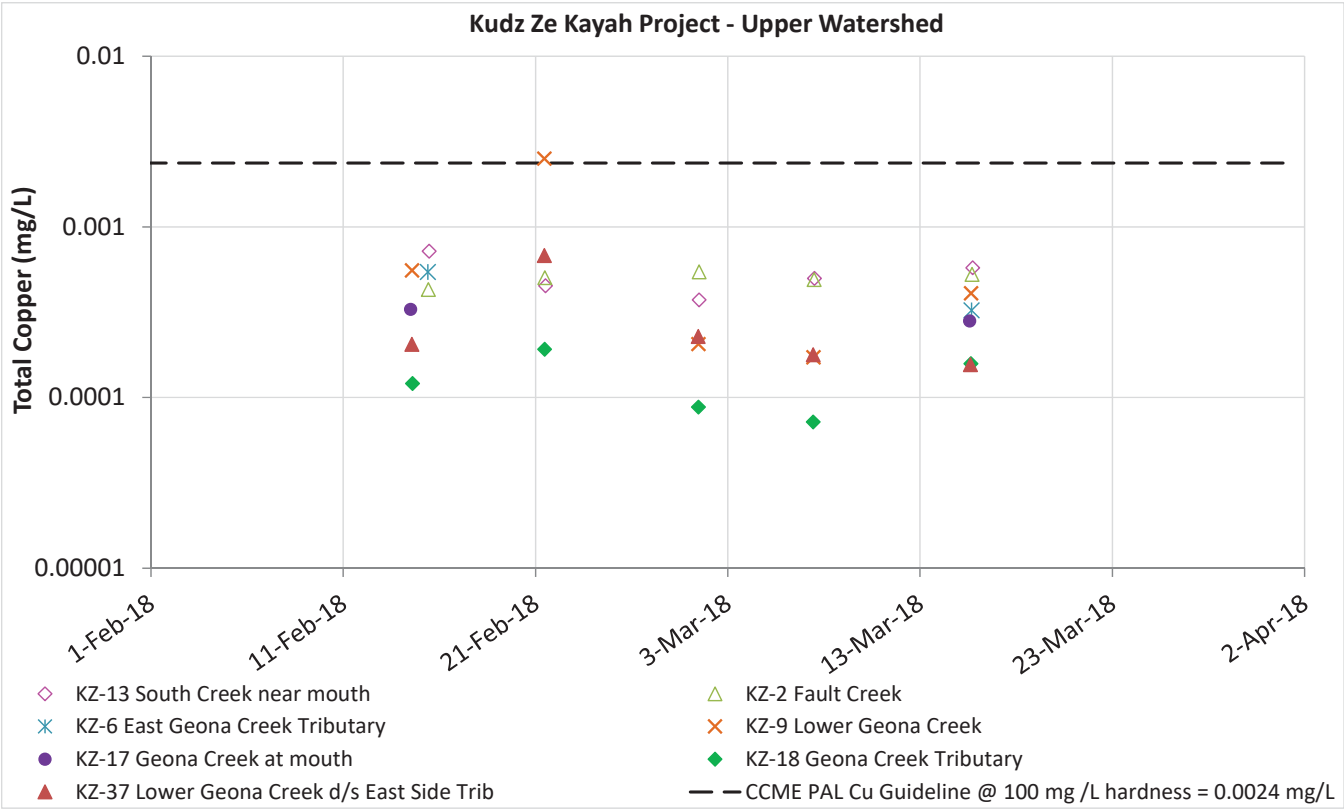


Figure F-6: Variation in Total Chromium Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in February-March 2018



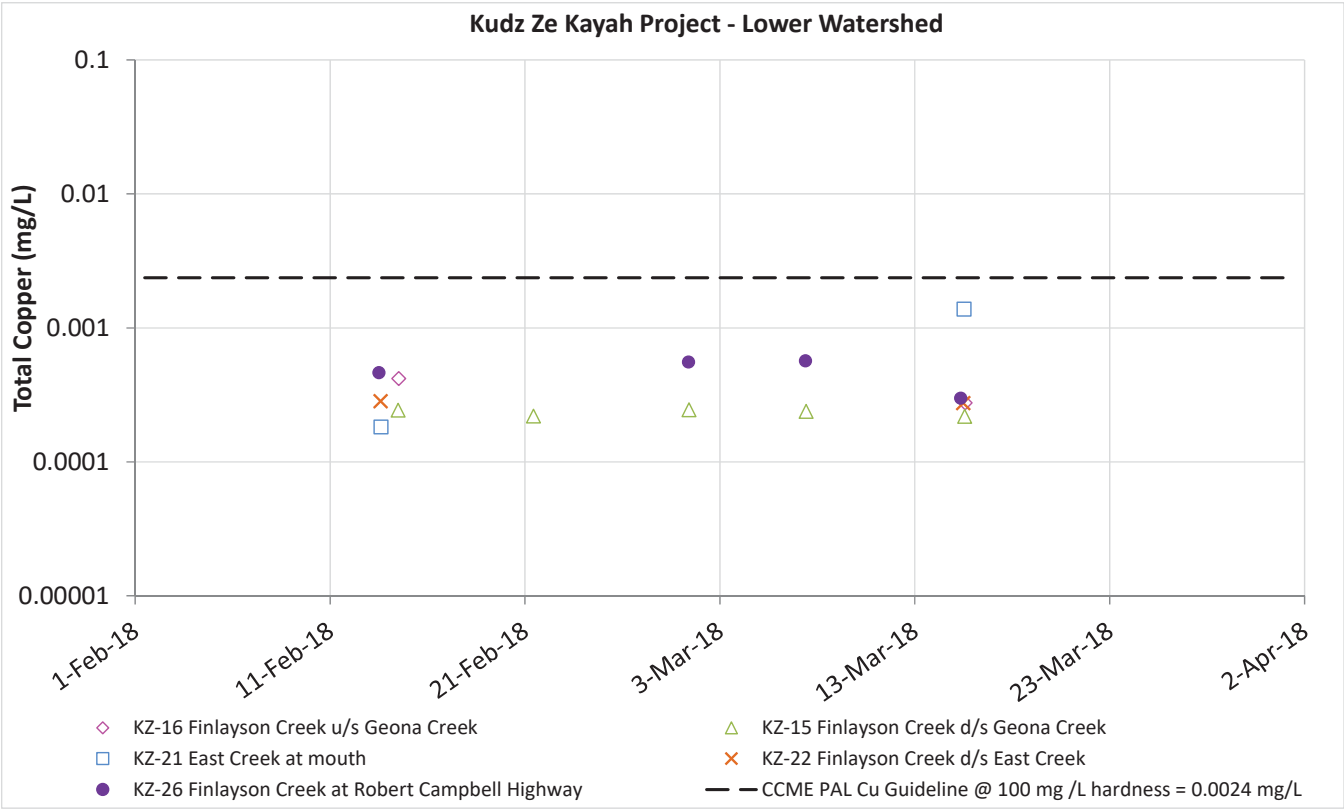


Figure F-7: Variation in Total Copper Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in February-March 2018

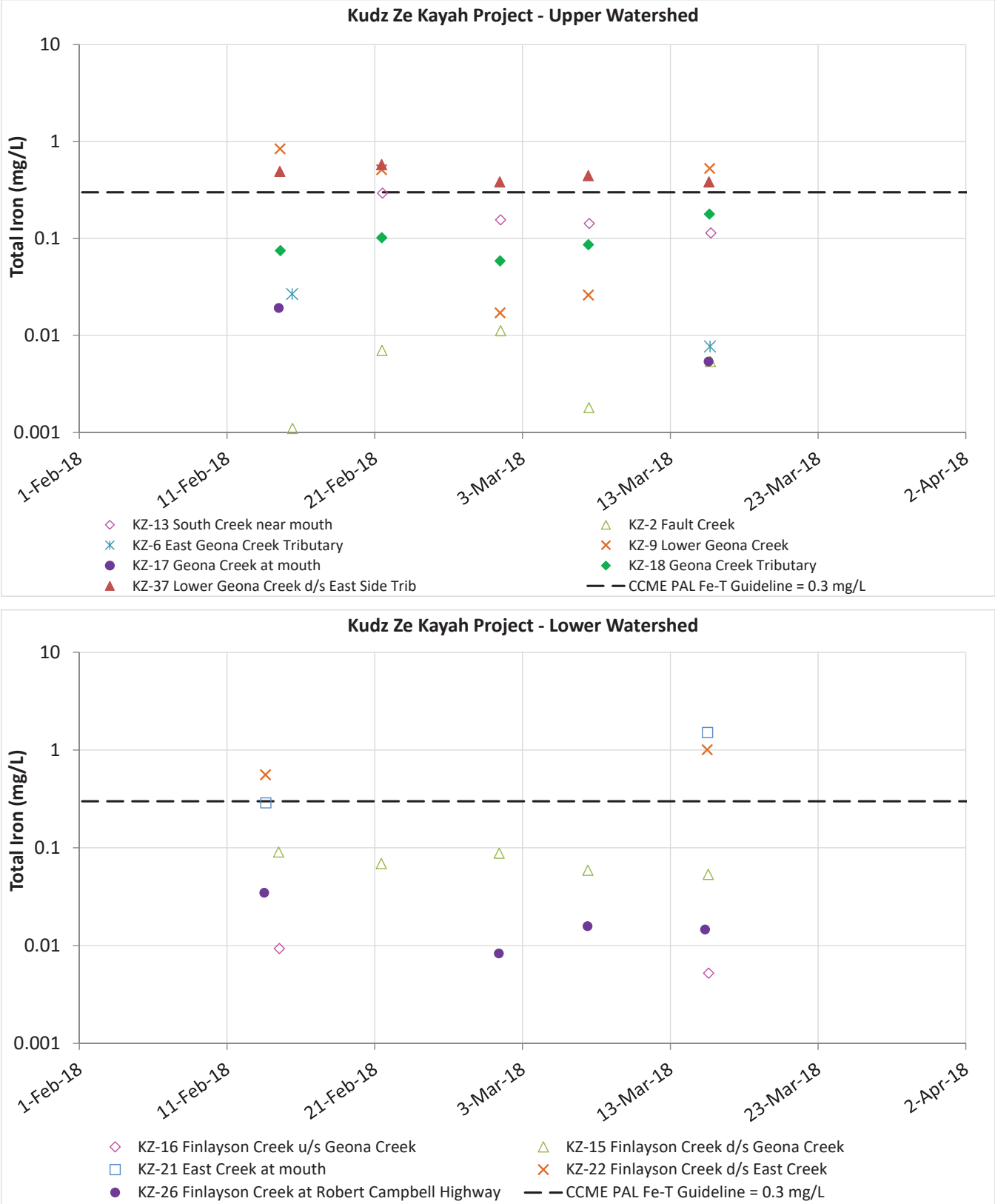
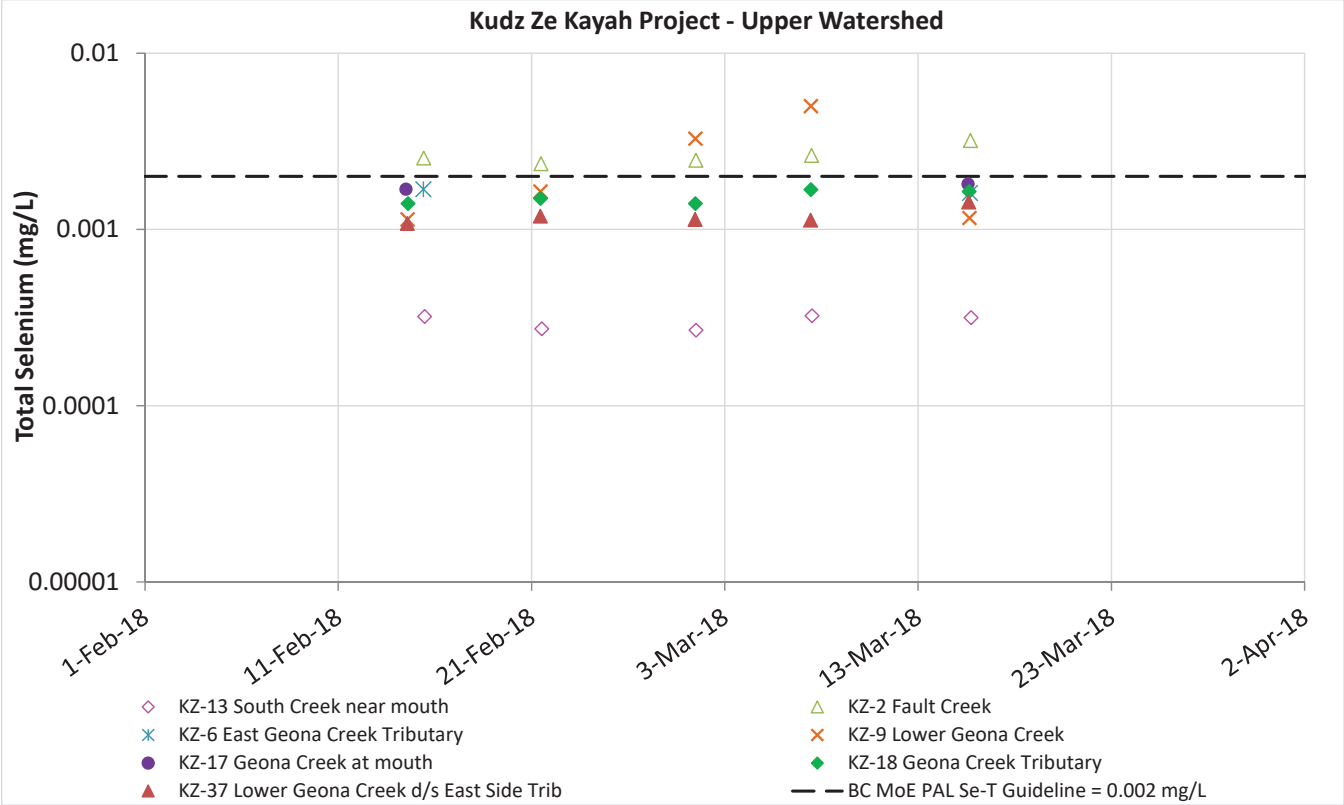


Figure F-8: Variation in Total Iron Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in February-March 2018



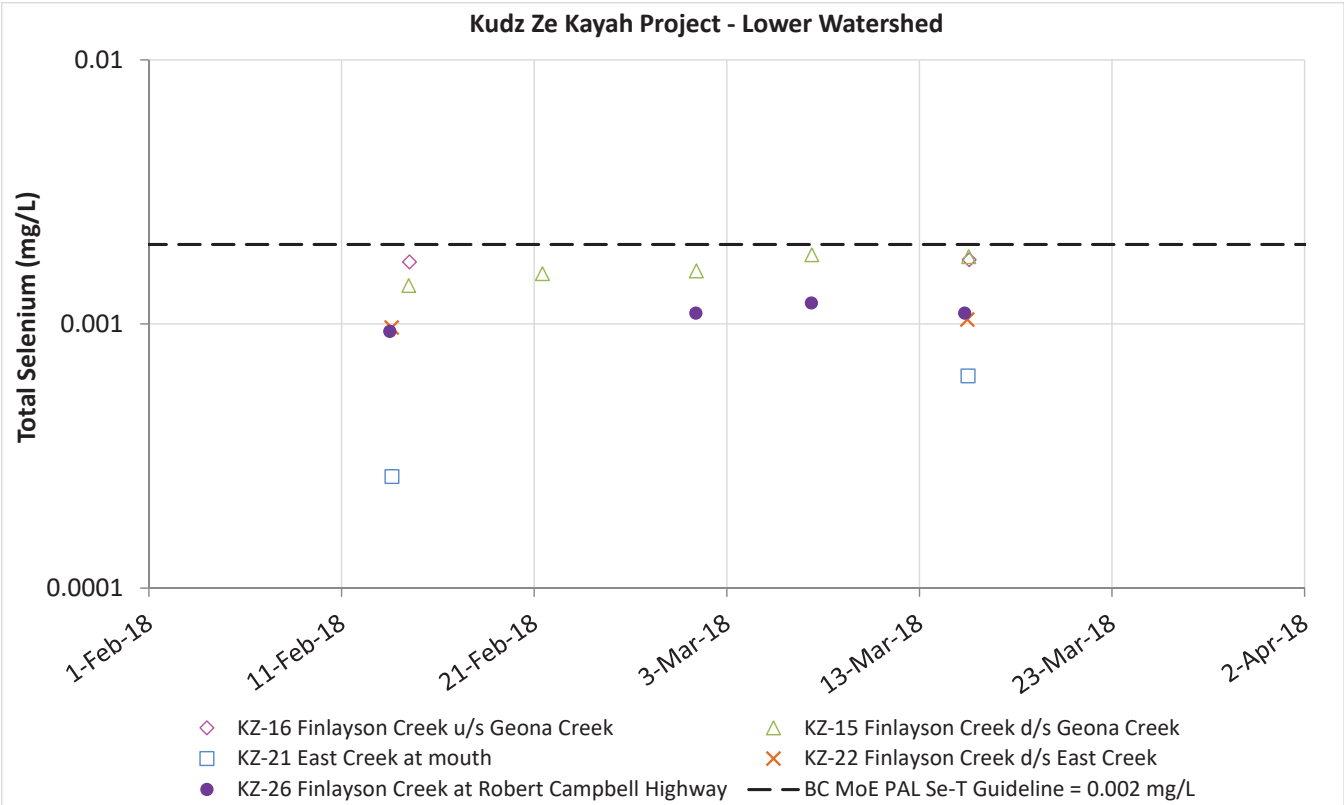
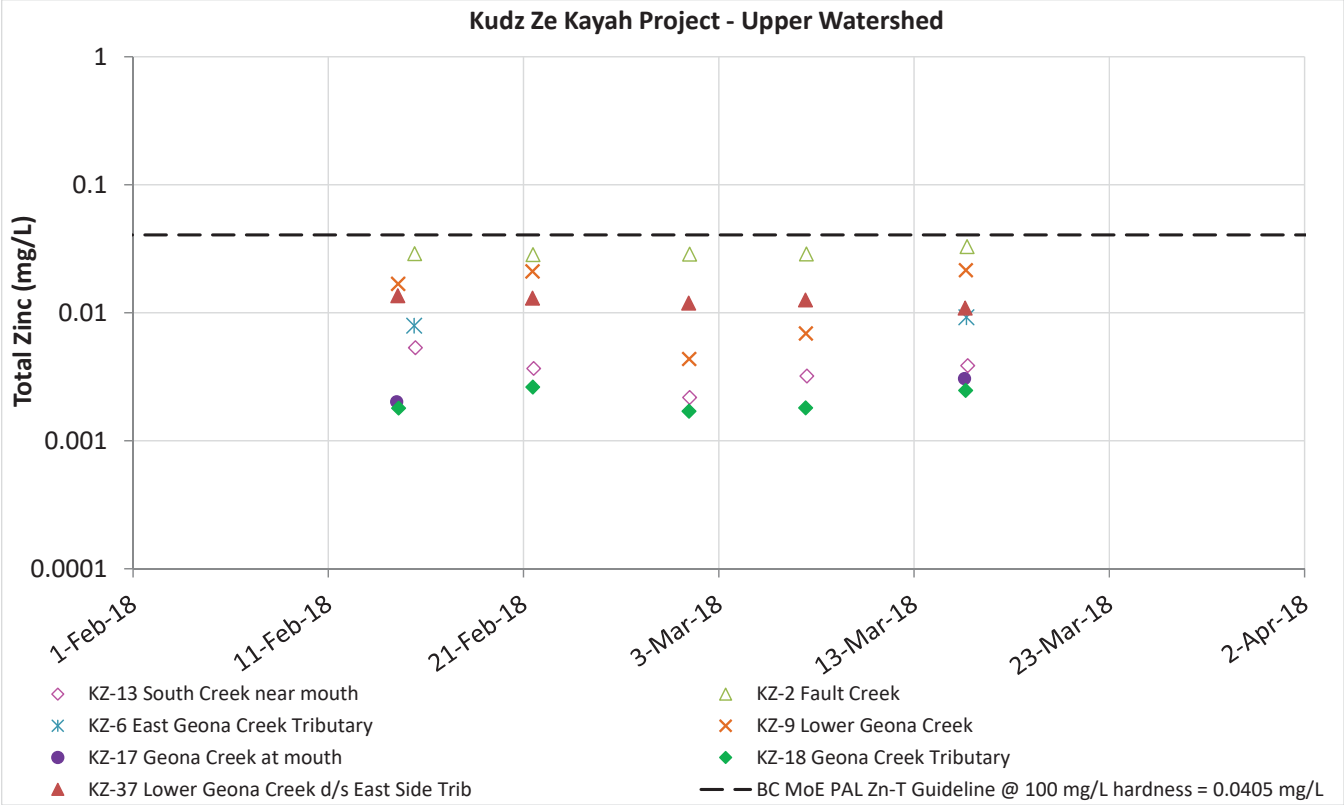


Figure F-9: Variation in Total Selenium Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in February-March 2018



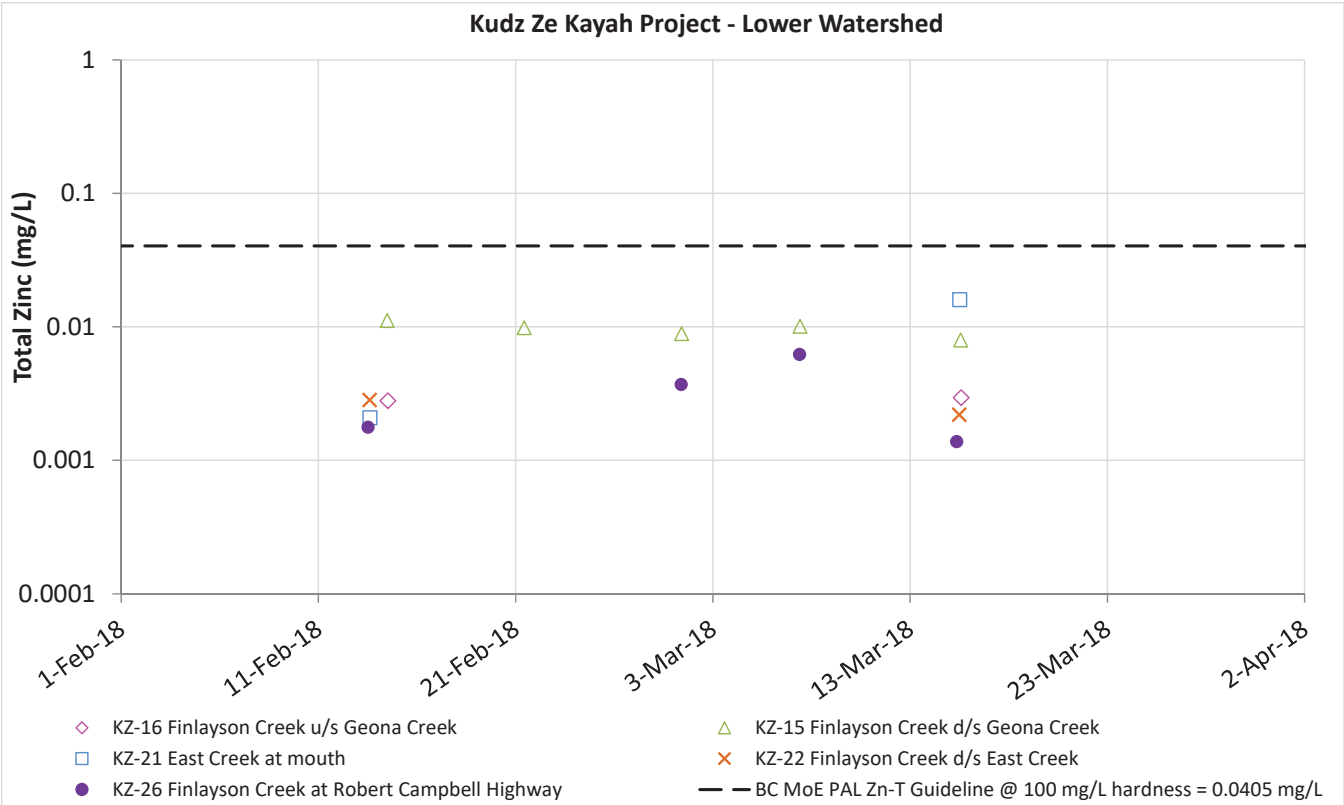


Figure F-10: Variation in Total Zinc Concentration in the Upper (South, Fault, and Geona Creeks) and Lower (Finlayson and East Creeks) Watershed of Kudz Ze Kayah Project in Samples Collected in February-March 2018

Page left intentionally blank

APPENDIX G.

April 2015 to March 2018 Maxxam Certificates of Analysis

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08406559, 08406560

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/05/11
Report #: R1898858
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B535707
Received: 2015/05/01, 14:50

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	13	N/A	2015/05/04	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	7	2015/05/04	2015/05/04	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	6	2015/05/04	2015/05/05	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	13	N/A	2015/05/05	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	13	N/A	2015/05/05	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	13	N/A	2015/05/05	BBY6SOP-00005	SM 22 4500-CN O
Colour (True)	12	N/A	2015/05/02	BBY6SOP-00021	SM 22 2120 B m
Colour (True)	1	N/A	2015/05/05	BBY6SOP-00021	SM 22 2120 B m
Carbon (DOC) - field filtered/preserved (1)	12	N/A	2015/05/05	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2015/05/05	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	7	N/A	2015/05/04	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	6	N/A	2015/05/05	BBY6SOP-00026	SM 22 2510 B m
Fluoride	12	N/A	2015/05/04	BBY6SOP-00048	SM 22 4500-F C m
Fluoride	1	N/A	2015/05/05	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	1	N/A	2015/05/05	BBY7SOP-00002	EPA 6020a R1 m
Hardness Total (calculated as CaCO3)	12	N/A	2015/05/06	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	1	N/A	2015/05/05	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	10	N/A	2015/05/06	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	2	N/A	2015/05/08	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	12	N/A	2015/05/06	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Dissolved-LowLevel) by CVAF	1	N/A	2015/05/07	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	8	2015/05/05	2015/05/05	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	5	2015/05/06	2015/05/06	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	10	N/A	2015/05/06	BBY WI-00033	SM 22 1030E
Ion Balance	3	N/A	2015/05/08	BBY WI-00033	SM 22 1030E
Sum of cations, anions	1	N/A	2015/05/05	Calc	
Sum of cations, anions	12	N/A	2015/05/06	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2015/05/05	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	10	N/A	2015/05/06	BBY7SOP-00002	EPA 6020A R1 m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08406559, 08406560

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/05/11
Report #: R1898858
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B535707
Received: 2015/05/01, 14:50

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	2	N/A	2015/05/08	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	13	N/A	2015/05/05	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Digested LL (total)	2	2015/05/04	2015/05/06	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2015/05/05	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	12	N/A	2015/05/06	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	11	N/A	2015/05/05	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	13	N/A	2015/05/05	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	13	N/A	2015/05/05	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	13	N/A	2015/05/05	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	13	N/A	2015/05/05	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	12	N/A	2015/05/04	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	7	N/A	2015/05/04	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (2)	6	N/A	2015/05/05	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	13	N/A	2015/05/05	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	11	2015/05/04	2015/05/04	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2015/05/04	2015/05/06	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2015/05/05	2015/05/05	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	12	N/A	2015/05/04	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	1	N/A	2015/05/05	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	12	2015/05/05	2015/05/06	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	1	2015/05/06	2015/05/06	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08406559, 08406560

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/05/11
Report #: R1898858
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B535707
Received: 2015/05/01, 14:50

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Email & Phone Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MD8814	MD8815		MD8816		MD8817		
Sampling Date		2015/04/30 16:05	2015/04/30 14:05		2015/04/30 12:30		2015/04/30 09:55		
COC Number		08406559	08406559		08406559		08406559		
	Units	KZ2	KZ7	QC Batch	KZ9	QC Batch	KZ13	RDL	QC Batch
Misc. Inorganics									
Acidity (pH 4.5)	mg/L	<0.50	<0.50	7890984	<0.50	7890984	<0.50	0.50	7890984
Acidity (pH 8.3)	mg/L	<0.50	<0.50	7890984	4.66	7890984	0.95	0.50	7890984
Calculated Parameters									
Anion Sum	meq/L	2.8	3.6	7891715	4.1	7891715	2.3	N/A	7891715
Cation Sum	meq/L	2.9	3.8	7891715	4.5	7891715	2.3	N/A	7891715
Filter and HNO3 Preservation	N/A	LAB	LAB	7890252	LAB	7890252	LAB	N/A	7890252
Ion Balance	N/A	1.1	1.1	7891714	1.1	7891714	1.0	0.010	7891714
Nitrate (N)	mg/L	0.119	0.0973	7888787	0.116	7888787	0.0935	0.0020	7888787
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	7892052	<0.00050	7892052	0.00050	0.00050	7892052
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	7892057	<0.00050	7892057	<0.00050	0.00050	7892057
Fluoride (F)	mg/L	0.050	0.075	7891933	0.097	7891933	0.064	0.010	7891933
Dissolved Organic Carbon (C)	mg/L	0.71	1.18	7892173	1.89	7892173	2.94	0.50	7892173
Alkalinity (Total as CaCO3)	mg/L	87.9	145	7891078	176	7891078	99.3	0.50	7891043
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	7891078	<0.50	7891078	<0.50	0.50	7891043
Bicarbonate (HCO3)	mg/L	107	177	7891078	214	7891078	121	0.50	7891043
Carbonate (CO3)	mg/L	<0.50	<0.50	7891078	<0.50	7891078	<0.50	0.50	7891043
Hydroxide (OH)	mg/L	<0.50	<0.50	7891078	<0.50	7891078	<0.50	0.50	7891043
Anions									
Dissolved Sulphate (SO4)	mg/L	47.2	31.3	7892466	29.4	7892466	13.7	0.50	7892466
Dissolved Chloride (Cl)	mg/L	<0.50	<0.50	7892465	<0.50	7892465	1.2	0.50	7892465
MISCELLANEOUS									
True Colour	Col. Unit	<5.0	13.4	7889801	24.4	7889801	24.6	5.0	7889801
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	0.0027 (1)	7893866	0.0059 (1)	7893866	0.0037 (1)	0.0020	7893866
Total Ammonia (N)	mg/L	0.0169	0.0116	7892180	0.0241	7892180	0.0074	0.0050	7892180
Nitrate plus Nitrite (N)	mg/L	0.122 (1)	0.102 (1)	7892414	0.118 (1)	7892412	0.0935 (1)	0.0020	7892412
Nitrite (N)	mg/L	0.0033 (1)	0.0044 (1)	7892415	0.0023 (1)	7892413	<0.0020 (1)	0.0020	7892413
Total Phosphorus (P)	mg/L	<0.0020 (1)	0.0021 (1)	7893837	0.0060 (1)	7893837	0.0032 (1)	0.0020	7893837
Physical Properties									
Conductivity	uS/cm	279	343	7891081	399	7891081	228	1.0	7891046
pH	pH	8.10	8.22	7891080	7.73	7891080	8.24	N/A	7891045

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MD8814	MD8815		MD8816		MD8817		
Sampling Date		2015/04/30 16:05	2015/04/30 14:05		2015/04/30 12:30		2015/04/30 09:55		
COC Number		08406559	08406559		08406559		08406559		
	Units	KZ2	KZ7	QC Batch	KZ9	QC Batch	KZ13	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	2.7	<1.0	7890953	1.6	7890953	7.3	1.0	7890953
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MD8818		MD8819		MD8820		
Sampling Date		2015/04/29 16:47		2015/04/30 17:44		2015/04/29 17:52		
COC Number		08406559		08406559		08406559		
	Units	KZ15	QC Batch	KZ16	QC Batch	KZ17	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	7890984	<0.50	7890984	<0.50	0.50	7890984
Acidity (pH 8.3)	mg/L	<0.50	7890984	<0.50	7890984	<0.50	0.50	7890984
Calculated Parameters								
Anion Sum	meq/L	5.2	7891715	5.1	7891715	5.0	N/A	7891715
Cation Sum	meq/L	5.5	7891715	5.5	7891715	5.4	N/A	7891715
Filter and HNO3 Preservation	N/A	LAB	7890252	LAB	7890252	LAB	N/A	7890252
Ion Balance	N/A	1.1	7891714	1.1	7891714	1.1	0.010	7891714
Nitrate (N)	mg/L	0.164	7888787	0.193	7888787	0.127	0.0020	7888787
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	7892052	<0.00050	7892052	<0.00050	0.00050	7892052
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	7892057	<0.00050	7892057	<0.00050	0.00050	7892057
Fluoride (F)	mg/L	0.120	7891933	0.087	7891933	0.140	0.010	7891933
Dissolved Organic Carbon (C)	mg/L	0.85	7892173	0.97	7892173	1.59	0.50	7892173
Alkalinity (Total as CaCO3)	mg/L	224	7891043	218	7891078	214	0.50	7891078
Alkalinity (PP as CaCO3)	mg/L	4.25	7891043	<0.50	7891078	<0.50	0.50	7891078
Bicarbonate (HCO3)	mg/L	263	7891043	266	7891078	261	0.50	7891078
Carbonate (CO3)	mg/L	5.10	7891043	<0.50	7891078	<0.50	0.50	7891078
Hydroxide (OH)	mg/L	<0.50	7891043	<0.50	7891078	<0.50	0.50	7891078
Anions								
Dissolved Sulphate (SO4)	mg/L	35.0	7892464	36.9	7892466	32.1	0.50	7892466
Dissolved Chloride (Cl)	mg/L	<0.50	7892463	<0.50	7892465	<0.50	0.50	7892465
MISCELLANEOUS								
True Colour	Col. Unit	6.1	7889801	6.1	7889801	9.6	5.0	7889801
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0021 (1)	7893866	0.0022 (1)	7893866	0.0041 (1)	0.0020	7893866
Total Ammonia (N)	mg/L	0.0199	7889799	0.0131	7892180	0.0237	0.0050	7892180
Nitrate plus Nitrite (N)	mg/L	0.164 (1)	7892412	0.196 (1)	7892414	0.129 (1)	0.0020	7892412
Nitrite (N)	mg/L	<0.0020 (1)	7892413	0.0032 (1)	7892415	0.0023 (1)	0.0020	7892413
Total Phosphorus (P)	mg/L	0.0021 (1)	7893837	0.0024 (1)	7893837	0.0041 (1)	0.0020	7893837
Physical Properties								
Conductivity	uS/cm	476	7891046	490	7891081	469	1.0	7891081
pH	pH	8.42	7891045	8.13	7891080	8.28	N/A	7891080

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MD8818		MD8819		MD8820		
Sampling Date		2015/04/29 16:47		2015/04/30 17:44		2015/04/29 17:52		
COC Number		08406559		08406559		08406559		
	Units	KZ15	QC Batch	KZ16	QC Batch	KZ17	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	7890953	<1.0	7890953	<1.0	1.0	7890953
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MD8821		MD8822	MD8823		MD8836		
Sampling Date		2015/04/29 13:45		2015/04/29 14:42	2015/04/29 13:15		2015/04/29 11:45		
COC Number		08406559		08406559	08406559		08406560		
	Units	KZ19	QC Batch	KZ21	KZ22	QC Batch	KZ26	RDL	QC Batch
Misc. Inorganics									
Acidity (pH 4.5)	mg/L	<0.50	7890984	<0.50	<0.50	7890984	<0.50	0.50	7890984
Acidity (pH 8.3)	mg/L	2.49	7890984	2.90	1.66	7890984	<0.50	0.50	7890984
Calculated Parameters									
Anion Sum	meq/L	6.2	7891715	6.4	6.2	7891715	6.1	N/A	7891715
Cation Sum	meq/L	6.6	7891715	6.7	6.7	7891715	6.4	N/A	7891715
Filter and HNO3 Preservation	N/A	LAB	7890252	LAB	LAB	7890252	LAB	N/A	7890252
Ion Balance	N/A	1.1	7891714	1.0	1.1	7891714	1.1	0.010	7891714
Nitrate (N)	mg/L	0.124	7888787	0.0599	0.120	7888787	0.201	0.0020	7888787
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00054	7892052	0.00059	0.00051	7892052	0.00051	0.00050	7892052
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	7892057	0.00057	0.00053	7892057	<0.00050	0.00050	7892057
Fluoride (F)	mg/L	0.160	7891933	0.200	0.160	7891933	0.130	0.010	7891933
Dissolved Organic Carbon (C)	mg/L	2.84	7892173	4.42	3.27	7892173	1.84	0.50	7892173
Alkalinity (Total as CaCO3)	mg/L	258	7891043	267	261	7891043	252	0.50	7891043
Alkalinity (PP as CaCO3)	mg/L	4.11	7891043	3.65	3.29	7891043	4.25	0.50	7891043
Bicarbonate (HCO3)	mg/L	305	7891043	317	311	7891043	298	0.50	7891043
Carbonate (CO3)	mg/L	4.93	7891043	4.38	3.95	7891043	5.10	0.50	7891043
Hydroxide (OH)	mg/L	<0.50	7891043	<0.50	<0.50	7891043	<0.50	0.50	7891043
Anions									
Dissolved Sulphate (SO4)	mg/L	47.1	7892464	46.6	45.7	7892466	47.6	0.50	7892464
Dissolved Chloride (Cl)	mg/L	<0.50	7892463	1.2	0.75	7892465	<0.50	0.50	7892463
MISCELLANEOUS									
True Colour	Col. Unit	42.8	7889801	75.3	44.5	7889801	11.1	5.0	7889801
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0136 (1)	7893866	0.0262 (1)	0.0159 (1)	7893866	0.0032	0.0020	7894834
Total Ammonia (N)	mg/L	0.0162	7889799	0.0181	0.0273	7892180	0.0119	0.0050	7889799
Nitrate plus Nitrite (N)	mg/L	0.124 (1)	7892412	0.0624 (1)	0.123 (1)	7892412	0.201 (1)	0.0020	7892412
Nitrite (N)	mg/L	<0.0020 (1)	7892413	0.0025 (1)	0.0025 (1)	7892413	<0.0020 (1)	0.0020	7892413
Total Phosphorus (P)	mg/L	0.0129 (1)	7893837	0.0254 (1)	0.0140 (1)	7893837	0.0032 (1)	0.0020	7893837
Physical Properties									
Conductivity	uS/cm	555	7891046	572	558	7891046	541	1.0	7891046
pH	pH	8.40	7891045	8.38	8.36	7891045	8.40	N/A	7891045

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MD8821		MD8822	MD8823		MD8836		
Sampling Date		2015/04/29 13:45		2015/04/29 14:42	2015/04/29 13:15		2015/04/29 11:45		
COC Number		08406559		08406559	08406559		08406560		
	Units	KZ19	QC Batch	KZ21	KZ22	QC Batch	KZ26	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	1.5	7890953	3.8	1.5	7890953	<1.0	1.0	7890953
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MD8837		ME0566		
Sampling Date		2015/04/30 10:30		2015/05/01 14:50		
COC Number		08406560		08406560		
	Units	KZ28	QC Batch	TRIP BLANK	RDL	QC Batch
Misc. Inorganics						
Acidity (pH 4.5)	mg/L	<0.50	7890984	<0.50	0.50	7890988
Acidity (pH 8.3)	mg/L	<0.50	7890984	<0.50	0.50	7890988
Calculated Parameters						
Anion Sum	meq/L	0.019	7891715	0.00020	N/A	7891715
Cation Sum	meq/L	0.0025	7891715	0.00090	N/A	7891715
Filter and HNO3 Preservation	N/A	LAB	7890252		N/A	
Ion Balance	N/A	0.13 (1)	7891714	NC (2)	0.010	7891714
Nitrate (N)	mg/L	0.0025	7888787	0.0032	0.0020	7890460
Misc. Inorganics						
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	7892052	<0.00050	0.00050	7892052
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	7892057	<0.00050	0.00050	7892057
Fluoride (F)	mg/L	<0.010	7891933	<0.010	0.010	7892316
Dissolved Organic Carbon (C)	mg/L	<0.50	7892173	<0.50	0.50	7892178
Alkalinity (Total as CaCO3)	mg/L	0.92	7891078	<0.50	0.50	7891085
Alkalinity (PP as CaCO3)	mg/L	<0.50	7891078	<0.50	0.50	7891085
Bicarbonate (HCO3)	mg/L	1.12	7891078	<0.50	0.50	7891085
Carbonate (CO3)	mg/L	<0.50	7891078	<0.50	0.50	7891085
Hydroxide (OH)	mg/L	<0.50	7891078	<0.50	0.50	7891085
Anions						
Dissolved Sulphate (SO4)	mg/L	<0.50	7892466	<0.50	0.50	7892471
Dissolved Chloride (Cl)	mg/L	<0.50	7892465	<0.50	0.50	7892469
MISCELLANEOUS						
True Colour	Col. Unit	<5.0	7889801	<5.0	5.0	7892298
Nutrients						
Dissolved Phosphorus (P)	mg/L	<0.0020 (3)	7893866	<0.0020	0.0020	7891883
Total Ammonia (N)	mg/L	0.0106	7892180	<0.0050	0.0050	7892181
Nitrate plus Nitrite (N)	mg/L	0.0025 (3)	7892412	0.0032	0.0020	7892416
Nitrite (N)	mg/L	<0.0020 (3)	7892413	<0.0020	0.0020	7892417
Total Phosphorus (P)	mg/L	<0.0020 (3)	7893837	<0.0020	0.0020	7891885
Physical Properties						
Conductivity	uS/cm	1.2	7891081	1.5	1.0	7891096

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).
(2) Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].
(3) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MD8837		ME0566		
Sampling Date		2015/04/30 10:30		2015/05/01 14:50		
COC Number		08406560		08406560		
	Units	**KZ28**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**
pH	pH	5.75	7891080	6.04	N/A	7891095
Physical Properties						
Total Suspended Solids	mg/L	<1.0	7890953	<1.0	1.0	7892343

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MD8814		MD8815	MD8816		
Sampling Date		2015/04/30 16:05		2015/04/30 14:05	2015/04/30 12:30		
COC Number		08406559		08406559	08406559		
	Units	KZ2	QC Batch	KZ7	KZ9	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	140	7888655	186	216	0.50	7888655
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	7892952	<0.0000020	<0.0000020	0.0000020	7892952
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00161	7890771	0.00389 (1)	0.00345	0.00050	7890771
Dissolved Antimony (Sb)	mg/L	0.000032	7893957	0.000092	0.000056	0.000020	7890771
Dissolved Arsenic (As)	mg/L	0.000091	7890771	0.000164	0.000288	0.000020	7890771
Dissolved Barium (Ba)	mg/L	0.0801	7890771	0.105	0.107	0.000020	7890771
Dissolved Beryllium (Be)	mg/L	<0.000010	7890771	<0.000010	<0.000010	0.000010	7890771
Dissolved Bismuth (Bi)	mg/L	<0.0000050	7890771	<0.0000050	0.0000081	0.0000050	7890771
Dissolved Boron (B)	mg/L	<0.010	7890771	<0.010	<0.010	0.010	7890771
Dissolved Cadmium (Cd)	mg/L	0.000229	7890771	0.0000248	0.0000606	0.0000050	7890771
Dissolved Chromium (Cr)	mg/L	<0.00010	7890771	<0.00010	<0.00010	0.00010	7890771
Dissolved Cobalt (Co)	mg/L	0.0000106	7890771	0.0000385	0.000147	0.0000050	7890771
Dissolved Copper (Cu)	mg/L	0.000606	7890771	0.000183	0.000398	0.000050	7890771
Dissolved Iron (Fe)	mg/L	0.0017	7890771	0.0136	0.0889	0.0010	7890771
Dissolved Lead (Pb)	mg/L	0.0000242	7890771	<0.0000050	0.0000067	0.0000050	7890771
Dissolved Lithium (Li)	mg/L	0.00162	7890771	0.00458	0.00511	0.00050	7890771
Dissolved Manganese (Mn)	mg/L	0.000491	7890771	0.0554	0.147	0.000050	7890771
Dissolved Molybdenum (Mo)	mg/L	0.000850	7890771	0.000664	0.000699	0.000050	7890771
Dissolved Nickel (Ni)	mg/L	0.000280	7890771	0.000366	0.000680	0.000020	7890771
Dissolved Phosphorus (P)	mg/L	<0.0020	7890771	<0.0020	0.0021	0.0020	7890771
Dissolved Selenium (Se)	mg/L	0.00306	7893957	0.000869	0.00106	0.000040	7893957
Dissolved Silicon (Si)	mg/L	2.71	7890771	4.20	4.41	0.050	7890771
Dissolved Silver (Ag)	mg/L	<0.0000050	7890771	<0.0000050	<0.0000050	0.0000050	7890771
Dissolved Strontium (Sr)	mg/L	0.162	7890771	0.218	0.263	0.000050	7890771
Dissolved Thallium (Tl)	mg/L	<0.0000020	7893957	<0.0000020	<0.0000020	0.0000020	7893957
Dissolved Tin (Sn)	mg/L	<0.00020	7890771	<0.00020	<0.00020	0.00020	7890771
Dissolved Titanium (Ti)	mg/L	<0.00050	7890771	<0.00050	<0.00050	0.00050	7890771
Dissolved Uranium (U)	mg/L	0.00498	7890771	0.00141	0.00165	0.0000020	7890771
Dissolved Vanadium (V)	mg/L	<0.00020	7890771	<0.00020	<0.00020	0.00020	7890771
Dissolved Zinc (Zn)	mg/L	0.0266	7890771	0.0290	0.00891	0.00010	7890771
Dissolved Zirconium (Zr)	mg/L	<0.00010	7890771	<0.00010	<0.00010	0.00010	7890771
Dissolved Calcium (Ca)	mg/L	44.3	7888785	61.2	72.0	0.050	7888785

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MD8814		MD8815	MD8816		
Sampling Date		2015/04/30 16:05		2015/04/30 14:05	2015/04/30 12:30		
COC Number		08406559		08406559	08406559		
	Units	**KZ2**	**QC Batch**	**KZ7**	**KZ9**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	7.18	7892909	8.05	8.94	0.050	7888785
Dissolved Potassium (K)	mg/L	2.50	7892909	2.21	2.28	0.050	7888785
Dissolved Sodium (Na)	mg/L	1.58 (1)	7888785	1.36	1.61	0.050	7888785
Dissolved Sulphur (S)	mg/L	17.1	7888785	10.8	10.8	3.0	7888785

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MD8817		MD8818	MD8819	MD8820		
Sampling Date		2015/04/30 09:55		2015/04/29 16:47	2015/04/30 17:44	2015/04/29 17:52		
COC Number		08406559		08406559	08406559	08406559		
	Units	KZ13	QC Batch	KZ15	KZ16	KZ17	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	111	7888655	270	272	263	0.50	7888655
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	7892952	<0.0000020	<0.0000020	<0.0000020	0.0000020	7892952
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00495	7890771	0.00064	0.00087	0.00093	0.00050	7890771
Dissolved Antimony (Sb)	mg/L	0.000046	7890771	0.000037	0.000031	0.000038	0.000020	7890771
Dissolved Arsenic (As)	mg/L	0.000219	7890771	0.000359	0.000301	0.000471	0.000020	7890771
Dissolved Barium (Ba)	mg/L	0.126	7890771	0.0931	0.0993	0.0904	0.000020	7890771
Dissolved Beryllium (Be)	mg/L	<0.000010	7890771	<0.000010	<0.000010	<0.000010	0.000010	7890771
Dissolved Bismuth (Bi)	mg/L	<0.0000050	7890771	<0.0000050	<0.0000050	<0.0000050	0.0000050	7890771
Dissolved Boron (B)	mg/L	<0.010	7890771	<0.010	<0.010	<0.010	0.010	7890771
Dissolved Cadmium (Cd)	mg/L	0.0000100	7890771	0.0000305	0.0000279	0.0000372	0.0000050	7890771
Dissolved Chromium (Cr)	mg/L	<0.00010	7890771	<0.00010	<0.00010	<0.00010	0.00010	7890771
Dissolved Cobalt (Co)	mg/L	0.0000117	7890771	0.0000099	0.0000333	0.0000116	0.0000050	7890771
Dissolved Copper (Cu)	mg/L	0.000327	7890771	0.000218	0.000219	0.000229	0.000050	7890771
Dissolved Iron (Fe)	mg/L	0.0271	7890771	0.0037	0.0052	0.0088	0.0010	7890771
Dissolved Lead (Pb)	mg/L	0.0000051	7890771	<0.0000050	<0.0000050	<0.0000050	0.0000050	7890771
Dissolved Lithium (Li)	mg/L	0.00225	7890771	0.00436	0.00400	0.00469	0.00050	7890771
Dissolved Manganese (Mn)	mg/L	0.0108	7890771	0.0138	0.0248	0.0284	0.000050	7890771
Dissolved Molybdenum (Mo)	mg/L	0.000939	7890771	0.00127	0.000587	0.00221	0.000050	7890771
Dissolved Nickel (Ni)	mg/L	0.000427	7890771	0.00109	0.00118	0.00108	0.000020	7890771
Dissolved Phosphorus (P)	mg/L	0.0031	7890771	0.0023	<0.0020	<0.0020	0.0020	7890771
Dissolved Selenium (Se)	mg/L	0.000237	7895018	0.00127	0.00142	0.00120	0.000040	7893957
Dissolved Silicon (Si)	mg/L	4.81	7890771	4.18	4.18	4.47	0.050	7890771
Dissolved Silver (Ag)	mg/L	<0.0000050	7890771	<0.0000050	<0.0000050	<0.0000050	0.0000050	7890771
Dissolved Strontium (Sr)	mg/L	0.117	7890771	0.269	0.277	0.254	0.000050	7890771
Dissolved Thallium (Tl)	mg/L	<0.0000020	7895018	0.0000070	0.0000049	0.0000030	0.0000020	7890771
Dissolved Tin (Sn)	mg/L	<0.00020	7890771	<0.00020	<0.00020	<0.00020	0.00020	7890771
Dissolved Titanium (Ti)	mg/L	<0.00050	7890771	<0.00050	<0.00050	<0.00050	0.00050	7890771
Dissolved Uranium (U)	mg/L	0.00244	7890771	0.00471	0.00291	0.00616	0.0000020	7890771
Dissolved Vanadium (V)	mg/L	<0.00020	7890771	<0.00020	<0.00020	<0.00020	0.00020	7890771
Dissolved Zinc (Zn)	mg/L	0.00099	7890771	0.00291	0.00112	0.00532	0.00010	7890771
Dissolved Zirconium (Zr)	mg/L	<0.00010	7890771	<0.00010	<0.00010	<0.00010	0.00010	7890771
Dissolved Calcium (Ca)	mg/L	37.2	7888785	78.7	80.3	76.2	0.050	7888785
Dissolved Magnesium (Mg)	mg/L	4.31	7888785	17.9	17.3	17.7	0.050	7888785
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MD8817		MD8818	MD8819	MD8820		
Sampling Date		2015/04/30 09:55		2015/04/29 16:47	2015/04/30 17:44	2015/04/29 17:52		
COC Number		08406559		08406559	08406559	08406559		
	Units	KZ13	QC Batch	KZ15	KZ16	KZ17	RDL	QC Batch
Dissolved Potassium (K)	mg/L	2.84	7888785	1.74	1.63	1.88	0.050	7888785
Dissolved Sodium (Na)	mg/L	1.29	7888785	1.58	1.68	2.54 (1)	0.050	7888785
Dissolved Sulphur (S)	mg/L	5.0	7888785	11.9	12.2	11.5	3.0	7888785

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MD8821		MD8822		MD8823		
Sampling Date		2015/04/29 13:45		2015/04/29 14:42		2015/04/29 13:15		
COC Number		08406559		08406559		08406559		
	Units	KZ19	QC Batch	KZ21	QC Batch	KZ22	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	321	7894334	325	7888655	323	0.50	7892679
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	7892952	<0.0000020	7892952	<0.0000020	0.0000020	7892952
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00084	7890771	0.00106	7890771	0.00082	0.00050	7890771
Dissolved Antimony (Sb)	mg/L	0.000033	7890771	0.000045	7890771	0.000038	0.000020	7890771
Dissolved Arsenic (As)	mg/L	0.00119	7890771	0.00148	7890771	0.00122	0.000020	7890771
Dissolved Barium (Ba)	mg/L	0.0824	7890771	0.0724	7890771	0.0843	0.000020	7890771
Dissolved Beryllium (Be)	mg/L	<0.000010	7890771	<0.000010	7890771	<0.000010	0.000010	7890771
Dissolved Bismuth (Bi)	mg/L	<0.0000050	7890771	<0.0000050	7890771	<0.0000050	0.0000050	7890771
Dissolved Boron (B)	mg/L	<0.010	7890771	<0.010	7890771	<0.010	0.010	7890771
Dissolved Cadmium (Cd)	mg/L	0.0000104	7890771	0.0000090	7890771	0.0000118	0.0000050	7890771
Dissolved Chromium (Cr)	mg/L	<0.00010	7890771	<0.00010	7890771	<0.00010	0.00010	7890771
Dissolved Cobalt (Co)	mg/L	0.0000822	7890771	0.0000592	7890771	0.0000815	0.0000050	7890771
Dissolved Copper (Cu)	mg/L	0.000252	7890771	0.000262	7890771	0.000254	0.000050	7890771
Dissolved Iron (Fe)	mg/L	0.0676	7890771	0.0981	7890771	0.0652	0.0010	7890771
Dissolved Lead (Pb)	mg/L	<0.0000050	7890771	<0.0000050	7890771	<0.0000050	0.0000050	7890771
Dissolved Lithium (Li)	mg/L	0.00698	7890771	0.00787	7890771	0.00649	0.00050	7890771
Dissolved Manganese (Mn)	mg/L	0.0953	7890771	0.139	7890771	0.0974	0.000050	7890771
Dissolved Molybdenum (Mo)	mg/L	0.00155	7890771	0.00157	7890771	0.00155	0.000050	7890771
Dissolved Nickel (Ni)	mg/L	0.00163	7890771	0.00284	7890771	0.00159	0.000020	7890771
Dissolved Phosphorus (P)	mg/L	0.0034	7890771	0.0050	7890771	0.0035	0.0020	7890771
Dissolved Selenium (Se)	mg/L	0.000723	7895018	0.000311 (1)	7895018	0.000963	0.000040	7890771
Dissolved Silicon (Si)	mg/L	5.70	7890771	6.60	7890771	5.68	0.050	7890771
Dissolved Silver (Ag)	mg/L	<0.0000050	7890771	<0.0000050	7890771	<0.0000050	0.0000050	7890771
Dissolved Strontium (Sr)	mg/L	0.282	7890771	0.265	7890771	0.299	0.000050	7890771
Dissolved Thallium (Tl)	mg/L	0.0000030	7890771	0.0000028	7890771	0.0000021	0.0000020	7890771
Dissolved Tin (Sn)	mg/L	<0.00020	7890771	<0.00020	7890771	<0.00020	0.00020	7890771
Dissolved Titanium (Ti)	mg/L	<0.00050	7890771	<0.00050	7890771	<0.00050	0.00050	7890771
Dissolved Uranium (U)	mg/L	0.00395	7890771	0.00314	7890771	0.00399	0.0000020	7890771
Dissolved Vanadium (V)	mg/L	<0.00020	7890771	<0.00020	7890771	<0.00020	0.00020	7890771
Dissolved Zinc (Zn)	mg/L	0.00086	7890771	0.00079	7890771	0.00090	0.00010	7890771
Dissolved Zirconium (Zr)	mg/L	<0.00010	7890771	0.00014	7890771	<0.00010	0.00010	7890771
Dissolved Calcium (Ca)	mg/L	83.5	7894335	78.3	7888785	84.3	0.050	7892909

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MD8821		MD8822		MD8823		
Sampling Date		2015/04/29 13:45		2015/04/29 14:42		2015/04/29 13:15		
COC Number		08406559		08406559		08406559		
	Units	**KZ19**	**QC Batch**	**KZ21**	**QC Batch**	**KZ22**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	27.4	7894335	31.4	7888785	27.3	0.050	7892909
Dissolved Potassium (K)	mg/L	2.36	7894335	2.69	7888785	2.43	0.050	7892909
Dissolved Sodium (Na)	mg/L	3.03	7894335	2.50	7888785	2.86 (1)	0.050	7892909
Dissolved Sulphur (S)	mg/L	17.7	7894335	16.7	7888785	17.8	3.0	7892909

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MD8836		MD8837		ME0566		
Sampling Date		2015/04/29 11:45		2015/04/30 10:30		2015/05/01 14:50		
COC Number		08406560		08406560		08406560		
	Units	KZ26	QC Batch	KZ28	QC Batch	TRIP BLANK	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	311	7888655	<0.50	7888655	<0.50	0.50	7890238
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	7892952	<0.0000020	7892952	<0.0000020	0.0000020	7894302
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00061	7890771	<0.00050	7890771	<0.00050	0.00050	7891581
Dissolved Antimony (Sb)	mg/L	0.000055	7890771	<0.000020	7890771	<0.000020	0.000020	7891581
Dissolved Arsenic (As)	mg/L	0.000533	7890771	<0.000020	7890771	<0.000020	0.000020	7891581
Dissolved Barium (Ba)	mg/L	0.0941	7890771	<0.000020	7890771	<0.000020	0.000020	7891581
Dissolved Beryllium (Be)	mg/L	<0.000010	7890771	<0.000010	7890771	<0.000010	0.000010	7891581
Dissolved Bismuth (Bi)	mg/L	<0.0000050	7890771	<0.0000050	7890771	<0.0000050	0.0000050	7891581
Dissolved Boron (B)	mg/L	<0.010	7890771	<0.010	7890771	<0.010	0.010	7891581
Dissolved Cadmium (Cd)	mg/L	0.0000119	7890771	<0.0000050	7890771	<0.0000050	0.0000050	7891581
Dissolved Chromium (Cr)	mg/L	<0.00010	7890771	<0.00010	7890771	<0.00010	0.00010	7891581
Dissolved Cobalt (Co)	mg/L	0.0000137	7890771	<0.0000050	7890771	<0.0000050	0.0000050	7891581
Dissolved Copper (Cu)	mg/L	0.000334	7890771	<0.000050	7890771	<0.000050	0.000050	7891581
Dissolved Iron (Fe)	mg/L	0.0109	7890771	<0.0010	7890771	<0.0010	0.0010	7891581
Dissolved Lead (Pb)	mg/L	<0.0000050	7890771	<0.0000050	7890771	<0.0000050	0.0000050	7891581
Dissolved Lithium (Li)	mg/L	0.00758	7890771	<0.00050	7890771	<0.00050	0.00050	7891581
Dissolved Manganese (Mn)	mg/L	0.00176	7890771	<0.000050	7890771	<0.000050	0.000050	7891581
Dissolved Molybdenum (Mo)	mg/L	0.00114	7890771	<0.000050	7890771	<0.000050	0.000050	7891581
Dissolved Nickel (Ni)	mg/L	0.000807	7890771	<0.000020	7890771	<0.000020	0.000020	7891581
Dissolved Phosphorus (P)	mg/L	<0.0020	7890771	<0.0020	7890771	<0.0020	0.0020	7891581
Dissolved Selenium (Se)	mg/L	0.000862	7893957	<0.000040	7890771	<0.000040	0.000040	7891581
Dissolved Silicon (Si)	mg/L	5.06	7890771	<0.050	7890771	<0.050	0.050	7891581
Dissolved Silver (Ag)	mg/L	<0.0000050	7890771	<0.0000050 (1)	7890771	<0.0000050	0.0000050	7891581
Dissolved Strontium (Sr)	mg/L	0.285	7890771	<0.000050	7890771	<0.000050	0.000050	7891581
Dissolved Thallium (Tl)	mg/L	<0.0000020	7890771	<0.0000020	7890771	<0.0000020	0.0000020	7891581
Dissolved Tin (Sn)	mg/L	<0.00020	7890771	<0.00020	7890771	<0.00020	0.00020	7891581
Dissolved Titanium (Ti)	mg/L	<0.00050	7890771	<0.00050	7890771	<0.00050	0.00050	7891581
Dissolved Uranium (U)	mg/L	0.00391	7890771	<0.0000020	7890771	<0.0000020	0.0000020	7891581
Dissolved Vanadium (V)	mg/L	<0.00020	7890771	<0.00020	7890771	<0.00020	0.00020	7891581
Dissolved Zinc (Zn)	mg/L	0.00029	7890771	<0.00010	7890771	<0.00010	0.00010	7891581
Dissolved Zirconium (Zr)	mg/L	<0.00010	7890771	<0.00010	7890771	<0.00010	0.00010	7891581
Dissolved Calcium (Ca)	mg/L	82.0	7888785	<0.050	7888785	<0.050	0.050	7890240

RDL = Reportable Detection Limit
(1) Matrix Spike outside acceptance criteria (10% of analytes failure allowed).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MD8836		MD8837		ME0566		
Sampling Date		2015/04/29 11:45		2015/04/30 10:30		2015/05/01 14:50		
COC Number		08406560		08406560		08406560		
	Units	**KZ26**	**QC Batch**	**KZ28**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	25.9	7888785	<0.050	7888785	<0.050	0.050	7890240
Dissolved Potassium (K)	mg/L	1.85	7888785	<0.050	7888785	<0.050	0.050	7890240
Dissolved Sodium (Na)	mg/L	2.31	7888785	<0.050	7888785	<0.050	0.050	7890240
Dissolved Sulphur (S)	mg/L	15.4	7888785	<3.0	7888785	<3.0	3.0	7890240
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MD8814		MD8815	MD8816	MD8818		
Sampling Date		2015/04/30 16:05		2015/04/30 14:05	2015/04/30 12:30	2015/04/29 16:47		
COC Number		08406559		08406559	08406559	08406559		
	Units	KZ2	QC Batch	KZ7	KZ9	KZ15	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	135	7888622	178	208	255	0.50	7888622
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	7893072	<0.0000020	<0.0000020	<0.0000020	0.0000020	7891536
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0688	7890730	0.00197	0.0117	0.00204	0.00050	7890730
Total Antimony (Sb)	mg/L	0.000033	7890730	0.000039	0.000030	0.000025	0.000020	7890730
Total Arsenic (As)	mg/L	0.000147	7890730	0.000184	0.000387	0.000371	0.000020	7890730
Total Barium (Ba)	mg/L	0.0766	7890730	0.0974	0.105	0.0893	0.000020	7890730
Total Beryllium (Be)	mg/L	<0.000010	7890730	<0.000010	<0.000010	<0.000010	0.000010	7890730
Total Bismuth (Bi)	mg/L	0.0000078	7890730	<0.0000050	<0.0000050	<0.0000050	0.0000050	7890730
Total Boron (B)	mg/L	<0.010	7890730	<0.010	<0.010	<0.010	0.010	7890730
Total Cadmium (Cd)	mg/L	0.000246	7890730	0.0000859	0.0000637	0.0000329	0.0000050	7890730
Total Chromium (Cr)	mg/L	0.00016	7890730	<0.00010	<0.00010	<0.00010	0.00010	7890730
Total Cobalt (Co)	mg/L	0.0000688	7890730	0.0000419	0.000217	0.0000344	0.0000050	7890730
Total Copper (Cu)	mg/L	0.00128	7890730	0.000202	0.000369	0.000265	0.000050	7890730
Total Iron (Fe)	mg/L	0.134	7890730	0.128	0.486	0.0357	0.0010	7890730
Total Lead (Pb)	mg/L	0.000743	7890730	0.0000081	0.000112	0.0000102	0.0000050	7890730
Total Lithium (Li)	mg/L	0.00179	7890730	0.00430	0.00472	0.00390	0.00050	7890730
Total Manganese (Mn)	mg/L	0.00472	7890730	0.0540	0.150	0.0334	0.000050	7890730
Total Molybdenum (Mo)	mg/L	0.000717	7890730	0.000677	0.000719	0.00132	0.000050	7890730
Total Nickel (Ni)	mg/L	0.000490	7890730	0.000442	0.000667	0.000946	0.000020	7890730
Total Phosphorus (P)	mg/L	0.0187	7890730	<0.0020	0.0045	0.0032	0.0020	7890730
Total Selenium (Se)	mg/L	0.00280	7890730	0.000853	0.00104	0.00130	0.000040	7890730
Total Silicon (Si)	mg/L	2.69	7890730	4.03	4.33	4.34	0.050	7890730
Total Silver (Ag)	mg/L	<0.0000050	7890730	<0.0000050	<0.0000050	<0.0000050	0.0000050	7890730
Total Strontium (Sr)	mg/L	0.153	7890730	0.204	0.248	0.262	0.000050	7890730
Total Thallium (Tl)	mg/L	0.0000026	7890730	<0.0000020	<0.0000020	<0.0000020	0.0000020	7890730
Total Tin (Sn)	mg/L	<0.00020	7890730	<0.00020	<0.00020	<0.00020	0.00020	7890730
Total Titanium (Ti)	mg/L	0.00438	7890730	<0.00050	0.00070	<0.00050	0.00050	7890730
Total Uranium (U)	mg/L	0.00506	7890730	0.00134	0.00156	0.00461	0.0000020	7890730
Total Vanadium (V)	mg/L	<0.00020	7890730	<0.00020	<0.00020	<0.00020	0.00020	7890730
Total Zinc (Zn)	mg/L	0.0309	7890730	0.0295	0.00905	0.00322	0.00010	7890730
Total Zirconium (Zr)	mg/L	<0.00010	7890730	<0.00010	<0.00010	<0.00010	0.00010	7890730
Total Calcium (Ca)	mg/L	42.4	7888786	58.8	69.5	74.1	0.050	7888786
Total Magnesium (Mg)	mg/L	6.95	7888786	7.47	8.33	17.0	0.050	7888786

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MD8814		MD8815	MD8816	MD8818		
Sampling Date		2015/04/30 16:05		2015/04/30 14:05	2015/04/30 12:30	2015/04/29 16:47		
COC Number		08406559		08406559	08406559	08406559		
	Units	**KZ2**	**QC Batch**	**KZ7**	**KZ9**	**KZ15**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	2.33	7888786	2.13	2.20	1.65	0.050	7888786
Total Sodium (Na)	mg/L	0.907	7888786	1.29	1.52	1.86	0.050	7888786
Total Sulphur (S)	mg/L	17.4	7888786	11.0	10.5	12.6	3.0	7888786
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MD8819	MD8820		MD8821		MD8823		
Sampling Date		2015/04/30 17:44	2015/04/29 17:52		2015/04/29 13:45		2015/04/29 13:15		
COC Number		08406559	08406559		08406559		08406559		
	Units	KZ16	KZ17	QC Batch	KZ19	QC Batch	KZ22	RDL	QC Batch
Calculated Parameters									
Total Hardness (CaCO3)	mg/L	259	249	7888622	293	7889396	300	0.50	7889396
Elements									
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	7893072	<0.0000020	7893072	<0.0000020	0.0000020	7891536
Total Metals by ICPMS									
Total Aluminum (Al)	mg/L	0.00095	0.00544	7890730	0.00250	7890730	0.00280	0.00050	7890730
Total Antimony (Sb)	mg/L	<0.000020	0.000030	7890730	0.000033	7890730	0.000038	0.000020	7890730
Total Arsenic (As)	mg/L	0.000299	0.000572	7890730	0.00216	7890730	0.00212	0.000020	7890730
Total Barium (Ba)	mg/L	0.0908	0.0870	7890730	0.0779	7890730	0.0793	0.000020	7890730
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	7890730	<0.000010	7890730	<0.000010	0.000010	7890730
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	7890730	<0.0000050	7890730	<0.0000050	0.0000050	7890730
Total Boron (B)	mg/L	<0.010	<0.010	7890730	<0.010	7890730	<0.010	0.010	7890730
Total Cadmium (Cd)	mg/L	0.0000289	0.0000483	7890730	0.0000168	7890730	0.0000255	0.0000050	7890730
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	7890730	<0.00010	7890730	<0.00010	0.00010	7890730
Total Cobalt (Co)	mg/L	0.0000616	0.0000414	7890730	0.000147	7890730	0.000145	0.0000050	7890730
Total Copper (Cu)	mg/L	0.000212	0.000272	7890730	0.000283	7890730	0.000291	0.000050	7890730
Total Iron (Fe)	mg/L	0.0193	0.0817	7890730	0.577	7890730	0.588	0.0010	7890730
Total Lead (Pb)	mg/L	0.0000118	0.0000250	7890730	0.0000147	7890730	0.0000135	0.0000050	7890730
Total Lithium (Li)	mg/L	0.00399	0.00493	7890730	0.00674	7890730	0.00669	0.00050	7890730
Total Manganese (Mn)	mg/L	0.0312	0.0548	7890730	0.112	7890730	0.113	0.000050	7890730
Total Molybdenum (Mo)	mg/L	0.000542	0.00198	7890730	0.00148	7890730	0.00144	0.000050	7890730
Total Nickel (Ni)	mg/L	0.00111	0.00112	7890730	0.00155	7890730	0.00160	0.000020	7890730
Total Phosphorus (P)	mg/L	<0.0020	0.0052	7890730	0.0142	7890730	0.0137	0.0020	7890730
Total Selenium (Se)	mg/L	0.00135	0.00117	7890730	0.000773	7890730	0.000811	0.000040	7890730
Total Silicon (Si)	mg/L	4.29	4.52	7890730	5.64	7890730	5.55	0.050	7890730
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	7890730	<0.0000050	7890730	<0.0000050	0.0000050	7890730
Total Strontium (Sr)	mg/L	0.269	0.247	7890730	0.264	7890730	0.261	0.000050	7890730
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	7890730	<0.0000020	7890730	<0.0000020	0.0000020	7890730
Total Tin (Sn)	mg/L	<0.00020	<0.00020	7890730	<0.00020	7890730	<0.00020	0.00020	7890730
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	7890730	<0.00050	7890730	<0.00050	0.00050	7890730
Total Uranium (U)	mg/L	0.00281	0.00589	7890730	0.00375	7890730	0.00392	0.0000020	7890730
Total Vanadium (V)	mg/L	<0.00020	<0.00020	7890730	<0.00020	7890730	<0.00020	0.00020	7890730
Total Zinc (Zn)	mg/L	0.00097	0.00586	7890730	0.00119	7890730	0.00121	0.00010	7890730
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	7890730	0.00016	7890730	0.00016	0.00010	7890730
Total Calcium (Ca)	mg/L	75.8	71.5	7888786	76.0	7888786	78.2	0.050	7888786
Total Magnesium (Mg)	mg/L	17.1	17.0	7888786	25.2	7888786	25.4	0.050	7888786

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MD8819	MD8820		MD8821		MD8823		
Sampling Date		2015/04/30 17:44	2015/04/29 17:52		2015/04/29 13:45		2015/04/29 13:15		
COC Number		08406559	08406559		08406559		08406559		
	Units	**KZ16**	**KZ17**	**QC Batch**	**KZ19**	**QC Batch**	**KZ22**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	1.53	1.78	7888786	2.19	7888786	2.08	0.050	7888786
Total Sodium (Na)	mg/L	1.49	1.55	7888786	2.48	7888786	2.16	0.050	7888786
Total Sulphur (S)	mg/L	13.0	12.1	7888786	16.5	7888786	16.2	3.0	7888786
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MD8836	MD8837		ME0566		
Sampling Date		2015/04/29 11:45	2015/04/30 10:30		2015/05/01 14:50		
COC Number		08406560	08406560		08406560		
	Units	KZ26	KZ28	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	302	<0.50	7889396	<0.50	0.50	7890611
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	7891536	<0.0000020	0.0000020	7893144
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00243	<0.00050	7890730	<0.00050	0.00050	7891584
Total Antimony (Sb)	mg/L	0.000063	<0.000020	7890730	<0.000020	0.000020	7891584
Total Arsenic (As)	mg/L	0.000654	<0.000020	7890730	<0.000020	0.000020	7891584
Total Barium (Ba)	mg/L	0.0877	<0.000020	7890730	<0.000020	0.000020	7891584
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	7890730	<0.000010	0.000010	7891584
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	7890730	<0.0000050	0.0000050	7891584
Total Boron (B)	mg/L	<0.010	<0.010	7890730	<0.010	0.010	7891584
Total Cadmium (Cd)	mg/L	0.0000122	<0.0000050	7890730	<0.0000050	0.0000050	7891584
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	7890730	<0.00010	0.00010	7891584
Total Cobalt (Co)	mg/L	0.0000184	<0.0000050	7890730	<0.0000050	0.0000050	7891584
Total Copper (Cu)	mg/L	0.000314	<0.000050	7890730	<0.000050	0.000050	7891584
Total Iron (Fe)	mg/L	0.0940	<0.0010	7890730	<0.0010	0.0010	7891584
Total Lead (Pb)	mg/L	0.0000105	<0.0000050	7890730	<0.0000050	0.0000050	7891584
Total Lithium (Li)	mg/L	0.00721	<0.00050	7890730	<0.00050	0.00050	7891584
Total Manganese (Mn)	mg/L	0.00498	<0.000050	7890730	<0.000050	0.000050	7891584
Total Molybdenum (Mo)	mg/L	0.00115	<0.000050	7890730	<0.000050	0.000050	7891584
Total Nickel (Ni)	mg/L	0.000820	0.000102	7890730	<0.000020	0.000020	7891584
Total Phosphorus (P)	mg/L	0.0035	<0.0020	7890730	<0.0020	0.0020	7891584
Total Selenium (Se)	mg/L	0.000866	<0.000040	7890730	<0.000040	0.000040	7891584
Total Silicon (Si)	mg/L	5.03	<0.050	7890730	<0.050	0.050	7891584
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	7890730	<0.0000050	0.0000050	7891584
Total Strontium (Sr)	mg/L	0.276	<0.000050	7890730	<0.000050	0.000050	7891584
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	7890730	<0.0000020	0.0000020	7891584
Total Tin (Sn)	mg/L	<0.00020	<0.00020	7890730	<0.00020	0.00020	7891584
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	7890730	<0.00050	0.00050	7891584
Total Uranium (U)	mg/L	0.00376	<0.0000020	7890730	<0.0000020	0.0000020	7891584
Total Vanadium (V)	mg/L	<0.00020	<0.00020	7890730	<0.00020	0.00020	7891584
Total Zinc (Zn)	mg/L	0.00041	<0.00010	7890730	<0.00010	0.00010	7891584
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	7890730	<0.00010	0.00010	7891584
Total Calcium (Ca)	mg/L	80.4	<0.050	7888786	<0.050	0.050	7890241
Total Magnesium (Mg)	mg/L	24.6	<0.050	7888786	<0.050	0.050	7890241
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MD8836	MD8837		ME0566		
Sampling Date		2015/04/29 11:45	2015/04/30 10:30		2015/05/01 14:50		
COC Number		08406560	08406560		08406560		
	Units	**KZ26**	**KZ28**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	1.73	<0.050	7888786	<0.050	0.050	7890241
Total Sodium (Na)	mg/L	2.29	<0.050	7888786	<0.050	0.050	7890241
Total Sulphur (S)	mg/L	16.4	<3.0	7888786	<3.0	3.0	7890241
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MD8817		MD8822		
Sampling Date		2015/04/30 09:55		2015/04/29 14:42		
COC Number		08406559		08406559		
	Units	KZ13	QC Batch	KZ21	RDL	QC Batch
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	113	7888622	306	0.50	7889396
Elements						
Total Mercury (Hg)	mg/L	<0.0000020	7891536	<0.0000020	0.0000020	7891536
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.0969	7890803	0.0082	0.0030	7890803
Total Antimony (Sb)	mg/L	<0.000050	7890803	<0.000050	0.000050	7890803
Total Arsenic (As)	mg/L	0.000291	7890803	0.00305	0.000020	7890803
Total Barium (Ba)	mg/L	0.121	7890803	0.0681	0.00010	7890803
Total Beryllium (Be)	mg/L	0.000017	7890803	<0.000010	0.000010	7890803
Total Bismuth (Bi)	mg/L	<0.000020	7890803	<0.000020	0.000020	7890803
Total Boron (B)	mg/L	<0.050	7890803	<0.050	0.050	7890803
Total Cadmium (Cd)	mg/L	0.0000359	7890803	0.0000136	0.0000050	7890803
Total Chromium (Cr)	mg/L	<0.00050	7890803	<0.00050	0.00050	7890803
Total Cobalt (Co)	mg/L	0.000091	7890803	0.000203	0.000010	7890803
Total Copper (Cu)	mg/L	0.00082	7890803	0.00054	0.00020	7890803
Total Iron (Fe)	mg/L	0.258	7890803	1.25	0.0050	7890803
Total Lead (Pb)	mg/L	0.000196	7890803	<0.000050	0.000050	7890803
Total Lithium (Li)	mg/L	0.00236	7890803	0.00729	0.00050	7890803
Total Manganese (Mn)	mg/L	0.0748	7890803	0.190	0.00010	7890803
Total Molybdenum (Mo)	mg/L	0.000953	7890803	0.00148	0.000050	7890803
Total Nickel (Ni)	mg/L	0.00065	7890803	0.00232	0.00010	7890803
Total Phosphorus (P)	mg/L	0.014	7890803	0.033	0.010	7890803
Total Selenium (Se)	mg/L	0.000236	7890803	0.000243	0.000040	7890803
Total Silicon (Si)	mg/L	4.78	7890803	6.07	0.10	7890803
Total Silver (Ag)	mg/L	0.0000128	7890803	0.0000078	0.0000050	7890803
Total Strontium (Sr)	mg/L	0.106	7890803	0.226	0.000050	7890803
Total Thallium (Tl)	mg/L	0.0000051	7890803	0.0000020	0.0000020	7890803
Total Tin (Sn)	mg/L	<0.00020	7890803	<0.00020	0.00020	7890803
Total Titanium (Ti)	mg/L	0.0054	7890803	<0.0050	0.0050	7890803
Total Uranium (U)	mg/L	0.00259	7890803	0.00296	0.0000050	7890803
Total Vanadium (V)	mg/L	0.00094	7890803	<0.00050	0.00050	7890803
Total Zinc (Zn)	mg/L	0.0038	7890803	0.0018	0.0010	7890803
Total Zirconium (Zr)	mg/L	0.00010	7890803	0.00033	0.00010	7890803
Total Calcium (Ca)	mg/L	37.9	7888786	73.9	0.25	7888786
Total Magnesium (Mg)	mg/L	4.47	7888786	29.6	0.25	7888786
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MD8817		MD8822		
Sampling Date		2015/04/30 09:55		2015/04/29 14:42		
COC Number		08406559		08406559		
	Units	KZ13	QC Batch	KZ21	RDL	QC Batch
Total Potassium (K)	mg/L	2.63	7888786	2.49	0.25	7888786
Total Sodium (Na)	mg/L	1.41	7888786	2.09	0.25	7888786
Total Sulphur (S)	mg/L	<15	7888786	15	15	7888786
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	5.7°C
Package 2	7.7°C

Revised Report R2 (2015/05/11): Reporting units have been changed as per client request and report comments have been amended (MM4).

Sample ME0566-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].
Sample MD8814, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MD8814, Na, K, Ca, Mg, S by CRC ICPMS (diss.): Test repeated.
Sample MD8815, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MD8816, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MD8817, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MD8818, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MD8819, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MD8820, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MD8821, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MD8822, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MD8836, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7889799	Total Ammonia (N)	2015/05/05	95	80 - 120	99	80 - 120	<0.0050	mg/L	NC	20
7889801	True Colour	2015/05/02			98	80 - 120	<5.0	Col. Unit	1.9	20
7890730	Total Aluminum (Al)	2015/05/05	97	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
7890730	Total Antimony (Sb)	2015/05/05	97	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
7890730	Total Arsenic (As)	2015/05/05	101	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
7890730	Total Barium (Ba)	2015/05/05	102	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
7890730	Total Beryllium (Be)	2015/05/05	92	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
7890730	Total Bismuth (Bi)	2015/05/05	97	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
7890730	Total Boron (B)	2015/05/05					<0.010	mg/L	NC	20
7890730	Total Cadmium (Cd)	2015/05/05	96	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
7890730	Total Chromium (Cr)	2015/05/05	96	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
7890730	Total Cobalt (Co)	2015/05/05	96	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
7890730	Total Copper (Cu)	2015/05/05	95	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
7890730	Total Iron (Fe)	2015/05/05	104	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20
7890730	Total Lead (Pb)	2015/05/05	96	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
7890730	Total Lithium (Li)	2015/05/05	103	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
7890730	Total Manganese (Mn)	2015/05/05	97	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
7890730	Total Molybdenum (Mo)	2015/05/05	96	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
7890730	Total Nickel (Ni)	2015/05/05	96	80 - 120	98	80 - 120	<0.000020	mg/L	2.9	20
7890730	Total Phosphorus (P)	2015/05/05					<0.0020	mg/L	NC	20
7890730	Total Selenium (Se)	2015/05/05	100	80 - 120	103	80 - 120	<0.000040	mg/L	NC	20
7890730	Total Silicon (Si)	2015/05/05					<0.050	mg/L	NC	20
7890730	Total Silver (Ag)	2015/05/05	82	80 - 120	95	80 - 120	<0.0000050	mg/L	NC	20
7890730	Total Strontium (Sr)	2015/05/05	96	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
7890730	Total Thallium (Tl)	2015/05/05	96	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	20
7890730	Total Tin (Sn)	2015/05/05	94	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
7890730	Total Titanium (Ti)	2015/05/05	94	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
7890730	Total Uranium (U)	2015/05/05	99	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
7890730	Total Vanadium (V)	2015/05/05	104	80 - 120	120	80 - 120	0.00025, RDL=0.00020	mg/L	NC	20
7890730	Total Zinc (Zn)	2015/05/05	97	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
7890730	Total Zirconium (Zr)	2015/05/05					<0.00010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7890771	Dissolved Aluminum (Al)	2015/05/05	104	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
7890771	Dissolved Antimony (Sb)	2015/05/05	102	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
7890771	Dissolved Arsenic (As)	2015/05/05	105	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
7890771	Dissolved Barium (Ba)	2015/05/05	104	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
7890771	Dissolved Beryllium (Be)	2015/05/05	100	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
7890771	Dissolved Bismuth (Bi)	2015/05/05	100	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
7890771	Dissolved Boron (B)	2015/05/05					<0.010	mg/L	NC	20
7890771	Dissolved Cadmium (Cd)	2015/05/05	101	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
7890771	Dissolved Chromium (Cr)	2015/05/05	101	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
7890771	Dissolved Cobalt (Co)	2015/05/05	99	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
7890771	Dissolved Copper (Cu)	2015/05/05	99	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
7890771	Dissolved Iron (Fe)	2015/05/05	106	80 - 120	113	80 - 120	<0.0010	mg/L	NC	20
7890771	Dissolved Lead (Pb)	2015/05/05	99	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
7890771	Dissolved Lithium (Li)	2015/05/05	103	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
7890771	Dissolved Manganese (Mn)	2015/05/05	100	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
7890771	Dissolved Molybdenum (Mo)	2015/05/05	99	80 - 120	95	80 - 120	<0.000050	mg/L	NC	20
7890771	Dissolved Nickel (Ni)	2015/05/05	100	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
7890771	Dissolved Phosphorus (P)	2015/05/05					<0.0020	mg/L	NC	20
7890771	Dissolved Selenium (Se)	2015/05/05	111	80 - 120	100	80 - 120	<0.000040	mg/L	NC	20
7890771	Dissolved Silicon (Si)	2015/05/05					<0.050	mg/L	NC	20
7890771	Dissolved Silver (Ag)	2015/05/05	72 (1)	80 - 120	90	80 - 120	<0.0000050	mg/L	NC	20
7890771	Dissolved Strontium (Sr)	2015/05/05	100	80 - 120	94	80 - 120	<0.000050	mg/L	NC	20
7890771	Dissolved Thallium (Tl)	2015/05/05	99	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
7890771	Dissolved Tin (Sn)	2015/05/05	101	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
7890771	Dissolved Titanium (Ti)	2015/05/05	98	80 - 120	95	80 - 120	<0.00050	mg/L	NC	20
7890771	Dissolved Uranium (U)	2015/05/05	104	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
7890771	Dissolved Vanadium (V)	2015/05/05	103	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
7890771	Dissolved Zinc (Zn)	2015/05/05	107	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
7890771	Dissolved Zirconium (Zr)	2015/05/05					<0.00010	mg/L	NC	20
7890803	Total Aluminum (Al)	2015/05/06	NC	80 - 120	99	80 - 120	<0.0030	mg/L	9.4	20
7890803	Total Antimony (Sb)	2015/05/06	113	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
7890803	Total Arsenic (As)	2015/05/06	NC	80 - 120	98	80 - 120	<0.000020	mg/L	6.9	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7890803	Total Barium (Ba)	2015/05/06	NC	80 - 120	98	80 - 120	<0.00010	mg/L	0.72	20
7890803	Total Beryllium (Be)	2015/05/06	110	80 - 120	97	80 - 120	0.000011, RDL=0.000010	mg/L	7.1	20
7890803	Total Bismuth (Bi)	2015/05/06	112	80 - 120	94	80 - 120	<0.000020	mg/L	NC	20
7890803	Total Boron (B)	2015/05/06					<0.050	mg/L	NC	20
7890803	Total Cadmium (Cd)	2015/05/06	102	80 - 120	93	80 - 120	<0.0000050	mg/L	4.5	20
7890803	Total Chromium (Cr)	2015/05/06	117	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
7890803	Total Cobalt (Co)	2015/05/06	115	80 - 120	97	80 - 120	<0.000010	mg/L	4.4	20
7890803	Total Copper (Cu)	2015/05/06	110	80 - 120	97	80 - 120	0.00032, RDL=0.00020	mg/L	4.9	20
7890803	Total Iron (Fe)	2015/05/06	NC	80 - 120	102	80 - 120	<0.0050	mg/L	6.0	20
7890803	Total Lead (Pb)	2015/05/06	119	80 - 120	95	80 - 120	<0.000050	mg/L	1.1	20
7890803	Total Lithium (Li)	2015/05/06	124 (1)	80 - 120	99	80 - 120	<0.00050	mg/L	0.96	20
7890803	Total Manganese (Mn)	2015/05/06	NC	80 - 120	96	80 - 120	<0.00010	mg/L	4.0	20
7890803	Total Molybdenum (Mo)	2015/05/06	120	80 - 120	93	80 - 120	<0.000050	mg/L	NC	20
7890803	Total Nickel (Ni)	2015/05/06	110	80 - 120	97	80 - 120	<0.00010	mg/L	6.4	20
7890803	Total Phosphorus (P)	2015/05/06					<0.010	mg/L	NC	20
7890803	Total Selenium (Se)	2015/05/06	87	80 - 120	98	80 - 120	<0.000040	mg/L	NC	20
7890803	Total Silicon (Si)	2015/05/06					<0.10	mg/L	7.0	20
7890803	Total Silver (Ag)	2015/05/06	98	80 - 120	90	80 - 120	0.0000051, RDL=0.0000050	mg/L	11	20
7890803	Total Strontium (Sr)	2015/05/06	NC	80 - 120	90	80 - 120	<0.000050	mg/L	5.7	20
7890803	Total Thallium (Tl)	2015/05/06	108	80 - 120	96	80 - 120	<0.0000020	mg/L	8.0	20
7890803	Total Tin (Sn)	2015/05/06	121 (1)	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
7890803	Total Titanium (Ti)	2015/05/06	109	80 - 120	96	80 - 120	<0.0050	mg/L	NC	20
7890803	Total Uranium (U)	2015/05/06	126 (1)	80 - 120	96	80 - 120	<0.0000050	mg/L	0.25	20
7890803	Total Vanadium (V)	2015/05/06	119	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
7890803	Total Zinc (Zn)	2015/05/06	NC	80 - 120	99	80 - 120	0.0012, RDL=0.0010	mg/L	8.4	20
7890803	Total Zirconium (Zr)	2015/05/06					<0.00010	mg/L	12	20
7890953	Total Suspended Solids	2015/05/06			102	80 - 120	<1.0	mg/L		
7890984	Acidity (pH 4.5)	2015/05/04					<0.50	mg/L	NC	20
7890984	Acidity (pH 8.3)	2015/05/04			101	80 - 120	0.66, RDL=0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7890988	Acidity (pH 4.5)	2015/05/04					<0.50	mg/L	1.6	20
7890988	Acidity (pH 8.3)	2015/05/04			102	80 - 120	0.63, RDL=0.50	mg/L	3.7	20
7891043	Alkalinity (PP as CaCO3)	2015/05/05					<0.50	mg/L	15	20
7891043	Alkalinity (Total as CaCO3)	2015/05/05	NC	80 - 120	96	80 - 120	<0.50	mg/L	0.28	20
7891043	Bicarbonate (HCO3)	2015/05/05					<0.50	mg/L	0.34	20
7891043	Carbonate (CO3)	2015/05/05					<0.50	mg/L	15	20
7891043	Hydroxide (OH)	2015/05/05					<0.50	mg/L	NC	20
7891045	pH	2015/05/05			102	97 - 103			0.24	N/A
7891046	Conductivity	2015/05/05			102	80 - 120	1.0, RDL=1.0	uS/cm	0.42	20
7891078	Alkalinity (PP as CaCO3)	2015/05/04					<0.50	mg/L	NC	20
7891078	Alkalinity (Total as CaCO3)	2015/05/04	NC	80 - 120	96	80 - 120	0.72, RDL=0.50	mg/L	0.59	20
7891078	Bicarbonate (HCO3)	2015/05/04					0.88, RDL=0.50	mg/L	0.61	20
7891078	Carbonate (CO3)	2015/05/04					<0.50	mg/L	NC	20
7891078	Hydroxide (OH)	2015/05/04					<0.50	mg/L	NC	20
7891080	pH	2015/05/04							0.64	N/A
7891081	Conductivity	2015/05/04			100	80 - 120	<1.0	uS/cm	1.5	20
7891085	Alkalinity (PP as CaCO3)	2015/05/04					<0.50	mg/L	NC	20
7891085	Alkalinity (Total as CaCO3)	2015/05/04	110	80 - 120	95	80 - 120	<0.50	mg/L	NC	20
7891085	Bicarbonate (HCO3)	2015/05/04					<0.50	mg/L	NC	20
7891085	Carbonate (CO3)	2015/05/04					<0.50	mg/L	NC	20
7891085	Hydroxide (OH)	2015/05/04					<0.50	mg/L	NC	20
7891095	pH	2015/05/04			102	97 - 103			2.5	N/A
7891096	Conductivity	2015/05/04			101	80 - 120	<1.0	uS/cm	NC	20
7891536	Total Mercury (Hg)	2015/05/05	102	80 - 120	105	80 - 120	<0.0000020	mg/L	NC	20
7891581	Dissolved Aluminum (Al)	2015/05/05	101	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
7891581	Dissolved Antimony (Sb)	2015/05/05	112	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
7891581	Dissolved Arsenic (As)	2015/05/05	112	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
7891581	Dissolved Barium (Ba)	2015/05/05	111	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
7891581	Dissolved Beryllium (Be)	2015/05/05	98	80 - 120	92	80 - 120	<0.000010	mg/L	NC	20
7891581	Dissolved Bismuth (Bi)	2015/05/05	96	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
7891581	Dissolved Boron (B)	2015/05/05					<0.010	mg/L	NC	20
7891581	Dissolved Cadmium (Cd)	2015/05/05	107	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7891581	Dissolved Chromium (Cr)	2015/05/05	98	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
7891581	Dissolved Cobalt (Co)	2015/05/05	98	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
7891581	Dissolved Copper (Cu)	2015/05/05	95	80 - 120	95	80 - 120	<0.000050	mg/L	NC	20
7891581	Dissolved Iron (Fe)	2015/05/05	108	80 - 120	126 (2)	80 - 120	<0.0010	mg/L	NC	20
7891581	Dissolved Lead (Pb)	2015/05/05	100	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
7891581	Dissolved Lithium (Li)	2015/05/05	111	80 - 120	108	80 - 120	<0.00050	mg/L	NC	20
7891581	Dissolved Manganese (Mn)	2015/05/05	98	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
7891581	Dissolved Molybdenum (Mo)	2015/05/05	101	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
7891581	Dissolved Nickel (Ni)	2015/05/05	97	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
7891581	Dissolved Phosphorus (P)	2015/05/05					<0.0020	mg/L	NC	20
7891581	Dissolved Selenium (Se)	2015/05/05	114	80 - 120	99	80 - 120	<0.000040	mg/L	NC	20
7891581	Dissolved Silicon (Si)	2015/05/05					<0.050	mg/L	NC	20
7891581	Dissolved Silver (Ag)	2015/05/05	91	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
7891581	Dissolved Strontium (Sr)	2015/05/05	105	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
7891581	Dissolved Thallium (Tl)	2015/05/05	97	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
7891581	Dissolved Tin (Sn)	2015/05/05	105	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
7891581	Dissolved Titanium (Ti)	2015/05/05	101	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
7891581	Dissolved Uranium (U)	2015/05/05	102	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
7891581	Dissolved Vanadium (V)	2015/05/05	107	80 - 120	121 (2)	80 - 120	<0.00020	mg/L	NC	20
7891581	Dissolved Zinc (Zn)	2015/05/05	108	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
7891581	Dissolved Zirconium (Zr)	2015/05/05					<0.00010	mg/L	NC	20
7891584	Total Aluminum (Al)	2015/05/05	95	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
7891584	Total Antimony (Sb)	2015/05/05	99	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
7891584	Total Arsenic (As)	2015/05/05	106	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
7891584	Total Barium (Ba)	2015/05/05	99	80 - 120	108	80 - 120	<0.000020	mg/L	NC	20
7891584	Total Beryllium (Be)	2015/05/05	91	80 - 120	93	80 - 120	<0.000010	mg/L	NC	20
7891584	Total Bismuth (Bi)	2015/05/05	93	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
7891584	Total Boron (B)	2015/05/05					<0.010	mg/L	NC	20
7891584	Total Cadmium (Cd)	2015/05/05	98	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
7891584	Total Chromium (Cr)	2015/05/05	92	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
7891584	Total Cobalt (Co)	2015/05/05	91	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
7891584	Total Copper (Cu)	2015/05/05	88	80 - 120	96	80 - 120	<0.000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7891584	Total Iron (Fe)	2015/05/05	106	80 - 120	123 (2)	80 - 120	<0.0010	mg/L	NC	20
7891584	Total Lead (Pb)	2015/05/05	95	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
7891584	Total Lithium (Li)	2015/05/05	92	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
7891584	Total Manganese (Mn)	2015/05/05	92	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
7891584	Total Molybdenum (Mo)	2015/05/05	93	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
7891584	Total Nickel (Ni)	2015/05/05	91	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
7891584	Total Phosphorus (P)	2015/05/05					<0.0020	mg/L	NC	20
7891584	Total Selenium (Se)	2015/05/05	104	80 - 120	100	80 - 120	<0.000040	mg/L	NC	20
7891584	Total Silicon (Si)	2015/05/05					<0.050	mg/L	NC	20
7891584	Total Silver (Ag)	2015/05/05	89	80 - 120	94	80 - 120	<0.0000050	mg/L	NC	20
7891584	Total Strontium (Sr)	2015/05/05	94	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
7891584	Total Thallium (Tl)	2015/05/05	91	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
7891584	Total Tin (Sn)	2015/05/05	95	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
7891584	Total Titanium (Ti)	2015/05/05	90	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
7891584	Total Uranium (U)	2015/05/05	95	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
7891584	Total Vanadium (V)	2015/05/05	107	80 - 120	122 (2)	80 - 120	<0.00020	mg/L	NC	20
7891584	Total Zinc (Zn)	2015/05/05	106	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
7891584	Total Zirconium (Zr)	2015/05/05					<0.00010	mg/L	NC	20
7891883	Dissolved Phosphorus (P)	2015/05/05	115	80 - 120	106	80 - 120	<0.0020	mg/L	NC	20
7891885	Total Phosphorus (P)	2015/05/05	107	80 - 120	106	80 - 120	<0.0020	mg/L	NC	20
7891933	Fluoride (F)	2015/05/04	98	80 - 120	98	80 - 120	<0.010	mg/L	0	20
7892052	Strong Acid Dissoc. Cyanide (CN)	2015/05/05	100	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
7892057	Weak Acid Dissoc. Cyanide (CN)	2015/05/05	102	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
7892173	Dissolved Organic Carbon (C)	2015/05/05	98	80 - 120	107	80 - 120	<0.50	mg/L	NC	20
7892178	Dissolved Organic Carbon (C)	2015/05/05	101	80 - 120	103	80 - 120	<0.50	mg/L	NC	20
7892180	Total Ammonia (N)	2015/05/05	96	80 - 120	109	80 - 120	0.0077, RDL=0.0050	mg/L	NC	20
7892181	Total Ammonia (N)	2015/05/05	104	80 - 120	112	80 - 120	<0.0050	mg/L	NC	20
7892298	True Colour	2015/05/05			103	80 - 120	<5.0	Col. Unit	7.0	20
7892316	Fluoride (F)	2015/05/05	97	80 - 120	98	80 - 120	<0.010	mg/L	0	20
7892343	Total Suspended Solids	2015/05/06			102	80 - 120	<1.0	mg/L		
7892412	Nitrate plus Nitrite (N)	2015/05/05	102	80 - 120	105	80 - 120	<0.0020	mg/L	0.62	25

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7892413	Nitrite (N)	2015/05/05	100	80 - 120	105	80 - 120	<0.0020	mg/L	NC	25
7892414	Nitrate plus Nitrite (N)	2015/05/05	101	80 - 120	105	80 - 120	<0.0020	mg/L	0.66	25
7892415	Nitrite (N)	2015/05/05	100	80 - 120	105	80 - 120	<0.0020	mg/L	NC	25
7892416	Nitrate plus Nitrite (N)	2015/05/05	104	80 - 120	106	80 - 120	<0.0020	mg/L	NC	25
7892417	Nitrite (N)	2015/05/05	102	80 - 120	105	80 - 120	<0.0020	mg/L	NC	25
7892463	Dissolved Chloride (Cl)	2015/05/05			100	80 - 120	<0.50	mg/L		
7892464	Dissolved Sulphate (SO4)	2015/05/05	91	80 - 120	91	80 - 120	<0.50	mg/L	0.16	20
7892465	Dissolved Chloride (Cl)	2015/05/05	96	80 - 120	98	80 - 120	<0.50	mg/L	12	20
7892466	Dissolved Sulphate (SO4)	2015/05/05	87	80 - 120	91	80 - 120	<0.50	mg/L	0.076	20
7892469	Dissolved Chloride (Cl)	2015/05/05	NC	80 - 120	103	80 - 120	0.77, RDL=0.50	mg/L	1.4	20
7892471	Dissolved Sulphate (SO4)	2015/05/05	NC	80 - 120	95	80 - 120	<0.50	mg/L	0.083	20
7892952	Dissolved Mercury (Hg)	2015/05/06	91	80 - 120	94	80 - 120	<0.0000020	mg/L	NC	20
7893072	Total Mercury (Hg)	2015/05/06	111	80 - 120	112	80 - 120	<0.0000020	mg/L	NC	20
7893144	Total Mercury (Hg)	2015/05/06	95	80 - 120	90	80 - 120	<0.0000020	mg/L	NC	20
7893837	Total Phosphorus (P)	2015/05/04	NC	80 - 120	98	80 - 120	<0.0020	mg/L	0.43	20
7893866	Dissolved Phosphorus (P)	2015/05/04	NC	80 - 120	101	80 - 120	<0.0020	mg/L	1.5	20
7893957	Dissolved Antimony (Sb)	2015/05/07			100	80 - 120	<0.000020	mg/L		
7893957	Dissolved Selenium (Se)	2015/05/07			100	80 - 120	<0.000040	mg/L		
7893957	Dissolved Thallium (Tl)	2015/05/07			96	80 - 120	<0.0000020	mg/L		
7894302	Dissolved Mercury (Hg)	2015/05/07	111	80 - 120	85	80 - 120	<0.0000020	mg/L	NC	20
7894834	Dissolved Phosphorus (P)	2015/05/04	104	80 - 120	103	80 - 120	<0.0020	mg/L	NC	20
7895018	Dissolved Selenium (Se)	2015/05/08			95	80 - 120	<0.000040	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7895018	Dissolved Thallium (Tl)	2015/05/08			96	80 - 120	<0.0000020	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) Blank Spike outside acceptance criteria (10% of analytes failure allowed).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B535707
Report Date: 2015/05/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

Signature Redacted

Signature Redacted

Andy Lu, Data Validation Coordinator

Signature Redacted

David Huang, BBY Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

BBY FCD-00077/05

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #:

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[X] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUCSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	H.Goulding & A.MacPhail	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL MERCURY	DISSOLVED LOW LEVEL METALS INCL MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ2	MD8814	2015/04/30	16:05		x	x	x	x	x	x	x	x	x	x	x	x	x				12	
2	KZ7	MD8815	2015/04/30	14:05		x	x	x	x	x	x	x	x	x	x	x	x	x				12	
3	KZ9	MD8816	2015/04/30	12:30		x	x	x	x	x	x	x	x	x	x	x	x	x				12	
4	KZ13	MD8817	2015/04/30	9:55		x	x	x	x	x	x	x	x	x	x	x	x	x				12	
5	KZ15	MD8818	2015/04/29	16:47		x	x	x	x	x	x	x	x	x	x	x	x	x				12	
6	KZ16	MD8819	2015/04/30	17:44		x	x	x	x	x	x	x	x	x	x	x	x	x				12	
7	KZ17	MD8820	2015/04/29	17:52		x	x	x	x	x	x	x	x	x	x	x	x	x				12	
8	KZ19	MD8821	2015/04/29	13:45		x	x	x	x	x	x	x	x	x	x	x	x	x				12	
9	KZ21	MD8822	2015/04/29	14:42		x	x	x	x	x	x	x	x	x	x	x	x	x				12	
10	KZ22	MD8823	2015/04/29	13:15		x	x	x	x	x	x	x	x	x	x	x	x	x				12	

LABORATORY USE ONLY		
CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
COOLING MEDIA PRESENT Y / N		

COMMENTS

B535707

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Holly Goulding	2015/05/01	6:00	Signature Redacted	2015/05/01	14:50	B535707

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

BBY FCD-00077/05

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #:

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUCSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	H.Goulding & A.MacPhail	Date Required:
						Rush Confirmation #:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS [Cl, F, SO4, NO2, NO3]	AMMONIA	CYANIDE [SAD & WAD]	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ26	MD8836	2015-04-29	11:45		x	x	x	x	x	x	x	x	x	x	x	x	x	12		
2	KZ28	MD8837	2015-04-30	10:30		x	x	x	x	x	x	x	x	x	x	x	x	x	12		
3	Trip Blank	ME0566				x	x	x	x	x	x	x	x	x	x	x	x	x	12		**Send separately.
4																					
5																					
6																					
7																					
8																					
9																					
10																					

B535707

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	

COOLING MEDIA PRESENT Y / N

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Holly Goulding	2015/05/01	6:00	Signature Redacted	2015/05/01	14:50	B535707

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08407188, 08407189, 08407190

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/05/22
Report #: R1962980
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B539758
Received: 2015/05/14, 09:40

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	13	N/A	2015/05/15	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	13	2015/05/14	2015/05/14	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	13	N/A	2015/05/15	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	13	N/A	2015/05/19	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	13	N/A	2015/05/19	BBY6SOP-00004	SM 22 4500-CN O
Colour (True)	13	N/A	2015/05/14	BBY6SOP-00021	SM 22 2120 B m
Carbon (DOC) - field filtered/preserved (1)	12	N/A	2015/05/16	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2015/05/16	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	13	N/A	2015/05/14	BBY6SOP-00026	SM 22 2510 B m
Fluoride	13	N/A	2015/05/15	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	13	N/A	2015/05/20	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	13	N/A	2015/05/20	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	13	N/A	2015/05/20	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	13	2015/05/20	2015/05/20	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	13	N/A	2015/05/21	BBY WI-00033	SM 22 1030E
Sum of cations, anions	1	N/A	2015/05/20	Calc	
Sum of cations, anions	12	N/A	2015/05/21	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	12	N/A	2015/05/20	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2015/05/21	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	13	N/A	2015/05/20	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Digested LL (total)	10	2015/05/15	2015/05/20	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	12	N/A	2015/05/20	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2015/05/22	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	3	N/A	2015/05/20	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	13	N/A	2015/05/14	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	13	N/A	2015/05/14	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	13	N/A	2015/05/14	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	13	N/A	2015/05/15	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	12	N/A	2015/05/15	BBY7 WI-00004	BCMOE Reqs 08/14

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08407188, 08407189, 08407190

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/05/22
Report #: R1962980
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B539758
Received: 2015/05/14, 09:40

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
pH Water (2)	13	N/A	2015/05/14	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	13	N/A	2015/05/15	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	5	2015/05/14	2015/05/15	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	7	2015/05/15	2015/05/15	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2015/05/21	2015/05/21	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	12	N/A	2015/05/15	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	1	N/A	2015/05/21	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	13	2015/05/15	2015/05/19	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Email & Phone Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MF9641		MF9642	MF9643		MF9644		
Sampling Date		2015/05/11 13:50		2015/05/11 14:36	2015/05/11 14:40		2015/05/11 11:40		
COC Number		08407188		08407188	08407188		08407188		
	Units	KZ-15	QC Batch	KZ-16	KZ-17	QC Batch	KZ-22	RDL	QC Batch
Misc. Inorganics									
Acidity (pH 4.5)	mg/L	<0.50	7902715	<0.50	<0.50	7902715	<0.50	0.50	7902715
Acidity (pH 8.3)	mg/L	0.74	7902715	0.89	0.79	7902715	0.57	0.50	7902715
Calculated Parameters									
Anion Sum	meq/L	1.2	7902575	1.2	1.1	7902575	1.8	N/A	7902575
Cation Sum	meq/L	1.5	7902575	1.5	1.5	7902575	2.1	N/A	7902575
Filter and HNO3 Preservation	N/A	LAB	7903794	LAB	LAB	7903794	LAB	N/A	7903794
Ion Balance	N/A	1.3 (1)	7901948	1.2	1.3 (1)	7901948	1.2	0.010	7901948
Nitrate (N)	mg/L	<0.020	7902057	<0.020	<0.020	7902057	<0.020	0.020	7902057
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00146	7905582	0.00122	0.00152	7905582	0.00122	0.00050	7905582
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00137	7905592	0.00107	0.00118	7905592	0.00119	0.00050	7905592
Fluoride (F)	mg/L	0.042	7903662	0.039	0.046	7903662	0.059	0.010	7903662
Dissolved Organic Carbon (C)	mg/L	14.9	7904603	10.8	15.6	7904603	12.4	0.50	7904603
Alkalinity (Total as CaCO3)	mg/L	59.4	7903028	58.6	54.4	7903028	77.8	0.50	7903028
Alkalinity (PP as CaCO3)	mg/L	<0.50	7903028	<0.50	<0.50	7903028	<0.50	0.50	7903028
Bicarbonate (HCO3)	mg/L	72.5	7903028	71.5	66.3	7903028	94.9	0.50	7903028
Carbonate (CO3)	mg/L	<0.50	7903028	<0.50	<0.50	7903028	<0.50	0.50	7903028
Hydroxide (OH)	mg/L	<0.50	7903028	<0.50	<0.50	7903028	<0.50	0.50	7903028
Anions									
Dissolved Sulphate (SO4)	mg/L	<0.50	7904013	1.21	<0.50	7904013	9.12	0.50	7904013
Dissolved Chloride (Cl)	mg/L	0.98	7904008	0.78	1.2	7904008	0.87	0.50	7904008
MISCELLANEOUS									
True Colour	Col. Unit	199	7903942	165	242	7903942	180	25	7903942
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0257 (2)	7902708	0.0184 (2)	0.0369 (2)	7902708	0.0169 (3)	0.0020	7908430
Total Ammonia (N)	mg/L	<0.0050	7902764	0.0098	0.0069	7902764	0.0053	0.0050	7902764
Nitrate plus Nitrite (N)	mg/L	<0.020 (4)	7902808	<0.020 (4)	<0.020 (4)	7902808	<0.020 (4)	0.020	7902808
Nitrite (N)	mg/L	<0.020 (4)	7902809	<0.020 (4)	<0.020 (4)	7902809	<0.020 (4)	0.020	7902809
Total Phosphorus (P)	mg/L	0.0257 (2)	7902716	0.0185 (2)	0.0349 (2)	7902716	0.0508 (3)	0.0020	7908481

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Ionic imbalance due to high level of iron which may precipitate out over time and affect the results for alkalinity.

(2) Sample preserved to extend hold time.

(3) Sample was originally analysed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.

(4) RDL raised due to sample matrix interference.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MF9641		MF9642	MF9643		MF9644		
Sampling Date		2015/05/11 13:50		2015/05/11 14:36	2015/05/11 14:40		2015/05/11 11:40		
COC Number		08407188		08407188	08407188		08407188		
	Units	KZ-15	QC Batch	KZ-16	KZ-17	QC Batch	KZ-22	RDL	QC Batch
Physical Properties									
Conductivity	uS/cm	132	7903027	135	126	7903027	176	1.0	7903027
pH	pH	7.67	7903017	7.68	7.25	7903017	7.81	N/A	7903017
Physical Properties									
Total Suspended Solids	mg/L	40.2	7903170	4.6	79.5	7903230	16.5	1.0	7903230

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MF9656		MF9657			MF9658	MF9659		
Sampling Date		2015/05/11 09:05		2015/05/11 09:45			2015/05/11 13:05	2015/05/11 16:55		
COC Number		08407189		08407189			08407189	08407189		
	Units	KZ-26	RDL	KZ-28	RDL	QC Batch	KZ-21	KZ-19	RDL	QC Batch
Misc. Inorganics										
Acidity (pH 4.5)	mg/L	<0.50	0.50	<0.50	0.50	7902715	<0.50	<0.50	0.50	7902715
Acidity (pH 8.3)	mg/L	<0.50	0.50	<0.50	0.50	7902715	0.66	0.86	0.50	7902715
Calculated Parameters										
Anion Sum	meq/L	2.0	N/A	0.020	N/A	7902575	1.8	0.85	N/A	7902575
Cation Sum	meq/L	2.3	N/A	0.0024	N/A	7902575	2.0	1.1	N/A	7902575
Filter and HNO3 Preservation	N/A	LAB	N/A	LAB	N/A	7903794	LAB	LAB	N/A	7903794
Ion Balance	N/A	1.1	0.010	0.12 (1)	0.010	7901948	1.1	1.3 (2)	0.010	7901948
Nitrate (N)	mg/L	<0.020	0.020	<0.0020	0.0020	7902057	<0.020	<0.020	0.020	7902057
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00108	0.00050	<0.00050	0.00050	7905582	0.00117	0.00160	0.00050	7905582
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00114	0.00050	0.00057	0.00050	7905592	0.00121	0.00152	0.00050	7905592
Fluoride (F)	mg/L	0.057	0.010	0.013	0.010	7903662	0.065	0.034	0.010	7903662
Dissolved Organic Carbon (C)	mg/L	13.9	0.50	1.38	0.50	7904603	11.2	14.3	0.50	7904603
Alkalinity (Total as CaCO3)	mg/L	86.1	0.50	0.97	0.50	7903037	75.9	41.4	0.50	7903037
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	<0.50	0.50	7903037	<0.50	<0.50	0.50	7903037
Bicarbonate (HCO3)	mg/L	105	0.50	1.18	0.50	7903037	92.6	50.5	0.50	7903037
Carbonate (CO3)	mg/L	<0.50	0.50	<0.50	0.50	7903037	<0.50	<0.50	0.50	7903037
Hydroxide (OH)	mg/L	<0.50	0.50	<0.50	0.50	7903037	<0.50	<0.50	0.50	7903037
Anions										
Dissolved Sulphate (SO4)	mg/L	13.3	0.50	<0.50	0.50	7904013	9.95	<0.50	0.50	7904013
Dissolved Chloride (Cl)	mg/L	1.0	0.50	<0.50	0.50	7904008	1.3	0.82	0.50	7904008
MISCELLANEOUS										
True Colour	Col. Unit	161	25	<5.0	5.0	7903946	182	233	25	7903946
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0223 (3)	0.0020	<0.0020 (3)	0.0020	7902708	0.0325 (3)	0.0280 (3)	0.0020	7906160
Total Ammonia (N)	mg/L	0.0078	0.0050	0.0086	0.0050	7902764	0.0074	<0.0050	0.0050	7902764
Nitrate plus Nitrite (N)	mg/L	<0.020 (4)	0.020	<0.0020	0.0020	7902808	<0.020 (4)	<0.020 (4)	0.020	7902808
Nitrite (N)	mg/L	<0.020 (4)	0.020	<0.0020	0.0020	7902809	<0.020 (4)	<0.020 (4)	0.020	7902809
Total Phosphorus (P)	mg/L	0.0223 (3)	0.0020	<0.0020 (3)	0.0020	7902716	0.0318 (3)	0.0259 (3)	0.0020	7902716

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).
(2) Ionic imbalance due to high level of iron which may precipitate out over time and affect the results for alkalinity.
(3) Sample preserved to extend hold time.
(4) RDL raised due to sample matrix interference.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MF9656		MF9657			MF9658	MF9659		
Sampling Date		2015/05/11 09:05		2015/05/11 09:45			2015/05/11 13:05	2015/05/11 16:55		
COC Number		08407189		08407189			08407189	08407189		
	Units	**KZ-26**	**RDL**	**KZ-28**	**RDL**	**QC Batch**	**KZ-21**	**KZ-19**	**RDL**	**QC Batch**
Physical Properties										
Conductivity	uS/cm	196	1.0	1.0	1.0	7903038	173	96.5	1.0	7903038
pH	pH	7.89	N/A	5.74	N/A	7903040	7.78	7.54	N/A	7903040
Physical Properties										
Total Suspended Solids	mg/L	15.8	1.0	<1.0	1.0	7903230	21.3	70.1	1.0	7903230

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MF9660			MF9693			MF9694		
Sampling Date		2015/05/11 16:05			2015/05/12 12:40			2015/05/12 09:25		
COC Number		08407189			08407190			08407190		
	Units	KZ-9	RDL	QC Batch	KZ-2	RDL	QC Batch	KZ-7	RDL	QC Batch
Misc. Inorganics										
Acidity (pH 4.5)	mg/L	<0.50	0.50	7902715	<0.50	0.50	7902715	<0.50	0.50	7902715
Acidity (pH 8.3)	mg/L	0.94	0.50	7902715	<0.50	0.50	7902715	1.10	0.50	7902715
Calculated Parameters										
Anion Sum	meq/L	0.88	N/A	7902575	1.5	N/A	7902575	0.75	N/A	7902575
Cation Sum	meq/L	1.1	N/A	7902575	1.7	N/A	7902575	1.1	N/A	7902575
Filter and HNO3 Preservation	N/A	LAB	N/A	7903794	LAB	N/A	7903794	LAB	N/A	7903794
Ion Balance	N/A	1.3 (1)	0.010	7901948	1.1	0.010	7901948	1.4 (1)	0.010	7901948
Nitrate (N)	mg/L	<0.020	0.020	7902057	0.0536	0.0020	7902057	<0.020	0.020	7902057
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00151	0.00050	7905582	0.00084	0.00050	7905582	0.00153	0.00050	7905582
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00146	0.00050	7905592	0.00093	0.00050	7905592	0.00147	0.00050	7905592
Fluoride (F)	mg/L	0.032	0.010	7903662	0.044	0.010	7903666	0.033	0.010	7903666
Dissolved Organic Carbon (C)	mg/L	16.1	0.50	7904603	5.77	0.50	7904603	17.2	0.50	7904603
Alkalinity (Total as CaCO3)	mg/L	42.4	0.50	7903037	49.6	0.50	7903037	35.7	0.50	7903037
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	7903037	<0.50	0.50	7903037	<0.50	0.50	7903037
Bicarbonate (HCO3)	mg/L	51.7	0.50	7903037	60.5	0.50	7903037	43.5	0.50	7903037
Carbonate (CO3)	mg/L	<0.50	0.50	7903037	<0.50	0.50	7903037	<0.50	0.50	7903037
Hydroxide (OH)	mg/L	<0.50	0.50	7903037	<0.50	0.50	7903037	<0.50	0.50	7903037
Anions										
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	7904663	24.6	0.50	7904663	<0.50	0.50	7904663
Dissolved Chloride (Cl)	mg/L	1.0	0.50	7904662	0.66	0.50	7904662	1.3	0.50	7904662
MISCELLANEOUS										
True Colour	Col. Unit	218	25	7903942	66.1	5.0	7903942	230	25	7903946
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0280 (2)	0.0020	7906160	0.0082	0.0020	7906160	0.0282 (2)	0.0020	7906160
Total Ammonia (N)	mg/L	0.0100	0.0050	7902764	0.0087	0.0050	7902764	0.0064	0.0050	7902764
Nitrate plus Nitrite (N)	mg/L	<0.020 (3)	0.020	7902808	0.0536	0.0020	7902808	<0.020 (3)	0.020	7902808
Nitrite (N)	mg/L	<0.020 (3)	0.020	7902809	<0.0020	0.0020	7902809	<0.020 (3)	0.020	7902809
Total Phosphorus (P)	mg/L	0.0272 (2)	0.0020	7904542	0.0063	0.0020	7902716	0.0318	0.0020	7904542
Physical Properties										
Conductivity	uS/cm	96.8	1.0	7903038	160	1.0	7903038	89.6	1.0	7903038

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ionic imbalance due to high level of iron which may precipitate out over time and affect the results for alkalinity.
(2) Sample preserved to extend hold time.
(3) RDL raised due to sample matrix interference.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MF9660			MF9693			MF9694		
Sampling Date		2015/05/11 16:05			2015/05/12 12:40			2015/05/12 09:25		
COC Number		08407189			08407190			08407190		
	Units	**KZ-9**	**RDL**	**QC Batch**	**KZ-2**	**RDL**	**QC Batch**	**KZ-7**	**RDL**	**QC Batch**
pH	pH	7.52	N/A	7903040	7.70	N/A	7903040	7.45	N/A	7903040
Physical Properties										
Total Suspended Solids	mg/L	66.2	1.0	7903230	<1.0	1.0	7903230	14.4	1.0	7903230

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MF9695			MF9696		
Sampling Date		2015/05/14 09:40			2015/05/12 16:50		
COC Number		08407190			08407190		
	Units	TRIP BLANK	RDL	QC Batch	KZ-13	RDL	QC Batch
Misc. Inorganics							
Acidity (pH 4.5)	mg/L	<0.50	0.50	7902715	<0.50	0.50	7902715
Acidity (pH 8.3)	mg/L	<0.50	0.50	7902715	<0.50	0.50	7902715
Calculated Parameters							
Anion Sum	meq/L	0.019	N/A	7902575	0.70	N/A	7902575
Cation Sum	meq/L	0.0024	N/A	7902575	0.80	N/A	7902575
Filter and HNO3 Preservation	N/A		N/A	7903794	LAB	N/A	7903794
Ion Balance	N/A	0.13 (1)	0.010	7901948	1.1	0.010	7901948
Nitrate (N)	mg/L	<0.0020	0.0020	7902057	0.035	0.020	7902057
Misc. Inorganics							
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	7905582	0.00119	0.00050	7905582
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00054	0.00050	7905592	0.00116	0.00050	7905592
Fluoride (F)	mg/L	0.013	0.010	7903662	0.033	0.010	7903662
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	7902597	11.0	0.50	7904603
Alkalinity (Total as CaCO3)	mg/L	0.90	0.50	7903037	33.6	0.50	7903037
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	7903037	<0.50	0.50	7903037
Bicarbonate (HCO3)	mg/L	1.10	0.50	7903037	40.9	0.50	7903037
Carbonate (CO3)	mg/L	<0.50	0.50	7903037	<0.50	0.50	7903037
Hydroxide (OH)	mg/L	<0.50	0.50	7903037	<0.50	0.50	7903037
Anions							
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	7904663	<0.50	0.50	7904663
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	7904662	0.85	0.50	7904662
MISCELLANEOUS							
True Colour	Col. Unit	<5.0	5.0	7903946	122	25	7903942
Nutrients							
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	7906160	0.0197	0.0020	7906160
Total Ammonia (N)	mg/L	0.0067	0.0050	7902764	0.0063	0.0050	7902764
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	7902808	0.035 (2)	0.020	7902808
Nitrite (N)	mg/L	<0.0020	0.0020	7902809	<0.020 (2)	0.020	7902809
Total Phosphorus (P)	mg/L	<0.0020	0.0020	7902716	0.0197	0.0020	7902716
Physical Properties							
Conductivity	uS/cm	1.6	1.0	7903038	71.7	1.0	7903038

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).
(2) RDL raised due to sample matrix interference.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MF9695			MF9696		
Sampling Date		2015/05/14 09:40			2015/05/12 16:50		
COC Number		08407190			08407190		
	Units	**TRIP BLANK**	**RDL**	**QC Batch**	**KZ-13**	**RDL**	**QC Batch**
pH	pH	5.71	N/A	7903040	7.53	N/A	7903040
Physical Properties							
Total Suspended Solids	mg/L	<1.0	1.0	7904465	34.0	1.0	7903230

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MF9641	MF9642	MF9643	MF9644	MF9656		
Sampling Date		2015/05/11 13:50	2015/05/11 14:36	2015/05/11 14:40	2015/05/11 11:40	2015/05/11 09:05		
COC Number		08407188	08407188	08407188	08407188	08407189		
	Units	KZ-15	KZ-16	KZ-17	KZ-22	KZ-26	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	72.9	72.0	69.1	102	109	0.50	7901947
Elements								
Dissolved Mercury (Hg)	mg/L	0.0000038	0.0000031	0.0000049	0.0000030	0.0000029	0.0000020	7906749
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0502	0.0444	0.0585	0.0139	0.00908	0.00050	7905503
Dissolved Antimony (Sb)	mg/L	0.000027	<0.000020	0.000034	0.000034	0.000050	0.000020	7905503
Dissolved Arsenic (As)	mg/L	0.000437	0.000353	0.000492	0.000875	0.000775	0.000020	7905503
Dissolved Barium (Ba)	mg/L	0.0366	0.0340	0.0364	0.0336	0.0371	0.000020	7905503
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	7905503
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7905503
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7905503
Dissolved Cadmium (Cd)	mg/L	0.0000584	0.0000356	0.0000643	0.0000216	0.0000228	0.0000050	7905503
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00012	<0.00010	<0.00010	0.00010	7905503
Dissolved Cobalt (Co)	mg/L	0.0000486	0.0000381	0.0000513	0.0000601	0.0000458	0.0000050	7905503
Dissolved Copper (Cu)	mg/L	0.00175	0.00139	0.00184	0.000978	0.000987	0.000050	7905503
Dissolved Iron (Fe)	mg/L	0.145	0.0704	0.213	0.202	0.161	0.0010	7905503
Dissolved Lead (Pb)	mg/L	0.0000173	0.0000196	0.0000230	0.0000108	0.0000087	0.0000050	7905503
Dissolved Lithium (Li)	mg/L	0.00092	0.00101	0.00124	0.00215	0.00217	0.00050	7905503
Dissolved Manganese (Mn)	mg/L	0.0119	0.00312	0.0121	0.0264	0.00733	0.000050	7905503
Dissolved Molybdenum (Mo)	mg/L	0.000432	0.000243	0.000622	0.000582	0.000568	0.000050	7905503
Dissolved Nickel (Ni)	mg/L	0.00146	0.000916	0.00175	0.00188	0.00178	0.000020	7905503
Dissolved Phosphorus (P)	mg/L	0.0126	0.0110	0.0166	0.0127	0.0116	0.0020	7905503
Dissolved Selenium (Se)	mg/L	0.000252	0.000248	0.000273	0.000214	0.000226	0.000040	7905503
Dissolved Silicon (Si)	mg/L	2.00	1.92	2.04	2.53	2.46	0.050	7905503
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7905503
Dissolved Strontium (Sr)	mg/L	0.0701	0.0759	0.0677	0.0845	0.0902	0.000050	7905503
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	7905503
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7905503
Dissolved Titanium (Ti)	mg/L	0.00065	0.00053	0.00069	<0.00050	<0.00050	0.00050	7905503
Dissolved Uranium (U)	mg/L	0.000521	0.000448	0.000573	0.000794	0.000907	0.0000020	7905503
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7905503
Dissolved Zinc (Zn)	mg/L	0.00566	0.00186	0.00749	0.00161	0.00127	0.00010	7905503
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00015	<0.00010	<0.00010	0.00010	7905503
Dissolved Calcium (Ca)	mg/L	22.2	22.2	20.9	27.6	28.7	0.050	7901950

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MF9641	MF9642	MF9643	MF9644	MF9656		
Sampling Date		2015/05/11 13:50	2015/05/11 14:36	2015/05/11 14:40	2015/05/11 11:40	2015/05/11 09:05		
COC Number		08407188	08407188	08407188	08407188	08407189		
	Units	**KZ-15**	**KZ-16**	**KZ-17**	**KZ-22**	**KZ-26**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	4.26	4.03	4.09	7.94	9.10	0.050	7901950
Dissolved Potassium (K)	mg/L	2.07	1.66	2.24	1.98	1.86	0.050	7901950
Dissolved Sodium (Na)	mg/L	0.484	0.476	0.445	0.676	0.820	0.050	7901950
Dissolved Sulphur (S)	mg/L	<3.0	<3.0	<3.0	4.1	4.9	3.0	7901950

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MF9657	MF9658	MF9659	MF9660	MF9693		
Sampling Date		2015/05/11 09:45	2015/05/11 13:05	2015/05/11 16:55	2015/05/11 16:05	2015/05/12 12:40		
COC Number		08407189	08407189	08407189	08407189	08407190		
	Units	KZ-28	KZ-21	KZ-19	KZ-9	KZ-2	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	<0.50	95.3	50.0	50.5	82.7	0.50	7901947
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000021	0.0000033	0.0000034	0.0000033	0.0000020	7906749
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	<0.00050	0.00619	0.0567	0.0556	0.0230	0.00050	7905503
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000048	0.000034	0.000037	0.000036	0.000020	7905503
Dissolved Arsenic (As)	mg/L	<0.000020	0.000990	0.000318	0.000308	0.000122	0.000020	7905503
Dissolved Barium (Ba)	mg/L	<0.000020	0.0302	0.0381	0.0375	0.0513	0.000020	7905503
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000042	0.000010	7905503
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000100	0.0000050	7905503
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7905503
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.0000130	0.0000709	0.0000685	0.000182	0.0000050	7905503
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00011	<0.00010	0.00010	7905503
Dissolved Cobalt (Co)	mg/L	<0.0000050	0.0000575	0.0000783	0.0000932	0.0000257	0.0000050	7905503
Dissolved Copper (Cu)	mg/L	<0.000050	0.000693	0.00190	0.00171	0.00528	0.000050	7905503
Dissolved Iron (Fe)	mg/L	<0.0010	0.252	0.286	0.289	0.0283	0.0010	7905503
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000068	0.0000635	0.0000565	0.000210	0.0000050	7905503
Dissolved Lithium (Li)	mg/L	<0.00050	0.00182	0.00099	0.00101	0.00124	0.00050	7905503
Dissolved Manganese (Mn)	mg/L	<0.000050	0.0303	0.0319	0.0436	0.00125	0.000050	7905503
Dissolved Molybdenum (Mo)	mg/L	<0.000050	0.000686	0.000335	0.000273	0.000561	0.000050	7905503
Dissolved Nickel (Ni)	mg/L	0.000042	0.00249	0.00104	0.00101	0.000763	0.000020	7905503
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0142	0.0147	0.0138	0.0044	0.0020	7905503
Dissolved Selenium (Se)	mg/L	<0.000040	0.000155	0.000215	0.000218	0.00112	0.000040	7905503
Dissolved Silicon (Si)	mg/L	<0.050	2.58	1.68	1.65	1.91	0.050	7905503
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000075	0.0000050	7905503
Dissolved Strontium (Sr)	mg/L	<0.000050	0.0759	0.0583	0.0559	0.0899	0.000050	7905503
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000094	0.0000020	7905503
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7905503
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00075	0.00068	0.00052	0.00050	7905503
Dissolved Uranium (U)	mg/L	<0.0000020	0.000635	0.000184	0.000185	0.00196	0.0000020	7905503
Dissolved Vanadium (V)	mg/L	0.00021	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7905503
Dissolved Zinc (Zn)	mg/L	<0.00010	0.00213	0.0132	0.0134	0.0206	0.00010	7905503
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00015	0.00014	0.00015	0.00010	7905503
Dissolved Calcium (Ca)	mg/L	<0.050	24.4	16.6	16.8	26.8	0.050	7901950

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MF9657	MF9658	MF9659	MF9660	MF9693		
Sampling Date		2015/05/11 09:45	2015/05/11 13:05	2015/05/11 16:55	2015/05/11 16:05	2015/05/12 12:40		
COC Number		08407189	08407189	08407189	08407189	08407190		
	Units	KZ-28	KZ-21	KZ-19	KZ-9	KZ-2	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	<0.050	8.36	2.05	2.09	3.84	0.050	7901950
Dissolved Potassium (K)	mg/L	<0.050	2.16	2.21	2.22	2.14	0.050	7901950
Dissolved Sodium (Na)	mg/L	<0.050	0.633	0.734	0.353	0.551	0.050	7901950
Dissolved Sulphur (S)	mg/L	<3.0	4.0	<3.0	<3.0	8.1	3.0	7901950
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MF9694		MF9695	MF9696		
Sampling Date		2015/05/12 09:25		2015/05/14 09:40	2015/05/12 16:50		
COC Number		08407190		08407190	08407190		
	Units	KZ-7	QC Batch	TRIP BLANK	KZ-13	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	46.9	7901947	<0.50	35.6	0.50	7901947
Elements							
Dissolved Mercury (Hg)	mg/L	0.0000045	7906749	<0.0000020	0.0000023	0.0000020	7906749
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.102	7905503	<0.00050	0.0341	0.00050	7905503
Dissolved Antimony (Sb)	mg/L	0.000047	7905503	<0.000020	<0.000020	0.000020	7905503
Dissolved Arsenic (As)	mg/L	0.000327	7905503	<0.000020	0.000253	0.000020	7905503
Dissolved Barium (Ba)	mg/L	0.0343	7905503	0.000035	0.0504	0.000020	7905503
Dissolved Beryllium (Be)	mg/L	<0.000010	7905503	<0.000010	<0.000010	0.000010	7905503
Dissolved Bismuth (Bi)	mg/L	<0.0000050	7905503	<0.0000050	<0.0000050	0.0000050	7905503
Dissolved Boron (B)	mg/L	<0.010	7905503	<0.010	<0.010	0.010	7905503
Dissolved Cadmium (Cd)	mg/L	0.000146	7905503	<0.0000050	0.0000107	0.0000050	7905503
Dissolved Chromium (Cr)	mg/L	0.00012	7905503	<0.00010	<0.00010	0.00010	7905503
Dissolved Cobalt (Co)	mg/L	0.000126	7905503	<0.0000050	0.0000189	0.0000050	7905503
Dissolved Copper (Cu)	mg/L	0.00170	7905503	<0.000050	0.000860	0.000050	7905503
Dissolved Iron (Fe)	mg/L	0.305	7905503	<0.0010	0.0961	0.0010	7905503
Dissolved Lead (Pb)	mg/L	0.0000658	7905503	<0.0000050	0.0000161	0.0000050	7905503
Dissolved Lithium (Li)	mg/L	0.00056	7905503	<0.00050	0.00102	0.00050	7905503
Dissolved Manganese (Mn)	mg/L	0.0507	7905503	<0.000050	0.000376	0.000050	7905503
Dissolved Molybdenum (Mo)	mg/L	0.000265	7905503	<0.000050	0.000403	0.000050	7905503
Dissolved Nickel (Ni)	mg/L	0.00102	7905503	<0.000020	0.000779	0.000020	7905503
Dissolved Phosphorus (P)	mg/L	0.0174	7905503	<0.0020	0.0087	0.0020	7905503
Dissolved Selenium (Se)	mg/L	0.000255	7905503	<0.000040	0.000106	0.000040	7905503
Dissolved Silicon (Si)	mg/L	1.68	7905503	<0.050	2.03	0.050	7905503
Dissolved Silver (Ag)	mg/L	<0.0000050	7905503	<0.0000050	<0.0000050	0.0000050	7905503
Dissolved Strontium (Sr)	mg/L	0.0506	7905503	<0.000050	0.0336	0.000050	7905503
Dissolved Thallium (Tl)	mg/L	0.0000031	7905503	<0.0000020	0.0000023	0.0000020	7905503
Dissolved Tin (Sn)	mg/L	<0.00020	7905503	<0.00020	<0.00020	0.00020	7905503
Dissolved Titanium (Ti)	mg/L	0.00080	7905503	<0.00050	<0.00050	0.00050	7905503
Dissolved Uranium (U)	mg/L	0.000199	7905503	<0.0000020	0.000330	0.0000020	7905503
Dissolved Vanadium (V)	mg/L	<0.00020	7905503	<0.00020	0.00031	0.00020	7905503
Dissolved Zinc (Zn)	mg/L	0.0330	7905503	<0.00010	0.00120	0.00010	7905503
Dissolved Zirconium (Zr)	mg/L	0.00017	7905503	<0.00010	<0.00010	0.00010	7905503
Dissolved Calcium (Ca)	mg/L	15.4	7908167	<0.050	12.0	0.050	7901950

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MF9694		MF9695	MF9696		
Sampling Date		2015/05/12 09:25		2015/05/14 09:40	2015/05/12 16:50		
COC Number		08407190		08407190	08407190		
	Units	**KZ-7**	**QC Batch**	**TRIP BLANK**	**KZ-13**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	2.05	7908167	<0.050	1.34	0.050	7901950
Dissolved Potassium (K)	mg/L	2.65	7908167	<0.050	2.51	0.050	7901950
Dissolved Sodium (Na)	mg/L	0.482	7908167	<0.050	0.480	0.050	7901950
Dissolved Sulphur (S)	mg/L	<3.0	7908167	<3.0	<3.0	3.0	7901950
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MF9657		MF9693	MF9695		
Sampling Date		2015/05/11 09:45		2015/05/12 12:40	2015/05/14 09:40		
COC Number		08407189		08407190	08407190		
	Units	KZ-28	QC Batch	KZ-2	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	<0.50	7901588	79.6	<0.50	0.50	7901588
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	7906731	0.0000045	<0.0000020	0.0000020	7906731
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	<0.00050	7910211	0.0858	<0.00050	0.00050	7901644
Total Antimony (Sb)	mg/L	<0.000020	7901644	0.000032	<0.000020	0.000020	7901644
Total Arsenic (As)	mg/L	<0.000020	7901644	0.000128	<0.000020	0.000020	7901644
Total Barium (Ba)	mg/L	<0.000020	7910211	0.0487	<0.000020	0.000020	7901644
Total Beryllium (Be)	mg/L	<0.000010	7901644	<0.000010	<0.000010	0.000010	7901644
Total Bismuth (Bi)	mg/L	<0.0000050	7901644	0.0000050	<0.0000050	0.0000050	7901644
Total Boron (B)	mg/L	<0.010	7901644	<0.010	<0.010	0.010	7901644
Total Cadmium (Cd)	mg/L	<0.0000050	7901644	0.000194	<0.0000050	0.0000050	7901644
Total Chromium (Cr)	mg/L	<0.00010	7901644	0.00016	<0.00010	0.00010	7901644
Total Cobalt (Co)	mg/L	<0.0000050	7901644	0.0000442	<0.0000050	0.0000050	7901644
Total Copper (Cu)	mg/L	<0.000050	7901644	0.00567	<0.000050	0.000050	7901644
Total Iron (Fe)	mg/L	0.0016	7910211	0.0711	<0.0010	0.0010	7901644
Total Lead (Pb)	mg/L	<0.0000050	7901644	0.000371	<0.0000050	0.0000050	7901644
Total Lithium (Li)	mg/L	<0.00050	7901644	0.00125	<0.00050	0.00050	7901644
Total Manganese (Mn)	mg/L	<0.000050	7901644	0.00210	<0.000050	0.000050	7901644
Total Molybdenum (Mo)	mg/L	<0.000050	7901644	0.000587	<0.000050	0.000050	7901644
Total Nickel (Ni)	mg/L	0.000028	7910211	0.000778	<0.000020	0.000020	7901644
Total Phosphorus (P)	mg/L	<0.0020	7901644	0.0087	<0.0020	0.0020	7901644
Total Selenium (Se)	mg/L	<0.000040	7901644	0.00125	<0.000040	0.000040	7901644
Total Silicon (Si)	mg/L	<0.050	7901644	2.03	<0.050	0.050	7901644
Total Silver (Ag)	mg/L	<0.0000050	7901644	0.0000059	<0.0000050	0.0000050	7901644
Total Strontium (Sr)	mg/L	<0.000050	7910211	0.0882	<0.000050	0.000050	7901644
Total Thallium (Tl)	mg/L	<0.0000020	7901644	0.0000035	<0.0000020	0.0000020	7901644
Total Tin (Sn)	mg/L	<0.00020	7901644	<0.00020	<0.00020	0.00020	7901644
Total Titanium (Ti)	mg/L	<0.00050	7901644	0.00257	<0.00050	0.00050	7901644
Total Uranium (U)	mg/L	<0.0000020	7901644	0.00193	<0.0000020	0.0000020	7901644
Total Vanadium (V)	mg/L	<0.00020	7901644	<0.00020	<0.00020	0.00020	7901644
Total Zinc (Zn)	mg/L	<0.00010	7910211	0.0239	0.00013	0.00010	7901644
Total Zirconium (Zr)	mg/L	<0.00010	7901644	0.00016	<0.00010	0.00010	7901644
Total Calcium (Ca)	mg/L	<0.050	7909956	25.8	<0.050	0.050	7901951

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MF9657		MF9693	MF9695		
Sampling Date		2015/05/11 09:45		2015/05/12 12:40	2015/05/14 09:40		
COC Number		08407189		08407190	08407190		
	Units	**KZ-28**	**QC Batch**	**KZ-2**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Magnesium (Mg)	mg/L	<0.050	7909956	3.70	<0.050	0.050	7901951
Total Potassium (K)	mg/L	<0.050	7909956	2.14	<0.050	0.050	7901951
Total Sodium (Na)	mg/L	<0.050	7909956	0.873	<0.050	0.050	7901951
Total Sulphur (S)	mg/L	<3.0	7909956	8.8	<3.0	3.0	7901951
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MF9641	MF9642	MF9643	MF9644	MF9656		
Sampling Date		2015/05/11 13:50	2015/05/11 14:36	2015/05/11 14:40	2015/05/11 11:40	2015/05/11 09:05		
COC Number		08407188	08407188	08407188	08407188	08407189		
	Units	KZ-15	KZ-16	KZ-17	KZ-22	KZ-26	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	70.1	70.7	68.0	98.0	107	0.50	7901588
Elements								
Total Mercury (Hg)	mg/L	0.0000044	0.0000037	0.0000035	0.0000025	0.0000030	0.0000020	7906731
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.356	0.0943	0.595	0.151	0.144	0.0030	7903993
Total Antimony (Sb)	mg/L	<0.000050	<0.000050	0.000078	0.000066	0.000068	0.000050	7903993
Total Arsenic (As)	mg/L	0.00318	0.000614	0.00598	0.00551	0.00208	0.000020	7903993
Total Barium (Ba)	mg/L	0.0509	0.0339	0.0680	0.0455	0.0425	0.00010	7903993
Total Beryllium (Be)	mg/L	0.000026	0.000011	0.000042	0.000014	0.000014	0.000010	7903993
Total Bismuth (Bi)	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	7903993
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7903993
Total Cadmium (Cd)	mg/L	0.000261	0.0000531	0.000428	0.0000631	0.0000580	0.0000050	7903993
Total Chromium (Cr)	mg/L	0.00103	<0.00050	0.00153	0.00075	<0.00050	0.00050	7903993
Total Cobalt (Co)	mg/L	0.000725	0.000154	0.00131	0.000386	0.000258	0.000010	7903993
Total Copper (Cu)	mg/L	0.00342	0.00182	0.00467	0.00166	0.00163	0.00020	7903993
Total Iron (Fe)	mg/L	2.07	0.256	4.40	2.10	0.994	0.0050	7903993
Total Lead (Pb)	mg/L	0.000939	0.000161	0.00156	0.000233	0.000237	0.000050	7903993
Total Lithium (Li)	mg/L	0.00125	0.00082	0.00173	0.00172	0.00225	0.00050	7903993
Total Manganese (Mn)	mg/L	0.338	0.0323	0.667	0.208	0.0942	0.00010	7903993
Total Molybdenum (Mo)	mg/L	0.000667	0.000345	0.00100	0.000774	0.000651	0.000050	7903993
Total Nickel (Ni)	mg/L	0.00314	0.00101	0.00492	0.00279	0.00239	0.00010	7903993
Total Phosphorus (P)	mg/L	0.103	0.025	0.156	0.067	0.039	0.010	7903993
Total Selenium (Se)	mg/L	0.000283 (1)	0.000226	0.000340	0.000222	0.000206	0.000040	7903993
Total Silicon (Si)	mg/L	2.52	2.01	2.81	2.78	2.66	0.10	7903993
Total Silver (Ag)	mg/L	0.0000238	0.0000181	0.0000272	0.0000179	0.0000112	0.0000050	7903993
Total Strontium (Sr)	mg/L	0.0733	0.0747	0.0653	0.0839	0.0858	0.000050	7903993
Total Thallium (Tl)	mg/L	0.0000085	0.0000021	0.0000111	0.0000023	0.0000022	0.0000020	7903993
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7903993
Total Titanium (Ti)	mg/L	0.0139	<0.0050	0.0242	<0.0050	<0.0050	0.0050	7903993
Total Uranium (U)	mg/L	0.000685	0.000489	0.000794	0.000881	0.000937	0.0000050	7903993
Total Vanadium (V)	mg/L	0.00119	<0.00050	0.00193	0.00057	0.00054	0.00050	7903993
Total Zinc (Zn)	mg/L	0.0229	0.0032	0.0427	0.0072	0.0044	0.0010	7903993
Total Zirconium (Zr)	mg/L	0.00023	0.00010	0.00034	0.00026	0.00016	0.00010	7903993

RDL = Reportable Detection Limit
(1) Matrix Spike outside acceptance criteria (10% of analytes failure allowed).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MF9641	MF9642	MF9643	MF9644	MF9656		
Sampling Date		2015/05/11 13:50	2015/05/11 14:36	2015/05/11 14:40	2015/05/11 11:40	2015/05/11 09:05		
COC Number		08407188	08407188	08407188	08407188	08407189		
	Units	KZ-15	KZ-16	KZ-17	KZ-22	KZ-26	RDL	QC Batch
Total Calcium (Ca)	mg/L	21.3	21.8	20.3	26.1	28.6	0.25	7901951
Total Magnesium (Mg)	mg/L	4.13	3.95	4.23	7.99	8.63	0.25	7901951
Total Potassium (K)	mg/L	1.98	1.58	2.45	1.99	1.69	0.25	7901951
Total Sodium (Na)	mg/L	0.74	0.93	0.53	1.07	0.69	0.25	7901951
Total Sulphur (S)	mg/L	<15	<15	<15	<15	<15	15	7901951
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MF9658	MF9659	MF9660	MF9694	MF9696		
Sampling Date		2015/05/11 13:05	2015/05/11 16:55	2015/05/11 16:05	2015/05/12 09:25	2015/05/12 16:50		
COC Number		08407189	08407189	08407189	08407190	08407190		
	Units	KZ-21	KZ-19	KZ-9	KZ-7	KZ-13	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	92.9	55.6	54.0	46.6	36.1	0.50	7901588
Elements								
Total Mercury (Hg)	mg/L	0.0000023	0.0000029	0.0000033	0.0000042	0.0000025	0.0000020	7906731
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.142	0.845	0.689	0.237	0.666	0.0030	7903993
Total Antimony (Sb)	mg/L	0.000068	0.000068	0.000058	0.000066	<0.000050	0.000050	7903993
Total Arsenic (As)	mg/L	0.00961	0.00214	0.00192	0.000966	0.000639	0.000020	7903993
Total Barium (Ba)	mg/L	0.0463	0.0652	0.0606	0.0429	0.0744	0.00010	7903993
Total Beryllium (Be)	mg/L	0.000022	0.000048	0.000043	0.000027	0.000039	0.000010	7903993
Total Bismuth (Bi)	mg/L	<0.000020	0.000020	<0.000020	<0.000020	<0.000020	0.000020	7903993
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7903993
Total Cadmium (Cd)	mg/L	0.0000575	0.000429	0.000378	0.000415	0.000109	0.0000050	7903993
Total Chromium (Cr)	mg/L	0.00058	0.00208	0.00179	<0.00050	0.00192	0.00050	7903993
Total Cobalt (Co)	mg/L	0.000612	0.00103	0.000859	0.000391	0.000562	0.000010	7903993
Total Copper (Cu)	mg/L	0.00150	0.00522	0.00469	0.00281	0.00260	0.00020	7903993
Total Iron (Fe)	mg/L	3.71	5.95	5.20	2.02	1.34	0.0050	7903993
Total Lead (Pb)	mg/L	0.000225	0.00297	0.00247	0.000855	0.00106	0.000050	7903993
Total Lithium (Li)	mg/L	0.00166	0.00198	0.00120	0.00115	0.00185	0.00050	7903993
Total Manganese (Mn)	mg/L	0.378	0.249	0.234	0.199	0.196	0.00010	7903993
Total Molybdenum (Mo)	mg/L	0.000888	0.000434	0.000435	0.000319	0.000545	0.000050	7903993
Total Nickel (Ni)	mg/L	0.00381	0.00309	0.00271	0.00154	0.00223	0.00010	7903993
Total Phosphorus (P)	mg/L	0.102	0.115	0.098	0.042	0.066	0.010	7903993
Total Selenium (Se)	mg/L	0.000215	0.000347	0.000303	0.000253	0.000133	0.000040	7903993
Total Silicon (Si)	mg/L	2.94	2.88	2.69	1.85	3.02	0.10	7903993
Total Silver (Ag)	mg/L	0.0000089	0.0000282	0.0000284	0.0000222	0.0000190	0.0000050	7903993
Total Strontium (Sr)	mg/L	0.0729	0.0587	0.0573	0.0489	0.0349	0.000050	7903993
Total Thallium (Tl)	mg/L	0.0000024	0.0000144	0.0000125	0.0000069	0.0000128	0.0000020	7903993
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7903993
Total Titanium (Ti)	mg/L	0.0060	0.0408	0.0323	0.0077	0.0403	0.0050	7903993
Total Uranium (U)	mg/L	0.000758	0.000388	0.000359	0.000278	0.000844	0.0000050	7903993
Total Vanadium (V)	mg/L	0.00062	0.00272	0.00218	0.00051	0.00220	0.00050	7903993
Total Zinc (Zn)	mg/L	0.0059	0.0521	0.0479	0.0554	0.0114	0.0010	7903993
Total Zirconium (Zr)	mg/L	0.00045	0.00049	0.00050	0.00046	0.00023	0.00010	7903993
Total Calcium (Ca)	mg/L	23.8	18.2	17.8	15.2	11.8	0.25	7901951

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MF9658	MF9659	MF9660	MF9694	MF9696		
Sampling Date		2015/05/11 13:05	2015/05/11 16:55	2015/05/11 16:05	2015/05/12 09:25	2015/05/12 16:50		
COC Number		08407189	08407189	08407189	08407190	08407190		
	Units	KZ-21	KZ-19	KZ-9	KZ-7	KZ-13	RDL	QC Batch
Total Magnesium (Mg)	mg/L	8.13	2.48	2.34	2.07	1.61	0.25	7901951
Total Potassium (K)	mg/L	2.05	2.30	2.21	2.41	2.52	0.25	7901951
Total Sodium (Na)	mg/L	0.77	0.38	0.40	0.33	0.58	0.25	7901951
Total Sulphur (S)	mg/L	<15	<15	<15	<15	<15	15	7901951

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.3°C
Package 2	3.7°C
Package 3	3.0°C

Sample MF9657, Elements by ICPMS Low Level (total): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7901644	Total Aluminum (Al)	2015/05/20	102	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
7901644	Total Antimony (Sb)	2015/05/20	102	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
7901644	Total Arsenic (As)	2015/05/20	103	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
7901644	Total Barium (Ba)	2015/05/20	103	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
7901644	Total Beryllium (Be)	2015/05/20	98	80 - 120	94	80 - 120	<0.000010	mg/L	NC	20
7901644	Total Bismuth (Bi)	2015/05/20	98	80 - 120	93	80 - 120	<0.0000050	mg/L	NC	20
7901644	Total Boron (B)	2015/05/20					<0.010	mg/L	NC	20
7901644	Total Cadmium (Cd)	2015/05/20	101	80 - 120	95	80 - 120	<0.0000050	mg/L	NC	20
7901644	Total Chromium (Cr)	2015/05/20	100	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
7901644	Total Cobalt (Co)	2015/05/20	103	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
7901644	Total Copper (Cu)	2015/05/20	100	80 - 120	94	80 - 120	<0.000050	mg/L	NC	20
7901644	Total Iron (Fe)	2015/05/20	106	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20
7901644	Total Lead (Pb)	2015/05/20	102	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
7901644	Total Lithium (Li)	2015/05/20	98	80 - 120	95	80 - 120	<0.00050	mg/L	NC	20
7901644	Total Manganese (Mn)	2015/05/20	101	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
7901644	Total Molybdenum (Mo)	2015/05/20	102	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
7901644	Total Nickel (Ni)	2015/05/20	101	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
7901644	Total Phosphorus (P)	2015/05/20					<0.0020	mg/L		
7901644	Total Selenium (Se)	2015/05/20	99	80 - 120	95	80 - 120	<0.000040	mg/L	NC	20
7901644	Total Silicon (Si)	2015/05/20					<0.050	mg/L	NC	20
7901644	Total Silver (Ag)	2015/05/20	96	80 - 120	82	80 - 120	<0.0000050	mg/L	NC	20
7901644	Total Strontium (Sr)	2015/05/20	99	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
7901644	Total Thallium (Tl)	2015/05/20	102	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	20
7901644	Total Tin (Sn)	2015/05/20	103	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
7901644	Total Titanium (Ti)	2015/05/20	107	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
7901644	Total Uranium (U)	2015/05/20	104	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
7901644	Total Vanadium (V)	2015/05/20	106	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
7901644	Total Zinc (Zn)	2015/05/20	97	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
7901644	Total Zirconium (Zr)	2015/05/20					<0.00010	mg/L	NC	20
7902597	Dissolved Organic Carbon (C)	2015/05/16	114	80 - 120	102	80 - 120	<0.50	mg/L	NC	20
7902708	Dissolved Phosphorus (P)	2015/05/15	NC	80 - 120	110	80 - 120	<0.0020	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7902715	Acidity (pH 4.5)	2015/05/15					<0.50	mg/L	NC	20
7902715	Acidity (pH 8.3)	2015/05/15			102	80 - 120	<0.50	mg/L	12	20
7902716	Total Phosphorus (P)	2015/05/15			112	80 - 120	<0.0020	mg/L		
7902764	Total Ammonia (N)	2015/05/14	89	80 - 120	116	80 - 120	<0.0050	mg/L	NC	20
7902808	Nitrate plus Nitrite (N)	2015/05/14	108	80 - 120	103	80 - 120	0.0032, RDL=0.0020	mg/L	NC	25
7902809	Nitrite (N)	2015/05/14	106	80 - 120	105	80 - 120	<0.0020	mg/L	NC	25
7903017	pH	2015/05/14			101	97 - 103				
7903027	Conductivity	2015/05/14			100	80 - 120	<1.0	uS/cm		
7903028	Alkalinity (PP as CaCO3)	2015/05/14					<0.50	mg/L		
7903028	Alkalinity (Total as CaCO3)	2015/05/14	96	80 - 120	98	80 - 120	<0.50	mg/L		
7903028	Bicarbonate (HCO3)	2015/05/14					<0.50	mg/L		
7903028	Carbonate (CO3)	2015/05/14					<0.50	mg/L		
7903028	Hydroxide (OH)	2015/05/14					<0.50	mg/L		
7903037	Alkalinity (PP as CaCO3)	2015/05/14					<0.50	mg/L	NC	20
7903037	Alkalinity (Total as CaCO3)	2015/05/14	NC	80 - 120	95	80 - 120	<0.50	mg/L	NC	20
7903037	Bicarbonate (HCO3)	2015/05/14					<0.50	mg/L	NC	20
7903037	Carbonate (CO3)	2015/05/14					<0.50	mg/L	NC	20
7903037	Hydroxide (OH)	2015/05/14					<0.50	mg/L	NC	20
7903038	Conductivity	2015/05/14			101	80 - 120	<1.0	uS/cm	NC	20
7903040	pH	2015/05/14			101	97 - 103			5.1	N/A
7903170	Total Suspended Solids	2015/05/19			102	80 - 120	<1.0	mg/L		
7903230	Total Suspended Solids	2015/05/19			94	80 - 120	<1.0	mg/L		
7903662	Fluoride (F)	2015/05/15	NC	80 - 120	98	80 - 120	<0.010	mg/L	NC	20
7903666	Fluoride (F)	2015/05/15	99	80 - 120	98	80 - 120	0.012, RDL=0.010	mg/L	1.3	20
7903942	True Colour	2015/05/14			106	80 - 120	<5.0	Col. Unit	5.2	20
7903946	True Colour	2015/05/14			115	80 - 120	<5.0	Col. Unit	4.4	20
7903993	Total Aluminum (Al)	2015/05/20	NC	80 - 120	106	80 - 120	<0.0030	mg/L	1.2	20
7903993	Total Antimony (Sb)	2015/05/20	99	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7903993	Total Arsenic (As)	2015/05/20	90	80 - 120	107	80 - 120	0.000031, RDL=0.000020	mg/L	0.079	20
7903993	Total Barium (Ba)	2015/05/20	NC	80 - 120	105	80 - 120	<0.00010	mg/L	1.4	20
7903993	Total Beryllium (Be)	2015/05/20	94	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
7903993	Total Bismuth (Bi)	2015/05/20	100	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
7903993	Total Boron (B)	2015/05/20					<0.050	mg/L	NC	20
7903993	Total Cadmium (Cd)	2015/05/20	90	80 - 120	100	80 - 120	<0.0000050	mg/L	5.1	20
7903993	Total Chromium (Cr)	2015/05/20	101	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
7903993	Total Cobalt (Co)	2015/05/20	103	80 - 120	102	80 - 120	<0.000010	mg/L	1.3	20
7903993	Total Copper (Cu)	2015/05/20	96	80 - 120	100	80 - 120	0.00030, RDL=0.00020	mg/L	3.1	20
7903993	Total Iron (Fe)	2015/05/20	NC	80 - 120	112	80 - 120	<0.0050	mg/L	2.6	20
7903993	Total Lead (Pb)	2015/05/20	108	80 - 120	102	80 - 120	<0.000050	mg/L	1.2	20
7903993	Total Lithium (Li)	2015/05/20	103	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
7903993	Total Manganese (Mn)	2015/05/20	NC	80 - 120	102	80 - 120	<0.00010	mg/L	2.6	20
7903993	Total Molybdenum (Mo)	2015/05/20	NC	80 - 120	101	80 - 120	<0.000050	mg/L	0.93	20
7903993	Total Nickel (Ni)	2015/05/20	100	80 - 120	102	80 - 120	<0.00010	mg/L	1.2	20
7903993	Total Phosphorus (P)	2015/05/20					<0.010	mg/L	5.3	20
7903993	Total Selenium (Se)	2015/05/20	78 (1)	80 - 120	100	80 - 120	<0.000040	mg/L	5.9	20
7903993	Total Silicon (Si)	2015/05/20					<0.10	mg/L	1.1	20
7903993	Total Silver (Ag)	2015/05/20	108	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
7903993	Total Strontium (Sr)	2015/05/20	NC	80 - 120	103	80 - 120	<0.000050	mg/L	1.4	20
7903993	Total Thallium (Tl)	2015/05/20	102	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
7903993	Total Tin (Sn)	2015/05/20	101	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
7903993	Total Titanium (Ti)	2015/05/20	NC	80 - 120	98	80 - 120	<0.0050	mg/L	NC	20
7903993	Total Uranium (U)	2015/05/20	113	80 - 120	103	80 - 120	<0.0000050	mg/L	0.81	20
7903993	Total Vanadium (V)	2015/05/20	106	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
7903993	Total Zinc (Zn)	2015/05/20	NC	80 - 120	102	80 - 120	<0.0010	mg/L	0.85	20
7903993	Total Zirconium (Zr)	2015/05/20					<0.00010	mg/L	NC	20
7904008	Dissolved Chloride (Cl)	2015/05/15	124 (1)	80 - 120	99	80 - 120	<0.50	mg/L	NC	20
7904013	Dissolved Sulphate (SO4)	2015/05/15	NC	80 - 120	91	80 - 120	<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7904465	Total Suspended Solids	2015/05/19			101	80 - 120	<1.0	mg/L		
7904542	Total Phosphorus (P)	2015/05/15	NC	80 - 120	112	80 - 120	<0.0020	mg/L	0.41	20
7904603	Dissolved Organic Carbon (C)	2015/05/16	NC	80 - 120	113	80 - 120	<0.50	mg/L	0.31	20
7904662	Dissolved Chloride (Cl)	2015/05/15	NC	80 - 120	99	80 - 120	<0.50	mg/L	0.65	20
7904663	Dissolved Sulphate (SO4)	2015/05/15	NC	80 - 120	91	80 - 120	<0.50	mg/L	0.067	20
7905503	Dissolved Aluminum (Al)	2015/05/20	99	80 - 120	105	80 - 120	<0.00050	mg/L	2.8	20
7905503	Dissolved Antimony (Sb)	2015/05/20	94	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
7905503	Dissolved Arsenic (As)	2015/05/20	93	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
7905503	Dissolved Barium (Ba)	2015/05/20	NC	80 - 120	106	80 - 120	<0.000020	mg/L	3.6	20
7905503	Dissolved Beryllium (Be)	2015/05/20	88	80 - 120	99	80 - 120	<0.000010	mg/L	NC	20
7905503	Dissolved Bismuth (Bi)	2015/05/20	94	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
7905503	Dissolved Boron (B)	2015/05/20					<0.010	mg/L	NC	20
7905503	Dissolved Cadmium (Cd)	2015/05/20	89	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
7905503	Dissolved Chromium (Cr)	2015/05/20	91	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
7905503	Dissolved Cobalt (Co)	2015/05/20	92	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
7905503	Dissolved Copper (Cu)	2015/05/20	89	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
7905503	Dissolved Iron (Fe)	2015/05/20	105	80 - 120	111	80 - 120	<0.0010	mg/L	NC	20
7905503	Dissolved Lead (Pb)	2015/05/20	96	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
7905503	Dissolved Lithium (Li)	2015/05/20	93	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
7905503	Dissolved Manganese (Mn)	2015/05/20	94	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
7905503	Dissolved Molybdenum (Mo)	2015/05/20	NC	80 - 120	106	80 - 120	<0.000050	mg/L	1.3	20
7905503	Dissolved Nickel (Ni)	2015/05/20	91	80 - 120	102	80 - 120	<0.000020	mg/L	6.2	20
7905503	Dissolved Phosphorus (P)	2015/05/20					<0.0020	mg/L	NC	20
7905503	Dissolved Selenium (Se)	2015/05/20	79 (1)	80 - 120	101	80 - 120	<0.000040	mg/L	NC	20
7905503	Dissolved Silicon (Si)	2015/05/20					<0.050	mg/L	0.26	20
7905503	Dissolved Silver (Ag)	2015/05/20	80	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
7905503	Dissolved Strontium (Sr)	2015/05/20	NC	80 - 120	105	80 - 120	<0.000050	mg/L	2.4	20
7905503	Dissolved Thallium (Tl)	2015/05/20	95	80 - 120	105	80 - 120	<0.0000020	mg/L	NC	20
7905503	Dissolved Tin (Sn)	2015/05/20	97	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
7905503	Dissolved Titanium (Ti)	2015/05/20	94	80 - 120	107	80 - 120	<0.00050	mg/L	NC	20
7905503	Dissolved Uranium (U)	2015/05/20	98	80 - 120	106	80 - 120	<0.0000020	mg/L	NC	20

Maxxam Job #: B539758
Report Date: 2015/05/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7905503	Dissolved Vanadium (V)	2015/05/20	92	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
7905503	Dissolved Zinc (Zn)	2015/05/20	91	80 - 120	101	80 - 120	<0.00010	mg/L	0.22	20
7905503	Dissolved Zirconium (Zr)	2015/05/20					<0.00010	mg/L	NC	20
7905582	Strong Acid Dissoc. Cyanide (CN)	2015/05/19	102	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
7905592	Weak Acid Dissoc. Cyanide (CN)	2015/05/19	98	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
7906160	Dissolved Phosphorus (P)	2015/05/15	105	80 - 120	98	80 - 120	<0.0020	mg/L	2.6	20
7906731	Total Mercury (Hg)	2015/05/20	95	80 - 120	93	80 - 120	<0.0000020	mg/L	NC	20
7906749	Dissolved Mercury (Hg)	2015/05/20	92	80 - 120	91	80 - 120	<0.0000020	mg/L	NC	20
7908430	Dissolved Phosphorus (P)	2015/05/21			95	80 - 120	<0.0020	mg/L		
7908481	Total Phosphorus (P)	2015/05/21			94	80 - 120	<0.0020	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B539758
Report Date: 2015/05/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: HG

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

David Huang, BBY Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY R

08407188

COC i

BBY FCD-00077/05

Page 1 3

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUCSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL Y / N (Present / Intact) | COOLER TEMPERATURES

	Present	Intact	Cooler Temperatures
	N/A		5,5,3
	N/A		3,4,4
	N/A		2,2,5

COOLING MEDIA PRESENT (Y) / N

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	~~KZ-2~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~12~~		
2	~~KZ-7~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~12~~		
3	~~KZ-9~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~12~~		
4	~~KZ-13~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~12~~		
5	KZ-15	MF9641	2015/05/11	13:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
6	KZ-16	MF9642	2015/05/11	14:36	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
7	KZ-17	MF9643	2015/05/11	14:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
8	~~KZ-19~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~12~~		
9	~~KZ-21~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~12~~		
10	KZ-22	MF9644	2015/05/11	11:40	~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~12~~		

B539758

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted Signature Redacted	2015/05/13	8:00	Signature Redacted	2015/05/14	09:40	B539758

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RE(

COC #: 08407189

BBY FCD-00077/05

Page 2 3

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUCSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL Y / N: Present / Intact

COOLER TEMPERATURES: NA 5,5,3; NA 3,4,4; NA 2,2,5

COOLING MEDIA PRESENT (Y) / N

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-26	MF9656	2015/05/11	9:05	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
2	KZ-28	MF9657	2015/05/11	9:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
3	~~Trip Blank~~		~~2015/05/11~~	~~13:05~~	~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~12~~		
4	KZ-21	MF9658	2015/05/11	13:05	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
5	KZ-19	MF9659	2015/05/11	16:55	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
6	KZ-9	MF9660	2015/05/11	16:05	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
7																					
8																					
9																					
10																					

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2015/05/13	8:00	Signature Redacted	2015/05/14	09:40	B539758

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY REC

COC #: 08407190

BBY FCD-00077/05

Page 3 3

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUCSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:

Regulatory Criteria		Special Instructions
[ ] BC CSR Soil	[ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify)	[ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water	[ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL Y / N: Present / Intact

COOLER TEMPERATURES: N/A 5,5,3 | N/A 3,4,4 | N/A 2,2,5

COOLING MEDIA PRESENT (Y) / N

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	~~KZ-26~~ KZ-2	MF9693	2015/05/12	12:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
2	~~KZ-28~~ KZ-7	MF9694	2015/05/12	9:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
3	Trip Blank	MF9695			Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
4	KZ-13	MF9696	2015/05/12	16:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
5																					
6																					
7																					
8																					
9																					
10																					

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2015/05/13	8:00	Signature Redacted	2015/05/14	09:40	B539758

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08409525

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/06/30
Report #: R1986607
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B553386
Received: 2015/06/24, 11:07

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	5	N/A	2015/06/24	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	4	2015/06/25	2015/06/25	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	1	2015/06/25	2015/06/26	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	5	N/A	2015/06/25	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	5	N/A	2015/06/24	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	5	N/A	2015/06/24	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	5	N/A	2015/06/25	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	5	N/A	2015/06/25	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	4	N/A	2015/06/25	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	1	N/A	2015/06/26	BBY6SOP-00026	SM 22 2510 B m
Fluoride	5	N/A	2015/06/25	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	5	N/A	2015/06/26	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	5	N/A	2015/06/26	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	1	N/A	2015/06/29	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Dissolved-LowLevel) by CVAF	4	N/A	2015/06/30	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	5	2015/06/30	2015/06/30	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	5	N/A	2015/06/26	BBY WI-00033	SM 22 1030E
Sum of cations, anions	5	N/A	2015/06/26	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	3	N/A	2015/06/26	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	2	N/A	2015/06/30	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	5	N/A	2015/06/25	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	5	N/A	2015/06/26	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	5	N/A	2015/06/26	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	5	N/A	2015/06/25	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	5	N/A	2015/06/25	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	5	N/A	2015/06/25	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	5	N/A	2015/06/26	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	5	N/A	2015/06/24	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	4	N/A	2015/06/25	BBY6SOP-00026	SM 22 4500-H+ B m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08409525

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/06/30
Report #: R1986607
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B553386
Received: 2015/06/24, 11:07

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
pH Water (2)	1	N/A	2015/06/26	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	5	N/A	2015/06/25	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	5	2015/06/25	2015/06/26	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	5	N/A	2015/06/26	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	5	2015/06/25	2015/06/26	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Name, Phone and Fax Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B553386
Report Date: 2015/06/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MN1920		MN1921		MN1922		
Sampling Date		2015/06/22 16:51		2015/06/22 14:55		2015/06/22 09:35		
COC Number		08409525		08409525		08409525		
	Units	KZ-2	QC Batch	KZ-7	QC Batch	KZ-15	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	7945430	<0.50	7945430	<0.50	0.50	7945430
Acidity (pH 8.3)	mg/L	1.30	7945430	1.02	7945430	1.10	0.50	7945430
Calculated Parameters								
Anion Sum	meq/L	1.4	7945227	2.2	7945227	2.4	N/A	7945227
Cation Sum	meq/L	1.4	7945227	2.5	7945227	2.9	N/A	7945227
Filter and HNO3 Preservation	N/A	LAB	7944655	LAB	7944655	LAB	N/A	7944655
Ion Balance	N/A	1.0	7944885	1.1	7944885	1.2 (1)	0.010	7944885
Nitrate (N)	mg/L	0.0559	7944499	0.0050	7944499	0.0093	0.0020	7944499
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00058	7945155	0.00068	7945155	0.00064	0.00050	7945155
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00054	7945157	0.00060	7945157	0.00055	0.00050	7945157
Fluoride (F)	mg/L	0.038	7946813	0.051	7946813	0.073	0.010	7946813
Dissolved Organic Carbon (C)	mg/L	1.61	7946629	2.18	7946629	2.26	0.50	7946629
Alkalinity (Total as CaCO3)	mg/L	38.7	7946887	82.0	7946997	102	0.50	7946887
Alkalinity (PP as CaCO3)	mg/L	<0.50	7946887	<0.50	7946997	<0.50	0.50	7946887
Bicarbonate (HCO3)	mg/L	47.2	7946887	100	7946997	124	0.50	7946887
Carbonate (CO3)	mg/L	<0.50	7946887	<0.50	7946997	<0.50	0.50	7946887
Hydroxide (OH)	mg/L	<0.50	7946887	<0.50	7946997	<0.50	0.50	7946887
Anions								
Dissolved Sulphate (SO4)	mg/L	28.0	7946511	27.0	7946511	19.5	0.50	7946511
Dissolved Chloride (Cl)	mg/L	<0.50	7946504	<0.50	7946504	<0.50	0.50	7946504
MISCELLANEOUS								
True Colour	Col. Unit	6.2	7947870	14.9	7947870	11.1	5.0	7947870
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020	7948168	0.0029	7948168	0.0020	0.0020	7948168
Total Ammonia (N)	mg/L	<0.0050	7946198	<0.0050	7946198	<0.0050	0.0050	7946198
Nitrate plus Nitrite (N)	mg/L	0.0559	7946185	0.0050	7946185	0.0093	0.0020	7946185
Nitrite (N)	mg/L	<0.0020	7946187	<0.0020	7946187	<0.0020	0.0020	7946187
Total Phosphorus (P)	mg/L	<0.0020	7948184	0.0032	7948184	0.0032	0.0020	7948184
Physical Properties								
Conductivity	uS/cm	143	7946888	220	7947002	231	1.0	7946888
pH	pH	7.75	7946889	7.83	7947004	8.18	N/A	7946889

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 3 meq/L for both cations and anions).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553386
Report Date: 2015/06/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MN1920		MN1921		MN1922		
Sampling Date		2015/06/22 16:51		2015/06/22 14:55		2015/06/22 09:35		
COC Number		08409525		08409525		08409525		
	Units	KZ-2	QC Batch	KZ-7	QC Batch	KZ-15	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	7945330	<1.0	7945330	<1.0	1.0	7945330
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553386
Report Date: 2015/06/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MN1923		MN1924		
Sampling Date		2015/06/22 11:35		2015/06/22 10:00		
COC Number		08409525		08409525		
	Units	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Misc. Inorganics						
Acidity (pH 4.5)	mg/L	<0.50	7945430	<0.50	0.50	7945430
Acidity (pH 8.3)	mg/L	0.95	7945430	1.18	0.50	7945430
Calculated Parameters						
Anion Sum	meq/L	2.1	7945227	2.9	N/A	7945227
Cation Sum	meq/L	2.3	7945227	3.1	N/A	7945227
Filter and HNO3 Preservation	N/A	LAB	7944655	LAB	N/A	7944655
Ion Balance	N/A	1.1	7944885	1.1	0.010	7944885
Nitrate (N)	mg/L	0.0113	7944499	0.0065	0.0020	7944499
Misc. Inorganics						
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00071	7945155	0.00068	0.00050	7945155
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00063	7945157	0.00055	0.00050	7945157
Fluoride (F)	mg/L	0.061	7946813	0.090	0.010	7946813
Dissolved Organic Carbon (C)	mg/L	1.72	7946630	2.91	0.50	7946629
Alkalinity (Total as CaCO3)	mg/L	88.4	7946887	118	0.50	7946887
Alkalinity (PP as CaCO3)	mg/L	<0.50	7946887	<0.50	0.50	7946887
Bicarbonate (HCO3)	mg/L	108	7946887	144	0.50	7946887
Carbonate (CO3)	mg/L	<0.50	7946887	<0.50	0.50	7946887
Hydroxide (OH)	mg/L	<0.50	7946887	<0.50	0.50	7946887
Anions						
Dissolved Sulphate (SO4)	mg/L	15.0	7946511	25.8	0.50	7946511
Dissolved Chloride (Cl)	mg/L	<0.50	7946504	<0.50	0.50	7946504
MISCELLANEOUS						
True Colour	Col. Unit	10.6	7947870	13.6	5.0	7947870
Nutrients						
Dissolved Phosphorus (P)	mg/L	0.0020	7948168	0.0029	0.0020	7948168
Total Ammonia (N)	mg/L	0.0097	7946198	0.0115	0.0050	7946198
Nitrate plus Nitrite (N)	mg/L	0.0113	7946185	0.0065	0.0020	7946185
Nitrite (N)	mg/L	<0.0020	7946187	<0.0020	0.0020	7946187
Total Phosphorus (P)	mg/L	0.0025	7948184	0.0030	0.0020	7948184
Physical Properties						
Conductivity	uS/cm	198	7946888	269	1.0	7946888
pH	pH	8.01	7946889	8.06	N/A	7946889

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553386
Report Date: 2015/06/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MN1923		MN1924		
Sampling Date		2015/06/22 11:35		2015/06/22 10:00		
COC Number		08409525		08409525		
	Units	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Physical Properties						
Total Suspended Solids	mg/L	<1.0	7945330	<1.0	1.0	7945330
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553386
Report Date: 2015/06/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN1920		MN1921		MN1922		
Sampling Date		2015/06/22 16:51		2015/06/22 14:55		2015/06/22 09:35		
COC Number		08409525		08409525		08409525		
	Units	KZ-2	QC Batch	KZ-7	QC Batch	KZ-15	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	67.3	7944580	121	7944580	141	0.50	7944580
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	7951514	<0.0000020	7951514	<0.0000020	0.0000020	7951514
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00502	7946306	0.00301	7946306	0.00307	0.00050	7946306
Dissolved Antimony (Sb)	mg/L	0.000023	7946306	0.000074	7946306	0.000037	0.000020	7946306
Dissolved Arsenic (As)	mg/L	0.000101	7946306	0.000254	7946306	0.000363	0.000020	7946306
Dissolved Barium (Ba)	mg/L	0.0415	7946306	0.0581	7946306	0.0566	0.000020	7946306
Dissolved Beryllium (Be)	mg/L	<0.000010	7946306	<0.000010	7946306	<0.000010	0.000010	7946306
Dissolved Bismuth (Bi)	mg/L	<0.0000050	7946306	<0.0000050	7946306	<0.0000050	0.0000050	7946306
Dissolved Boron (B)	mg/L	<0.010	7946306	<0.010	7946306	<0.010	0.010	7946306
Dissolved Cadmium (Cd)	mg/L	0.000242	7946306	0.0000838	7946306	0.0000170	0.0000050	7946306
Dissolved Chromium (Cr)	mg/L	<0.00010	7946306	<0.00010	7946306	<0.00010	0.00010	7946306
Dissolved Cobalt (Co)	mg/L	0.0000081	7946306	0.0000135	7946306	0.0000167	0.0000050	7946306
Dissolved Copper (Cu)	mg/L	0.000690	7946306	0.000602	7946306	0.000494	0.000050	7946306
Dissolved Iron (Fe)	mg/L	0.0022	7946306	0.0553	7946306	0.0156	0.0010	7946306
Dissolved Lead (Pb)	mg/L	0.0000241	7946306	0.0000232	7946306	0.0000091	0.0000050	7946306
Dissolved Lithium (Li)	mg/L	0.00076	7946306	0.00150	7946306	0.00155	0.00050	7946306
Dissolved Manganese (Mn)	mg/L	0.000101	7946306	0.00829	7946306	0.00741	0.000050	7946306
Dissolved Molybdenum (Mo)	mg/L	0.000633	7946306	0.000469	7946306	0.000714	0.000050	7946306
Dissolved Nickel (Ni)	mg/L	0.000404	7950580	0.000460	7946306	0.000405	0.000020	7946306
Dissolved Phosphorus (P)	mg/L	<0.0020	7946306	<0.0020	7946306	0.0030	0.0020	7946306
Dissolved Selenium (Se)	mg/L	0.000486	7946306	0.000632	7946306	0.000465	0.000040	7946306
Dissolved Silicon (Si)	mg/L	2.04	7946306	2.27	7946306	2.41	0.050	7946306
Dissolved Silver (Ag)	mg/L	<0.0000050	7946306	<0.0000050	7946306	<0.0000050	0.0000050	7946306
Dissolved Strontium (Sr)	mg/L	0.0822	7946306	0.133	7946306	0.131	0.000050	7950580
Dissolved Thallium (Tl)	mg/L	<0.0000020	7946306	<0.0000020	7946306	<0.0000020	0.0000020	7946306
Dissolved Tin (Sn)	mg/L	<0.00020	7946306	<0.00020	7946306	0.00031	0.00020	7946306
Dissolved Titanium (Ti)	mg/L	<0.00050	7946306	<0.00050	7946306	<0.00050	0.00050	7946306
Dissolved Uranium (U)	mg/L	0.00111	7946306	0.000667	7946306	0.00116	0.0000020	7946306
Dissolved Vanadium (V)	mg/L	<0.00020	7946306	<0.00020	7946306	<0.00020	0.00020	7946306
Dissolved Zinc (Zn)	mg/L	0.0355	7946306	0.0182	7946306	0.00255	0.00010	7946306
Dissolved Zirconium (Zr)	mg/L	<0.00010	7946306	<0.00010	7946306	<0.00010	0.00010	7946306
Dissolved Calcium (Ca)	mg/L	23.2	7944910	40.3	7944910	46.6	0.050	7949980

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553386
Report Date: 2015/06/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN1920		MN1921		MN1922		
Sampling Date		2015/06/22 16:51		2015/06/22 14:55		2015/06/22 09:35		
COC Number		08409525		08409525		08409525		
	Units	KZ-2	QC Batch	KZ-7	QC Batch	KZ-15	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	2.27	7944910	4.94	7944910	6.10	0.050	7949980
Dissolved Potassium (K)	mg/L	1.37	7944910	1.13	7944910	1.15	0.050	7949980
Dissolved Sodium (Na)	mg/L	0.573	7944910	0.723	7944910	0.841	0.050	7949980
Dissolved Sulphur (S)	mg/L	9.2	7944910	9.0	7944910	6.6	3.0	7949980

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553386
Report Date: 2015/06/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN1923		MN1924		
Sampling Date		2015/06/22 11:35		2015/06/22 10:00		
COC Number		08409525		08409525		
	Units	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Misc. Inorganics						
Dissolved Hardness (CaCO3)	mg/L	113	7944580	149	0.50	7944580
Elements						
Dissolved Mercury (Hg)	mg/L	<0.0000020	7951514	<0.0000020	0.0000020	7950243
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	0.00228	7946306	0.00214	0.00050	7946306
Dissolved Antimony (Sb)	mg/L	<0.000020	7946306	0.000055	0.000020	7946306
Dissolved Arsenic (As)	mg/L	0.000260	7946306	0.000455	0.000020	7946306
Dissolved Barium (Ba)	mg/L	0.0493	7946306	0.0644	0.000020	7946306
Dissolved Beryllium (Be)	mg/L	<0.000010	7946306	<0.000010	0.000010	7946306
Dissolved Bismuth (Bi)	mg/L	<0.0000050	7946306	<0.0000050	0.0000050	7946306
Dissolved Boron (B)	mg/L	<0.010	7946306	<0.010	0.010	7946306
Dissolved Cadmium (Cd)	mg/L	0.0000135	7946306	0.0000244	0.0000050	7946306
Dissolved Chromium (Cr)	mg/L	<0.00010	7946306	<0.00010	0.00010	7946306
Dissolved Cobalt (Co)	mg/L	0.0000111	7946306	0.0000197	0.0000050	7946306
Dissolved Copper (Cu)	mg/L	0.000512	7950580	0.000505	0.000050	7946306
Dissolved Iron (Fe)	mg/L	0.0045	7946306	0.0306	0.0010	7946306
Dissolved Lead (Pb)	mg/L	<0.0000050	7946306	0.0000081	0.0000050	7946306
Dissolved Lithium (Li)	mg/L	0.00127	7946306	0.00245	0.00050	7946306
Dissolved Manganese (Mn)	mg/L	0.00185	7946306	0.0158	0.000050	7946306
Dissolved Molybdenum (Mo)	mg/L	0.000423	7946306	0.00108	0.000050	7946306
Dissolved Nickel (Ni)	mg/L	0.000339	7946306	0.000524	0.000020	7946306
Dissolved Phosphorus (P)	mg/L	<0.0020	7946306	<0.0020	0.0020	7946306
Dissolved Selenium (Se)	mg/L	0.000347	7946306	0.000705	0.000040	7946306
Dissolved Silicon (Si)	mg/L	2.28	7946306	2.84	0.050	7946306
Dissolved Silver (Ag)	mg/L	<0.0000050	7946306	<0.0000050	0.0000050	7946306
Dissolved Strontium (Sr)	mg/L	0.123	7946306	0.151	0.000050	7950580
Dissolved Thallium (Tl)	mg/L	<0.0000020	7946306	<0.0000020	0.0000020	7946306
Dissolved Tin (Sn)	mg/L	<0.00020	7946306	<0.00020	0.00020	7946306
Dissolved Titanium (Ti)	mg/L	<0.00050	7946306	<0.00050	0.00050	7946306
Dissolved Uranium (U)	mg/L	0.000669	7946306	0.00178	0.0000020	7946306
Dissolved Vanadium (V)	mg/L	<0.00020	7946306	<0.00020	0.00020	7946306
Dissolved Zinc (Zn)	mg/L	0.00033	7946306	0.00289	0.00010	7946306
Dissolved Zirconium (Zr)	mg/L	<0.00010	7946306	<0.00010	0.00010	7946306
Dissolved Calcium (Ca)	mg/L	36.7	7944910	46.2	0.050	7949980
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553386
Report Date: 2015/06/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN1923		MN1924		
Sampling Date		2015/06/22 11:35		2015/06/22 10:00		
COC Number		08409525		08409525		
	Units	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	5.06	7944910	8.20	0.050	7949980
Dissolved Potassium (K)	mg/L	1.09	7944910	1.20	0.050	7949980
Dissolved Sodium (Na)	mg/L	0.801	7944910	0.887	0.050	7949980
Dissolved Sulphur (S)	mg/L	4.5	7944910	8.8	3.0	7949980
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553386
Report Date: 2015/06/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MN1920	MN1921	MN1922	MN1923	MN1924		
Sampling Date		2015/06/22 16:51	2015/06/22 14:55	2015/06/22 09:35	2015/06/22 11:35	2015/06/22 10:00		
COC Number		08409525	08409525	08409525	08409525	08409525		
	Units	KZ-2	KZ-7	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	67.8	111	120	104	144	0.50	7944794
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	7951485
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00962	0.0206	0.0163	0.0100	0.0267	0.00050	7945971
Total Antimony (Sb)	mg/L	0.000024	0.000073	0.000033	0.000021	0.000053	0.000020	7945971
Total Arsenic (As)	mg/L	0.000096	0.000407	0.000400	0.000255	0.000637	0.000020	7945971
Total Barium (Ba)	mg/L	0.0386	0.0575	0.0531	0.0497	0.0639	0.000020	7945971
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	7945971
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7945971
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7945971
Total Cadmium (Cd)	mg/L	0.000229	0.000145	0.0000287	0.0000131	0.0000416	0.0000050	7945971
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	7945971
Total Cobalt (Co)	mg/L	0.0000113	0.0000570	0.0000524	0.0000164	0.0000853	0.0000050	7945971
Total Copper (Cu)	mg/L	0.000698	0.000770	0.000531	0.000456	0.000637	0.000050	7945971
Total Iron (Fe)	mg/L	0.0105	0.363	0.104	0.0150	0.189	0.0010	7945971
Total Lead (Pb)	mg/L	0.0000875	0.000196	0.0000561	0.0000095	0.000103	0.0000050	7945971
Total Lithium (Li)	mg/L	0.00066	0.00127	0.00196	0.00149	0.00224	0.00050	7945971
Total Manganese (Mn)	mg/L	0.000479	0.0331	0.0279	0.00349	0.0478	0.000050	7945971
Total Molybdenum (Mo)	mg/L	0.000598	0.000449	0.000677	0.000448	0.00106	0.000050	7945971
Total Nickel (Ni)	mg/L	0.000337	0.000472	0.000440	0.000365	0.000761	0.000020	7945971
Total Phosphorus (P)	mg/L	<0.0020	0.0069	0.0036	<0.0020	0.0074	0.0020	7945971
Total Selenium (Se)	mg/L	0.000442	0.000600	0.000434	0.000327	0.000580	0.000040	7945971
Total Silicon (Si)	mg/L	2.04	2.18	2.30	2.14	2.50	0.050	7945971
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7945971
Total Strontium (Sr)	mg/L	0.0749	0.122	0.126	0.116	0.149	0.000050	7945971
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	7945971
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7945971
Total Titanium (Ti)	mg/L	<0.00050	0.00091	0.00073	<0.00050	0.00124	0.00050	7945971
Total Uranium (U)	mg/L	0.00109	0.000666	0.00114	0.000728	0.00183	0.0000020	7945971
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7945971
Total Zinc (Zn)	mg/L	0.0326	0.0264	0.00288	0.00052	0.00545	0.00010	7945971
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	7945971
Total Calcium (Ca)	mg/L	23.7	36.5	38.4	33.4	44.6	0.050	7944911

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553386
Report Date: 2015/06/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MN1920	MN1921	MN1922	MN1923	MN1924		
Sampling Date		2015/06/22 16:51	2015/06/22 14:55	2015/06/22 09:35	2015/06/22 11:35	2015/06/22 10:00		
COC Number		08409525	08409525	08409525	08409525	08409525		
	Units	KZ-2	KZ-7	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Total Magnesium (Mg)	mg/L	2.10	4.78	5.95	5.00	7.95	0.050	7944911
Total Potassium (K)	mg/L	1.24	1.05	1.01	1.05	1.15	0.050	7944911
Total Sodium (Na)	mg/L	0.502	0.674	0.745	0.757	0.845	0.050	7944911
Total Sulphur (S)	mg/L	8.8	9.0	5.9	4.8	8.0	3.0	7944911
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553386
Report Date: 2015/06/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	5.3°C

Sample MN1920, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MN1922, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MN1923, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MN1924, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553386
Report Date: 2015/06/30

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7945155	Strong Acid Dissoc. Cyanide (CN)	2015/06/24	105	80 - 120	99	80 - 120	0.00051, RDL=0.00050	mg/L	NC	20
7945157	Weak Acid Dissoc. Cyanide (CN)	2015/06/24	107	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
7945330	Total Suspended Solids	2015/06/26			91	80 - 120	<1.0	mg/L		
7945430	Acidity (pH 4.5)	2015/06/24					<0.50	mg/L	NC	20
7945430	Acidity (pH 8.3)	2015/06/24			100	80 - 120	<0.50	mg/L	NC	20
7945971	Total Aluminum (Al)	2015/06/26	100	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
7945971	Total Antimony (Sb)	2015/06/26	98	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
7945971	Total Arsenic (As)	2015/06/26	98	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
7945971	Total Barium (Ba)	2015/06/26	102	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
7945971	Total Beryllium (Be)	2015/06/26	91	80 - 120	93	80 - 120	<0.000010	mg/L	NC	20
7945971	Total Bismuth (Bi)	2015/06/26	98	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
7945971	Total Boron (B)	2015/06/26					<0.010	mg/L	NC	20
7945971	Total Cadmium (Cd)	2015/06/26	96	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
7945971	Total Chromium (Cr)	2015/06/26	97	80 - 120	105	80 - 120	<0.00010	mg/L	NC	20
7945971	Total Cobalt (Co)	2015/06/26	97	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
7945971	Total Copper (Cu)	2015/06/26	96	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
7945971	Total Iron (Fe)	2015/06/26	100	80 - 120	113	80 - 120	<0.0010	mg/L	NC	20
7945971	Total Lead (Pb)	2015/06/26	100	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
7945971	Total Lithium (Li)	2015/06/26	96	80 - 120	94	80 - 120	<0.00050	mg/L	NC	20
7945971	Total Manganese (Mn)	2015/06/26	98	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
7945971	Total Molybdenum (Mo)	2015/06/26	102	80 - 120	107	80 - 120	<0.000050	mg/L	NC	20
7945971	Total Nickel (Ni)	2015/06/26	97	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
7945971	Total Phosphorus (P)	2015/06/26					<0.0020	mg/L		
7945971	Total Selenium (Se)	2015/06/26	91	80 - 120	105	80 - 120	<0.000040	mg/L	NC	20
7945971	Total Silicon (Si)	2015/06/26					<0.050	mg/L	NC	20
7945971	Total Silver (Ag)	2015/06/26	97	80 - 120	88	80 - 120	<0.0000050	mg/L	NC	20
7945971	Total Strontium (Sr)	2015/06/26	99	80 - 120	107	80 - 120	<0.000050	mg/L	NC	20
7945971	Total Thallium (Tl)	2015/06/26	97	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
7945971	Total Tin (Sn)	2015/06/26	96	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
7945971	Total Titanium (Ti)	2015/06/26	96	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553386
Report Date: 2015/06/30

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7945971	Total Uranium (U)	2015/06/26	104	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
7945971	Total Vanadium (V)	2015/06/26	97	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
7945971	Total Zinc (Zn)	2015/06/26	97	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20
7945971	Total Zirconium (Zr)	2015/06/26					<0.00010	mg/L	NC	20
7946185	Nitrate plus Nitrite (N)	2015/06/25	93	80 - 120	102	80 - 120	<0.0020	mg/L	NC	25
7946187	Nitrite (N)	2015/06/25	97	80 - 120	104	80 - 120	<0.0020	mg/L	NC	25
7946198	Total Ammonia (N)	2015/06/25	84	80 - 120	99	80 - 120	<0.0050	mg/L	NC	20
7946306	Dissolved Aluminum (Al)	2015/06/25	108	80 - 120	113	80 - 120	<0.00050	mg/L	NC	20
7946306	Dissolved Antimony (Sb)	2015/06/25	103	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
7946306	Dissolved Arsenic (As)	2015/06/25	103	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
7946306	Dissolved Barium (Ba)	2015/06/25	105	80 - 120	109	80 - 120	<0.000020	mg/L	NC	20
7946306	Dissolved Beryllium (Be)	2015/06/25	93	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
7946306	Dissolved Bismuth (Bi)	2015/06/25	100	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
7946306	Dissolved Boron (B)	2015/06/25					<0.010	mg/L	NC	20
7946306	Dissolved Cadmium (Cd)	2015/06/25	98	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
7946306	Dissolved Chromium (Cr)	2015/06/25	96	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
7946306	Dissolved Cobalt (Co)	2015/06/25	96	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
7946306	Dissolved Copper (Cu)	2015/06/25	95	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
7946306	Dissolved Iron (Fe)	2015/06/25	100	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
7946306	Dissolved Lead (Pb)	2015/06/25	104	80 - 120	107	80 - 120	0.0000069, RDL=0.0000050	mg/L	NC	20
7946306	Dissolved Lithium (Li)	2015/06/25	98	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
7946306	Dissolved Manganese (Mn)	2015/06/25	96	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
7946306	Dissolved Molybdenum (Mo)	2015/06/25	101	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
7946306	Dissolved Nickel (Ni)	2015/06/25	95	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
7946306	Dissolved Phosphorus (P)	2015/06/25					<0.0020	mg/L	NC	20
7946306	Dissolved Selenium (Se)	2015/06/25	101	80 - 120	98	80 - 120	<0.000040	mg/L	NC	20
7946306	Dissolved Silicon (Si)	2015/06/25					<0.050	mg/L	NC	20
7946306	Dissolved Silver (Ag)	2015/06/25	77 (1)	80 - 120	90	80 - 120	0.0000052, RDL=0.0000050	mg/L	NC	20
7946306	Dissolved Strontium (Sr)	2015/06/25	102	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553386
Report Date: 2015/06/30

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7946306	Dissolved Thallium (Tl)	2015/06/25	96	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
7946306	Dissolved Tin (Sn)	2015/06/25	100	80 - 120	110	80 - 120	<0.00020	mg/L	NC	20
7946306	Dissolved Titanium (Ti)	2015/06/25	96	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
7946306	Dissolved Uranium (U)	2015/06/25	102	80 - 120	108	80 - 120	<0.0000020	mg/L	NC	20
7946306	Dissolved Vanadium (V)	2015/06/25	94	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
7946306	Dissolved Zinc (Zn)	2015/06/25	104	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
7946306	Dissolved Zirconium (Zr)	2015/06/25					<0.00010	mg/L	NC	20
7946504	Dissolved Chloride (Cl)	2015/06/25	NC	80 - 120	94	80 - 120	<0.50	mg/L	NC	20
7946511	Dissolved Sulphate (SO4)	2015/06/25	NC	80 - 120	91	80 - 120	<0.50	mg/L	0.38	20
7946629	Dissolved Organic Carbon (C)	2015/06/25	97	80 - 120	102	80 - 120	<0.50	mg/L	7.6	20
7946630	Dissolved Organic Carbon (C)	2015/06/25	96	80 - 120	104	80 - 120	<0.50	mg/L	NC	20
7946813	Fluoride (F)	2015/06/25	109	80 - 120	108	80 - 120	<0.010	mg/L	NC	20
7946887	Alkalinity (PP as CaCO3)	2015/06/25					<0.50	mg/L	NC	20
7946887	Alkalinity (Total as CaCO3)	2015/06/25	99	80 - 120	94	80 - 120	0.60, RDL=0.50	mg/L	6.5	20
7946887	Bicarbonate (HCO3)	2015/06/25					0.73, RDL=0.50	mg/L	6.5	20
7946887	Carbonate (CO3)	2015/06/25					<0.50	mg/L	NC	20
7946887	Hydroxide (OH)	2015/06/25					<0.50	mg/L	NC	20
7946888	Conductivity	2015/06/25			98	80 - 120	<1.0	uS/cm	6.3	20
7946889	pH	2015/06/25			101	97 - 103			1.1	N/A
7946997	Alkalinity (PP as CaCO3)	2015/06/26					<0.50	mg/L	NC	20
7946997	Alkalinity (Total as CaCO3)	2015/06/26	116	80 - 120	98	80 - 120	<0.50	mg/L	15	20
7946997	Bicarbonate (HCO3)	2015/06/26					<0.50	mg/L	15	20
7946997	Carbonate (CO3)	2015/06/26					<0.50	mg/L	NC	20
7946997	Hydroxide (OH)	2015/06/26					<0.50	mg/L	NC	20
7947002	Conductivity	2015/06/26			100	80 - 120	1.5, RDL=1.0	uS/cm	0.45	20
7947004	pH	2015/06/26			101	97 - 103			2.6	N/A
7947870	True Colour	2015/06/25			108	80 - 120	<5.0	Col. Unit	NC	20
7948168	Dissolved Phosphorus (P)	2015/06/26	92	80 - 120	89	80 - 120	<0.0020	mg/L	NC	20
7948184	Total Phosphorus (P)	2015/06/26			89	80 - 120	<0.0020	mg/L		
7950243	Dissolved Mercury (Hg)	2015/06/29	89	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	20
7950580	Dissolved Copper (Cu)	2015/06/29	96	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553386
Report Date: 2015/06/30

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7950580	Dissolved Nickel (Ni)	2015/06/29	96	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
7950580	Dissolved Strontium (Sr)	2015/06/29	93	80 - 120	110	80 - 120	<0.000050	mg/L	NC	20
7951485	Total Mercury (Hg)	2015/06/30	107	80 - 120	116	80 - 120	<0.0000020	mg/L	NC	20
7951514	Dissolved Mercury (Hg)	2015/06/30	89	80 - 120	88	80 - 120	<0.0000020	mg/L	NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553386
Report Date: 2015/06/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

David Huang, BBY Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RE[illegible]

COC # 08409525

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		[illegible]nd Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUCSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL Y / N

Present	Intact	COOLER TEMPERATURES
		4, 4, 8

COOLING MEDIA PRESENT Y / N

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-2	MN1920	2015/06/22	16:51	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
2	KZ-7	MN1921	2015/06/22	14:55	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
3	KZ-9				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
4	KZ-13				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
5	KZ-15	MN 1922	2015/06/22	09:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
6	KZ-16	MN 1923	2015/06/22	11:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
7	KZ-17	MN 1924	2015/06/22	10:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
8	KZ-19				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
9	KZ-21				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
10	KZ-22				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		

B553386

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2015/06/22	20:00	Signature Redacted	2015/06/24	09:55	B553386

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08409568, 08409569

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/07/03
Report #: R1989596
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B553960
Received: 2015/06/25, 13:25

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	13	N/A	2015/06/26	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	13	2015/06/26	2015/06/27	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	7	N/A	2015/06/26	BBY6SOP-00011	SM 22 4500-Cl- G m
Chloride by Automated Colourimetry	1	N/A	2015/06/29	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	8	N/A	2015/06/29	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	8	N/A	2015/06/29	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	13	N/A	2015/06/26	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	7	N/A	2015/06/30	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2015/06/30	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	13	N/A	2015/06/27	BBY6SOP-00026	SM 22 2510 B m
Fluoride	8	N/A	2015/06/26	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	3	N/A	2015/06/29	BBY7SOP-00002	EPA 6020a R1 m
Hardness Total (calculated as CaCO3)	5	N/A	2015/06/30	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	13	N/A	2015/06/30	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	8	N/A	2015/06/30	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	8	2015/06/30	2015/06/30	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	8	N/A	2015/06/30	BBY WI-00033	SM 22 1030E
Sum of cations, anions	3	N/A	2015/06/29	Calc	
Sum of cations, anions	5	N/A	2015/06/30	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	13	N/A	2015/06/30	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	13	N/A	2015/06/29	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Digested LL (total)	5	2015/06/29	2015/06/29	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	3	N/A	2015/06/29	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	5	N/A	2015/06/30	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	3	N/A	2015/06/27	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	8	N/A	2015/06/26	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	8	N/A	2015/06/26	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	8	N/A	2015/06/26	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	8	N/A	2015/06/27	BBY6SOP-00010	SM 22 4500-NO3- I m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08409568, 08409569

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/07/03
Report #: R1989596
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B553960
Received: 2015/06/25, 13:25

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Filter and HNO3 Preserve for Metals	12	N/A	2015/06/26	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	13	N/A	2015/06/27	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	8	N/A	2015/06/26	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	8	2015/06/27	2015/06/29	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	8	N/A	2015/06/29	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	8	2015/06/27	2015/06/29	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.

(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax Redacted

===

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B553960
Report Date: 2015/07/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MN5100	MN5101		MN5102		MN5103		
Sampling Date		2015/06/23 15:30	2015/06/24 08:57		2015/06/23 17:00		2015/06/23 12:00		
COC Number		08409568	08409568		08409568		08409568		
	Units	KZ-9	KZ-13	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Misc. Inorganics									
Acidity (pH 4.5)	mg/L	<0.50	<0.50	7947430	<0.50	7947430	<0.50	0.50	7947430
Acidity (pH 8.3)	mg/L	<0.50	<0.50	7947430	<0.50	7947430	<0.50	0.50	7947430
Calculated Parameters									
Anion Sum	meq/L	2.6	1.2	7946756	3.3	7946756	3.9	N/A	7946756
Cation Sum	meq/L	2.8	1.3	7946756	2.8	7946756	3.9	N/A	7946756
Filter and HNO3 Preservation	N/A	LAB	LAB	7947373	LAB	7947373	LAB	N/A	7947373
Ion Balance	N/A	1.1	1.1	7945958	0.87	7945958	0.99	0.010	7945958
Nitrate (N)	mg/L	0.0115	0.0175	7945712	0.0101	7945712	<0.0020	0.0020	7945712
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	7950501	<0.00050	7950501	0.00052	0.00050	7950501
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	7950510	<0.00050	7950510	0.00056	0.00050	7950510
Fluoride (F)	mg/L	0.057	0.043	7948458	0.057	7948458	0.170	0.010	7948458
Dissolved Organic Carbon (C)	mg/L	2.63	3.77	7952019	3.20	7952019	7.12	0.50	7952019
Alkalinity (Total as CaCO3)	mg/L	101	49.7	7948358	136	7948358	160	0.50	7948358
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	7948358	<0.50	7948358	<0.50	0.50	7948358
Bicarbonate (HCO3)	mg/L	123	60.7	7948358	166	7948358	195	0.50	7948358
Carbonate (CO3)	mg/L	<0.50	<0.50	7948358	<0.50	7948358	<0.50	0.50	7948358
Hydroxide (OH)	mg/L	<0.50	<0.50	7948358	<0.50	7948358	<0.50	0.50	7948358
Anions									
Dissolved Sulphate (SO4)	mg/L	25.8	10.2	7948093	26.0	7948093	35.5	0.50	7948093
Dissolved Chloride (Cl)	mg/L	0.72	0.73	7948088	<0.50	7951325	<0.50	0.50	7948088
MISCELLANEOUS									
True Colour	Col. Unit	14.0	22.0	7948202	13.4	7948202	60.5	5.0	7948202
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	0.0028 (2)	7950665	<0.0020 (1)	7950665	0.0104 (1)	0.0020	7950665
Total Ammonia (N)	mg/L	0.0085	0.0083	7948360	<0.0050	7948360	<0.0050	0.0050	7948360
Nitrate plus Nitrite (N)	mg/L	0.0115	0.0175	7948241	0.0101	7948241	<0.0020	0.0020	7948241
Nitrite (N)	mg/L	<0.0020	<0.0020	7948242	<0.0020	7948242	<0.0020	0.0020	7948242
Total Phosphorus (P)	mg/L	0.0023 (1)	0.0030 (2)	7950670	<0.0020 (1)	7950670	0.0126 (1)	0.0020	7950670
Physical Properties									
Conductivity	uS/cm	244	124	7948362	247	7948362	369	1.0	7948362
pH	pH	8.10	7.86	7948361	8.08	7948361	8.19	N/A	7948361

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.
(2) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MN5100	MN5101		MN5102		MN5103		
Sampling Date		2015/06/23 15:30	2015/06/24 08:57		2015/06/23 17:00		2015/06/23 12:00		
COC Number		08409568	08409568		08409568		08409568		
	Units	KZ-9	KZ-13	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	1.3	1.1	7948915	1.5	7948915	1.7	1.0	7948915
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MN5104		MN5139		MN5140		
Sampling Date		2015/06/23 10:30		2015/06/23 08:30		2015/06/23 13:30		
COC Number		08409568		08409569		08409569		
	Units	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	7947430	<0.50	7947430	<0.50	0.50	7947430
Acidity (pH 8.3)	mg/L	<0.50	7947430	1.03	7947430	<0.50	0.50	7947430
Calculated Parameters								
Anion Sum	meq/L	3.4	7946756	3.5	7946756	0.012	N/A	7946756
Cation Sum	meq/L	3.6	7946756	3.7	7946756	0.0010	N/A	7946756
Filter and HNO3 Preservation	N/A	LAB	7947373	LAB	7947373	LAB	N/A	7947373
Ion Balance	N/A	1.1	7945958	1.1	7945958	0.081 (1)	0.010	7945958
Nitrate (N)	mg/L	<0.0020	7945712	0.0057	7945712	<0.0020	0.0020	7945712
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	7950501	<0.00050	7950501	<0.00050	0.00050	7950501
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00056	7950510	<0.00050	7950510	<0.00050	0.00050	7950510
Fluoride (F)	mg/L	0.120	7948458	0.110	7948458	<0.010	0.010	7948459
Dissolved Organic Carbon (C)	mg/L	4.96	7952019	5.64	7952019	0.65	0.50	7952019
Alkalinity (Total as CaCO3)	mg/L	139	7948358	146	7948358	0.62	0.50	7948358
Alkalinity (PP as CaCO3)	mg/L	<0.50	7948358	<0.50	7948358	<0.50	0.50	7948358
Bicarbonate (HCO3)	mg/L	170	7948358	178	7948358	0.76	0.50	7948358
Carbonate (CO3)	mg/L	<0.50	7948358	<0.50	7948358	<0.50	0.50	7948358
Hydroxide (OH)	mg/L	<0.50	7948358	<0.50	7948358	<0.50	0.50	7948358
Anions								
Dissolved Sulphate (SO4)	mg/L	28.4	7948093	27.8	7948093	<0.50	0.50	7948093
Dissolved Chloride (Cl)	mg/L	<0.50	7948088	0.97	7948088	<0.50	0.50	7948088
MISCELLANEOUS								
True Colour	Col. Unit	28.6	7948202	34.1	7948202	<5.0	5.0	7948202
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0060 (2)	7950665	0.0054 (2)	7950665	<0.0020 (2)	0.0020	7950665
Total Ammonia (N)	mg/L	<0.0050	7948360	0.0086	7948360	<0.0050	0.0050	7948360
Nitrate plus Nitrite (N)	mg/L	<0.0020	7948241	0.0057	7948241	<0.0020	0.0020	7948241
Nitrite (N)	mg/L	<0.0020	7948242	<0.0020	7948242	<0.0020	0.0020	7948242
Total Phosphorus (P)	mg/L	0.0052 (2)	7950670	0.0062 (2)	7950668	<0.0020 (2)	0.0020	7950670
Physical Properties								
Conductivity	uS/cm	317	7948362	327	7948362	1.2	1.0	7948362

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 3 meq/L for both cations and anions).

(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MN5104		MN5139		MN5140		
Sampling Date		2015/06/23 10:30		2015/06/23 08:30		2015/06/23 13:30		
COC Number		08409568		08409569		08409569		
	Units	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
pH	pH	8.24	7948361	7.90	7948361	6.11	N/A	7948361
Physical Properties								
Total Suspended Solids	mg/L	<1.0	7948915	10.6	7948915	<1.0	1.0	7948915

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MN5141	MN5142	MN5143	MN5144	MN5145		
Sampling Date		2015/06/25 13:25	2015/06/24 10:23	2015/06/24 10:35	2015/06/24 11:36	2015/06/24 12:26		
COC Number		08409569	08409569	08409569	08409569	08409569		
	Units	TRIP BLANK	KZ-9 WEST SEEP	KZ-9 EAST SEEP	SEEP 3	SEEP 4	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7947430
Acidity (pH 8.3)	mg/L	<0.50	<0.50	242	<0.50	1.11	0.50	7947430
Calculated Parameters								
Anion Sum	meq/L	0.014					N/A	7946756
Cation Sum	meq/L	0.00090					N/A	7946756
Filter and HNO3 Preservation	N/A		LAB	LAB	LAB	LAB	N/A	7947373
Ion Balance	N/A	0.066 (1)					0.010	7945958
Nitrate (N)	mg/L	<0.0020					0.0020	7945712
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050					0.00050	7950501
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050					0.00050	7950510
Fluoride (F)	mg/L	<0.010					0.010	7948458
Dissolved Organic Carbon (C)	mg/L	<0.50					0.50	7948394
Alkalinity (Total as CaCO3)	mg/L	0.68	204	889	142	104	0.50	7948358
Alkalinity (PP as CaCO3)	mg/L	<0.50	1.12	<0.50	<0.50	<0.50	0.50	7948358
Bicarbonate (HCO3)	mg/L	0.83	246	1090	173	127	0.50	7948358
Carbonate (CO3)	mg/L	<0.50	1.34	<0.50	<0.50	<0.50	0.50	7948358
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	7948358
Anions								
Dissolved Sulphate (SO4)	mg/L	<0.50					0.50	7948093
Dissolved Chloride (Cl)	mg/L	<0.50					0.50	7948088
MISCELLANEOUS								
True Colour	Col. Unit	<5.0	<5.0	7.2	6.1	<5.0	5.0	7948202
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020					0.0020	7950665
Total Ammonia (N)	mg/L	<0.0050					0.0050	7948360
Nitrate plus Nitrite (N)	mg/L	<0.0020					0.0020	7948241
Nitrite (N)	mg/L	<0.0020					0.0020	7948242
Total Phosphorus (P)	mg/L	<0.0020					0.0020	7950670
Physical Properties								
Conductivity	uS/cm	1.3	446	1550	320	269	1.0	7948362
pH	pH	6.04	8.31	6.48	8.06	7.97	N/A	7948361

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 3 meq/L for both cations and anions).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MN5141	MN5142	MN5143	MN5144	MN5145		
Sampling Date		2015/06/25 13:25	2015/06/24 10:23	2015/06/24 10:35	2015/06/24 11:36	2015/06/24 12:26		
COC Number		08409569	08409569	08409569	08409569	08409569		
	Units	TRIP BLANK	KZ-9 WEST SEEP	KZ-9 EAST SEEP	SEEP 3	SEEP 4	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0					1.0	7948915
RDL = Reportable Detection Limit								

Maxxam ID		MN5146		
Sampling Date		2015/06/24 12:40		
COC Number		08409569		
	Units	SEEP 5	RDL	QC Batch
Misc. Inorganics				
Acidity (pH 4.5)	mg/L	<0.50	0.50	7947430
Acidity (pH 8.3)	mg/L	81.6	0.50	7947430
Calculated Parameters				
Filter and HNO3 Preservation	N/A	LAB	N/A	7947373
Misc. Inorganics				
Alkalinity (Total as CaCO3)	mg/L	277	0.50	7948358
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	7948358
Bicarbonate (HCO3)	mg/L	338	0.50	7948358
Carbonate (CO3)	mg/L	<0.50	0.50	7948358
Hydroxide (OH)	mg/L	<0.50	0.50	7948358
MISCELLANEOUS				
True Colour	Col. Unit	6.8	5.0	7948202
Physical Properties				
Conductivity	uS/cm	521	1.0	7948362
pH	pH	6.51	N/A	7948361
RDL = Reportable Detection Limit N/A = Not Applicable				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN5100	MN5101		MN5102		
Sampling Date		2015/06/23 15:30	2015/06/24 08:57		2015/06/23 17:00		
COC Number		08409568	08409568		08409568		
	Units	KZ-9	KZ-13	QC Batch	KZ-19	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	134	61.4	7946718	137	0.50	7946718
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	7951514	<0.0000020	0.0000020	7951514
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00228	0.00784	7950580	0.00593	0.00050	7950580
Dissolved Antimony (Sb)	mg/L	0.000063	0.000027	7950580	0.000061	0.000020	7950580
Dissolved Arsenic (As)	mg/L	0.000208	0.000193	7950580	0.000214	0.000020	7950580
Dissolved Barium (Ba)	mg/L	0.0658	0.0843	7950580	0.0678	0.000020	7950580
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	7950580	<0.000010	0.000010	7950580
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	7950580	<0.0000050	0.0000050	7950580
Dissolved Boron (B)	mg/L	<0.010	<0.010	7950580	<0.010	0.010	7950580
Dissolved Cadmium (Cd)	mg/L	0.0000341	0.0000121	7950580	0.0000346	0.0000050	7950580
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	7950580	<0.00010	0.00010	7950580
Dissolved Cobalt (Co)	mg/L	0.0000263	0.0000160	7950580	0.0000259	0.0000050	7950580
Dissolved Copper (Cu)	mg/L	0.000660	0.000775	7950580	0.000681	0.000050	7950580
Dissolved Iron (Fe)	mg/L	0.0646	0.0247	7950580	0.0957	0.0010	7950580
Dissolved Lead (Pb)	mg/L	0.0000067	0.0000060	7950580	0.0000126	0.0000050	7950580
Dissolved Lithium (Li)	mg/L	0.00156	0.00101	7950580	0.00147	0.00050	7950580
Dissolved Manganese (Mn)	mg/L	0.0183	0.00601	7950580	0.0170	0.000050	7950580
Dissolved Molybdenum (Mo)	mg/L	0.000511	0.000527	7950580	0.000514	0.000050	7950580
Dissolved Nickel (Ni)	mg/L	0.000355	0.000466	7950580	0.000423	0.000020	7950580
Dissolved Phosphorus (P)	mg/L	0.0026	0.0034	7950580	0.0502 (1)	0.0020	7953116
Dissolved Selenium (Se)	mg/L	0.000576	0.000124	7950580	0.000573	0.000040	7950580
Dissolved Silicon (Si)	mg/L	2.50	2.57	7950580	2.51	0.050	7950580
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	7950580	<0.0000050	0.0000050	7950580
Dissolved Strontium (Sr)	mg/L	0.150	0.0625	7950580	0.155	0.000050	7950580
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	7950580	<0.0000020	0.0000020	7950580
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	7950580	<0.00020	0.00020	7950580
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	7950580	<0.00050	0.00050	7950580
Dissolved Uranium (U)	mg/L	0.000707	0.000396	7950580	0.000678	0.0000020	7950580
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	7950580	<0.00020	0.00020	7950580
Dissolved Zinc (Zn)	mg/L	0.00561	0.00158	7950580	0.00597	0.00010	7950580
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	7950580	<0.00010	0.00010	7950580

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN5100	MN5101		MN5102		
Sampling Date		2015/06/23 15:30	2015/06/24 08:57		2015/06/23 17:00		
COC Number		08409568	08409568		08409568		
	Units	**KZ-9**	**KZ-13**	**QC Batch**	**KZ-19**	**RDL**	**QC Batch**
Dissolved Calcium (Ca)	mg/L	45.4	20.9	7945959	46.3	0.050	7945959
Dissolved Magnesium (Mg)	mg/L	5.04	2.26	7945959	5.20	0.050	7945959
Dissolved Potassium (K)	mg/L	1.38	1.40	7945959	1.46	0.050	7945959
Dissolved Sodium (Na)	mg/L	0.877	0.937	7945959	0.993	0.050	7945959
Dissolved Sulphur (S)	mg/L	8.8	3.6	7945959	8.8	3.0	7945959
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN5103		MN5104		MN5139		
Sampling Date		2015/06/23 12:00		2015/06/23 10:30		2015/06/23 08:30		
COC Number		08409568		08409568		08409569		
	Units	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	191	7946718	177	7946718	182	0.50	7946718
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	7951514	<0.0000020	7951514	<0.0000020	0.0000020	7951514
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00591	7950580	0.00413	7950580	0.00352	0.00050	7950580
Dissolved Antimony (Sb)	mg/L	0.000174	7950580	0.000090	7950580	0.000101	0.000020	7950580
Dissolved Arsenic (As)	mg/L	0.00172	7950580	0.00108	7950580	0.000799	0.000020	7950580
Dissolved Barium (Ba)	mg/L	0.0564	7950580	0.0578	7950580	0.0617	0.000020	7950580
Dissolved Beryllium (Be)	mg/L	<0.000010	7950580	<0.000010	7950580	<0.000010	0.000010	7950580
Dissolved Bismuth (Bi)	mg/L	<0.0000050	7950580	<0.0000050	7950580	<0.0000050	0.0000050	7950580
Dissolved Boron (B)	mg/L	<0.010	7950580	<0.010	7950580	<0.010	0.010	7950580
Dissolved Cadmium (Cd)	mg/L	0.0000082	7950580	0.0000098	7950580	0.0000118	0.0000050	7950580
Dissolved Chromium (Cr)	mg/L	<0.00010	7950580	<0.00010	7950580	<0.00010	0.00010	7950580
Dissolved Cobalt (Co)	mg/L	0.0000546	7950580	0.0000379	7950580	0.0000271	0.0000050	7950580
Dissolved Copper (Cu)	mg/L	0.000607	7950580	0.000575	7950580	0.000845	0.000050	7950580
Dissolved Iron (Fe)	mg/L	0.182	7950580	0.0899	7950580	0.0405	0.0010	7950580
Dissolved Lead (Pb)	mg/L	0.0000054	7950580	0.0000066	7950580	0.0000112	0.0000050	7950580
Dissolved Lithium (Li)	mg/L	0.00355 (1)	7953116	0.00218	7950580	0.00358	0.00050	7950580
Dissolved Manganese (Mn)	mg/L	0.0177	7950580	0.00822	7950580	0.00212	0.000050	7950580
Dissolved Molybdenum (Mo)	mg/L	0.00187	7950580	0.00120	7950580	0.00110	0.000050	7950580
Dissolved Nickel (Ni)	mg/L	0.00267	7950580	0.00143	7950580	0.00123	0.000020	7950580
Dissolved Phosphorus (P)	mg/L	0.0100	7950580	0.0191 (1)	7953116	0.0053	0.0020	7950580
Dissolved Selenium (Se)	mg/L	0.000575	7950580	0.000493	7950580	0.000449	0.000040	7950580
Dissolved Silicon (Si)	mg/L	3.87 (1)	7953116	3.15	7950580	3.65	0.050	7950580
Dissolved Silver (Ag)	mg/L	<0.0000050	7950580	<0.0000050	7950580	<0.0000050	0.0000050	7950580
Dissolved Strontium (Sr)	mg/L	0.155	7950580	0.166	7950580	0.170	0.000050	7950580
Dissolved Thallium (Tl)	mg/L	<0.0000020	7950580	<0.0000020	7950580	<0.0000020	0.0000020	7950580
Dissolved Tin (Sn)	mg/L	<0.00020	7950580	<0.00020	7950580	<0.00020	0.00020	7950580
Dissolved Titanium (Ti)	mg/L	<0.00050	7950580	<0.00050	7950580	<0.00050	0.00050	7950580
Dissolved Uranium (U)	mg/L	0.00275	7950580	0.00197	7950580	0.00182	0.0000020	7950580
Dissolved Vanadium (V)	mg/L	<0.00020	7950580	<0.00020	7950580	<0.00020	0.00020	7950580
Dissolved Zinc (Zn)	mg/L	0.00090	7950580	0.00071	7950580	0.00031	0.00010	7950580
Dissolved Zirconium (Zr)	mg/L	<0.00010	7950580	<0.00010	7950580	<0.00010	0.00010	7950580

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN5103		MN5104		MN5139		
Sampling Date		2015/06/23 12:00		2015/06/23 10:30		2015/06/23 08:30		
COC Number		08409568		08409568		08409569		
	Units	**KZ-21**	**QC Batch**	**KZ-22**	**QC Batch**	**KZ-26**	**RDL**	**QC Batch**
Dissolved Calcium (Ca)	mg/L	48.4	7945959	48.6	7945959	49.8	0.050	7945959
Dissolved Magnesium (Mg)	mg/L	17.1	7945959	13.5	7945959	13.9	0.050	7945959
Dissolved Potassium (K)	mg/L	1.22	7945959	1.37	7945959	1.37	0.050	7945959
Dissolved Sodium (Na)	mg/L	1.09	7945959	1.13	7945959	1.30	0.050	7945959
Dissolved Sulphur (S)	mg/L	11.9	7945959	10.1	7945959	9.3	3.0	7945959
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN5140		MN5141	MN5142	MN5143		
Sampling Date		2015/06/23 13:30		2015/06/25 13:25	2015/06/24 10:23	2015/06/24 10:35		
COC Number		08409569		08409569	08409569	08409569		
	Units	KZ-28	QC Batch	TRIP BLANK	KZ-9 WEST SEEP	KZ-9 EAST SEEP	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	<0.50	7946718	<0.50	260	993	0.50	7946718
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	7951514	<0.0000020			0.0000020	7951514
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00219	7950580	<0.00050	0.00091	0.0585	0.00050	7950580
Dissolved Antimony (Sb)	mg/L	<0.000020	7950580	<0.000020	0.000025	<0.000020	0.000020	7950580
Dissolved Arsenic (As)	mg/L	<0.000020	7950580	<0.000020	0.000131	0.00188	0.000020	7950580
Dissolved Barium (Ba)	mg/L	0.000021	7950580	<0.000020	0.180	0.171	0.000020	7950580
Dissolved Beryllium (Be)	mg/L	<0.000010	7950580	<0.000010	<0.000010	0.000283	0.000010	7950580
Dissolved Bismuth (Bi)	mg/L	<0.0000050	7950580	<0.0000050	<0.0000050	<0.0000050	0.0000050	7950580
Dissolved Boron (B)	mg/L	<0.010	7950580	<0.010	<0.010	<0.010	0.010	7950580
Dissolved Cadmium (Cd)	mg/L	<0.0000050	7950580	<0.0000050	0.0000386	0.0000505	0.0000050	7950580
Dissolved Chromium (Cr)	mg/L	<0.00010	7950580	<0.00010	0.00020	<0.00010	0.00010	7950580
Dissolved Cobalt (Co)	mg/L	<0.0000050	7950580	<0.0000050	0.0000059	0.00267	0.0000050	7950580
Dissolved Copper (Cu)	mg/L	<0.000050	7950580	<0.000050	0.000115	<0.000050	0.000050	7950580
Dissolved Iron (Fe)	mg/L	<0.0010	7950580	<0.0010	<0.0010	3.89	0.0010	7950580
Dissolved Lead (Pb)	mg/L	0.0000059	7950580	<0.0000050	<0.0000050	<0.0000050	0.0000050	7950580
Dissolved Lithium (Li)	mg/L	<0.00050	7950580	<0.00050	0.00197	0.0758	0.00050	7950580
Dissolved Manganese (Mn)	mg/L	0.000159	7950580	<0.000050	0.000096	2.16	0.000050	7950580
Dissolved Molybdenum (Mo)	mg/L	<0.000050	7950580	<0.000050	0.00153	0.000443	0.000050	7950580
Dissolved Nickel (Ni)	mg/L	<0.000020	7950580	<0.000020	0.000144	0.00789	0.000020	7950580
Dissolved Phosphorus (P)	mg/L	0.0109 (1)	7953116	<0.0020	0.0026	0.0045	0.0020	7950580
Dissolved Selenium (Se)	mg/L	<0.000040	7950580	<0.000040	0.00247	<0.000040	0.000040	7950580
Dissolved Silicon (Si)	mg/L	<0.050	7950580	<0.050	3.67	11.9	0.050	7950580
Dissolved Silver (Ag)	mg/L	<0.0000050	7950580	<0.0000050	<0.0000050	<0.0000050	0.0000050	7950580
Dissolved Strontium (Sr)	mg/L	0.000094	7950580	<0.000050	0.269	1.33	0.000050	7950580
Dissolved Thallium (Tl)	mg/L	<0.0000020	7950580	<0.0000020	<0.0000020	<0.0000020	0.0000020	7950580
Dissolved Tin (Sn)	mg/L	<0.00020	7950580	<0.00020	<0.00020	<0.00020	0.00020	7950580
Dissolved Titanium (Ti)	mg/L	<0.00050	7950580	<0.00050	<0.00050	<0.00050	0.00050	7950580
Dissolved Uranium (U)	mg/L	<0.0000020	7950580	<0.0000020	0.00301	0.00190	0.0000020	7950580
Dissolved Vanadium (V)	mg/L	<0.00020	7950580	<0.00020	<0.00020	<0.00020	0.00020	7950580
Dissolved Zinc (Zn)	mg/L	<0.00010	7950580	<0.00010	0.00029	0.0302	0.00010	7950580
Dissolved Zirconium (Zr)	mg/L	<0.00010	7950580	<0.00010	<0.00010	0.00033	0.00010	7950580

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN5140		MN5141	MN5142	MN5143		
Sampling Date		2015/06/23 13:30		2015/06/25 13:25	2015/06/24 10:23	2015/06/24 10:35		
COC Number		08409569		08409569	08409569	08409569		
	Units	KZ-28	QC Batch	TRIP BLANK	KZ-9 WEST SEEP	KZ-9 EAST SEEP	RDL	QC Batch
Dissolved Calcium (Ca)	mg/L	<0.050	7945959	<0.050	88.1	339	0.050	7945959
Dissolved Magnesium (Mg)	mg/L	<0.050	7945959	<0.050	9.73	35.8	0.050	7945959
Dissolved Potassium (K)	mg/L	<0.050	7945959	<0.050	1.17	6.13	0.050	7945959
Dissolved Sodium (Na)	mg/L	<0.050	7945959	<0.050	1.09	9.88	0.050	7945959
Dissolved Sulphur (S)	mg/L	<3.0	7945959	<3.0	13.1	7.5	3.0	7945959
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN5144	MN5145	MN5146		
Sampling Date		2015/06/24 11:36	2015/06/24 12:26	2015/06/24 12:40		
COC Number		08409569	08409569	08409569		
	Units	SEEP 3	SEEP 4	SEEP 5	RDL	QC Batch
Misc. Inorganics						
Dissolved Hardness (CaCO3)	mg/L	173	142	267	0.50	7946718
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	0.00261	0.00126	0.00257	0.00050	7950580
Dissolved Antimony (Sb)	mg/L	<0.000020	<0.000020	<0.000020	0.000020	7950580
Dissolved Arsenic (As)	mg/L	0.000175	0.000056	0.000264	0.000020	7950580
Dissolved Barium (Ba)	mg/L	0.130	0.106	0.150	0.000020	7950580
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	7950580
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	7950580
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	7950580
Dissolved Cadmium (Cd)	mg/L	0.0000092	0.0000137	0.0000141	0.0000050	7950580
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	7950580
Dissolved Cobalt (Co)	mg/L	0.0000099	0.0000079	0.000552	0.0000050	7950580
Dissolved Copper (Cu)	mg/L	0.000120	0.000295	0.000151	0.000050	7950580
Dissolved Iron (Fe)	mg/L	<0.0010	<0.0010	0.0333	0.0010	7950580
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	7950580
Dissolved Lithium (Li)	mg/L	<0.00050	0.00053	0.0178	0.00050	7950580
Dissolved Manganese (Mn)	mg/L	0.000138	0.000087	1.10	0.000050	7950580
Dissolved Molybdenum (Mo)	mg/L	0.000594	0.000493	<0.000050	0.000050	7950580
Dissolved Nickel (Ni)	mg/L	0.000106	0.000159	0.00112	0.000020	7950580
Dissolved Phosphorus (P)	mg/L	0.0027	<0.0020	<0.0020	0.0020	7950580
Dissolved Selenium (Se)	mg/L	0.000757	0.000709	0.000043	0.000040	7950580
Dissolved Silicon (Si)	mg/L	2.69	2.72	11.2	0.050	7950580
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	7950580
Dissolved Strontium (Sr)	mg/L	0.225	0.187	0.336	0.000050	7950580
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	7950580
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	7950580
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	7950580
Dissolved Uranium (U)	mg/L	0.000970	0.000944	0.0000684	0.0000020	7950580
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	7950580
Dissolved Zinc (Zn)	mg/L	0.00023	0.00026	0.00856	0.00010	7950580
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	7950580
Dissolved Calcium (Ca)	mg/L	65.4	52.9	88.3	0.050	7945959
Dissolved Magnesium (Mg)	mg/L	2.27	2.37	11.4	0.050	7945959

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MN5144	MN5145	MN5146		
Sampling Date		2015/06/24 11:36	2015/06/24 12:26	2015/06/24 12:40		
COC Number		08409569	08409569	08409569		
	Units	SEEP 3	SEEP 4	SEEP 5	RDL	QC Batch
Dissolved Potassium (K)	mg/L	1.44	1.78	1.93	0.050	7945959
Dissolved Sodium (Na)	mg/L	0.845	0.670	3.26	0.050	7945959
Dissolved Sulphur (S)	mg/L	8.3	10.3	<3.0	3.0	7945959
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MN5100	MN5140	MN5141		
Sampling Date		2015/06/23 15:30	2015/06/23 13:30	2015/06/25 13:25		
COC Number		08409568	08409569	08409569		
	Units	KZ-9	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	186	<0.50	<0.50	0.50	7945871
Elements						
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	7951485
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.0626	<0.00050	<0.00050	0.00050	7947498
Total Antimony (Sb)	mg/L	0.000060	<0.000020	<0.000020	0.000020	7947498
Total Arsenic (As)	mg/L	0.000455	<0.000020	<0.000020	0.000020	7947498
Total Barium (Ba)	mg/L	0.0609	<0.000020	<0.000020	0.000020	7947498
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	7947498
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	7947498
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	7947498
Total Cadmium (Cd)	mg/L	0.0000840	<0.0000050	<0.0000050	0.0000050	7947498
Total Chromium (Cr)	mg/L	0.00015	<0.00010	<0.00010	0.00010	7947498
Total Cobalt (Co)	mg/L	0.000147	<0.0000050	<0.0000050	0.0000050	7947498
Total Copper (Cu)	mg/L	0.00105	<0.000050	<0.000050	0.000050	7947498
Total Iron (Fe)	mg/L	0.866	<0.0010	<0.0010	0.0010	7947498
Total Lead (Pb)	mg/L	0.000482	<0.0000050	<0.0000050	0.0000050	7947498
Total Lithium (Li)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	7947498
Total Manganese (Mn)	mg/L	0.0434	<0.000050	<0.000050	0.000050	7947498
Total Molybdenum (Mo)	mg/L	0.000471	<0.000050	<0.000050	0.000050	7947498
Total Nickel (Ni)	mg/L	0.000481	0.000129	<0.000020	0.000020	7947498
Total Phosphorus (P)	mg/L	0.0116	<0.0020	<0.0020	0.0020	7947498
Total Selenium (Se)	mg/L	0.000973	<0.000040	<0.000040	0.000040	7947498
Total Silicon (Si)	mg/L	2.38	<0.050	<0.050	0.050	7947498
Total Silver (Ag)	mg/L	0.0000107	0.0000083	<0.0000050	0.0000050	7947498
Total Strontium (Sr)	mg/L	0.139	<0.000050	<0.000050	0.000050	7947498
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	7947498
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	7947498
Total Titanium (Ti)	mg/L	0.00442	<0.00050	<0.00050	0.00050	7947498
Total Uranium (U)	mg/L	0.000624	<0.0000020	<0.0000020	0.0000020	7947498
Total Vanadium (V)	mg/L	0.00032	<0.00020	<0.00020	0.00020	7947498
Total Zinc (Zn)	mg/L	0.0137	<0.00010	<0.00010	0.00010	7947498
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	7947498
Total Calcium (Ca)	mg/L	66.6	<0.050	<0.050	0.050	7945960
Total Magnesium (Mg)	mg/L	4.75	<0.050	<0.050	0.050	7945960
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MN5100	MN5140	MN5141		
Sampling Date		2015/06/23 15:30	2015/06/23 13:30	2015/06/25 13:25		
COC Number		08409568	08409569	08409569		
	Units	**KZ-9**	**KZ-28**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	1.19	<0.050	<0.050	0.050	7945960
Total Sodium (Na)	mg/L	0.748	<0.050	<0.050	0.050	7945960
Total Sulphur (S)	mg/L	8.7	<3.0	<3.0	3.0	7945960
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MN5101	MN5102	MN5103	MN5104	MN5139		
Sampling Date		2015/06/24 08:57	2015/06/23 17:00	2015/06/23 12:00	2015/06/23 10:30	2015/06/23 08:30		
COC Number		08409568	08409568	08409568	08409568	08409569		
	Units	KZ-13	KZ-19	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	60.8	135	212	165	178	0.50	7945871
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	7951485
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0293	0.0219	0.0264	0.0123	0.101	0.0030	7950238
Total Antimony (Sb)	mg/L	<0.000050	0.000071	0.000174	0.000092	0.000140	0.000050	7950238
Total Arsenic (As)	mg/L	0.000226	0.000263	0.00236	0.00124	0.00119	0.000020	7950238
Total Barium (Ba)	mg/L	0.0864	0.0644	0.0551	0.0564	0.0667	0.00010	7950238
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000013	0.000010	7950238
Total Bismuth (Bi)	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	7950238
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	7950238
Total Cadmium (Cd)	mg/L	0.0000197	0.0000488	0.0000149	0.0000148	0.0000310	0.0000050	7950238
Total Chromium (Cr)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	7950238
Total Cobalt (Co)	mg/L	0.000030	0.000048	0.000093	0.000054	0.000141	0.000010	7950238
Total Copper (Cu)	mg/L	0.00084	0.00078	0.00108	0.00106	0.00162	0.00020	7950238
Total Iron (Fe)	mg/L	0.0664	0.243	0.443	0.196	0.309	0.0050	7950238
Total Lead (Pb)	mg/L	<0.000050	0.000084	<0.000050	<0.000050	0.000221	0.000050	7950238
Total Lithium (Li)	mg/L	0.00087	0.00170	0.00262	0.00229	0.00350	0.00050	7950238
Total Manganese (Mn)	mg/L	0.0160	0.0238	0.0418	0.0202	0.0174	0.00010	7950238
Total Molybdenum (Mo)	mg/L	0.000548	0.000517	0.00184	0.00121	0.00115	0.000050	7950238
Total Nickel (Ni)	mg/L	0.00063	0.00044	0.00312	0.00162	0.00183	0.00010	7950238
Total Phosphorus (P)	mg/L	<0.010	0.017	0.026	0.011	0.030	0.010	7950238
Total Selenium (Se)	mg/L	0.000138	0.000569	0.000566	0.000462	0.000426	0.000040	7950238
Total Silicon (Si)	mg/L	2.54	2.22	3.05	2.81	3.21	0.10	7950238
Total Silver (Ag)	mg/L	0.0000258	0.0000285	0.0000180	0.0000155	0.0000133	0.0000050	7950238
Total Strontium (Sr)	mg/L	0.0609	0.134	0.156	0.152	0.159	0.000050	7950238
Total Thallium (Tl)	mg/L	0.0000049	0.0000042	0.0000035	0.0000026	0.0000043	0.0000020	7950238
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7950238
Total Titanium (Ti)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	7950238
Total Uranium (U)	mg/L	0.000410	0.000707	0.00268	0.00191	0.00188	0.0000050	7950238
Total Vanadium (V)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00056	0.00050	7950238
Total Zinc (Zn)	mg/L	0.0028	0.0080	0.0021	0.0018	0.0024	0.0010	7950238
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00012	<0.00010	0.00020	0.00010	7950238
Total Calcium (Ca)	mg/L	20.5	45.9	54.3	45.0	47.5	0.25	7945960
Total Magnesium (Mg)	mg/L	2.32	5.01	18.6	12.9	14.3	0.25	7945960

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MN5101	MN5102	MN5103	MN5104	MN5139		
Sampling Date		2015/06/24 08:57	2015/06/23 17:00	2015/06/23 12:00	2015/06/23 10:30	2015/06/23 08:30		
COC Number		08409568	08409568	08409568	08409568	08409569		
	Units	KZ-13	KZ-19	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Total Potassium (K)	mg/L	1.43	1.20	1.18	1.17	1.19	0.25	7945960
Total Sodium (Na)	mg/L	0.90	0.84	1.12	1.08	1.29	0.25	7945960
Total Sulphur (S)	mg/L	<15	<15	<15	<15	<15	15	7945960
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	7.7°C
Package 2	8.7°C

Sample MN5102, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MN5103, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MN5104, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MN5140, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7947430	Acidity (pH 4.5)	2015/06/26					<0.50	mg/L	NC	20
7947430	Acidity (pH 8.3)	2015/06/26			95	80 - 120	<0.50	mg/L	NC	20
7947498	Total Aluminum (Al)	2015/06/27	102	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
7947498	Total Antimony (Sb)	2015/06/27	97	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
7947498	Total Arsenic (As)	2015/06/27	96	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
7947498	Total Barium (Ba)	2015/06/27	105	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
7947498	Total Beryllium (Be)	2015/06/27	102	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20
7947498	Total Bismuth (Bi)	2015/06/27	93	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
7947498	Total Boron (B)	2015/06/27					<0.010	mg/L	NC	20
7947498	Total Cadmium (Cd)	2015/06/27	85	80 - 120	94	80 - 120	<0.0000050	mg/L	NC	20
7947498	Total Chromium (Cr)	2015/06/27	95	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
7947498	Total Cobalt (Co)	2015/06/27	96	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
7947498	Total Copper (Cu)	2015/06/27	96	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
7947498	Total Iron (Fe)	2015/06/27	108	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20
7947498	Total Lead (Pb)	2015/06/27	97	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
7947498	Total Lithium (Li)	2015/06/27	89	80 - 120	82	80 - 120	<0.00050	mg/L	NC	20
7947498	Total Manganese (Mn)	2015/06/27	95	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
7947498	Total Molybdenum (Mo)	2015/06/27	97	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
7947498	Total Nickel (Ni)	2015/06/27	95	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
7947498	Total Phosphorus (P)	2015/06/27					<0.0020	mg/L	NC	20
7947498	Total Selenium (Se)	2015/06/27	98	80 - 120	96	80 - 120	<0.000040	mg/L	NC	20
7947498	Total Silicon (Si)	2015/06/27					<0.050	mg/L	NC	20
7947498	Total Silver (Ag)	2015/06/27	84	80 - 120	78 (1)	80 - 120	<0.0000050	mg/L	NC	20
7947498	Total Strontium (Sr)	2015/06/27	92	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
7947498	Total Thallium (Tl)	2015/06/27	91	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
7947498	Total Tin (Sn)	2015/06/27	98	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
7947498	Total Titanium (Ti)	2015/06/27	98	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
7947498	Total Uranium (U)	2015/06/27	98	80 - 120	111	80 - 120	<0.0000020	mg/L	NC	20
7947498	Total Vanadium (V)	2015/06/27	97	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
7947498	Total Zinc (Zn)	2015/06/27	95	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
7947498	Total Zirconium (Zr)	2015/06/27					<0.00010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7948088	Dissolved Chloride (Cl)	2015/06/26	97	80 - 120	98	80 - 120	<0.50	mg/L	NC	20
7948093	Dissolved Sulphate (SO4)	2015/06/26	89	80 - 120	91	80 - 120	<0.50	mg/L	NC	20
7948202	True Colour	2015/06/26			109	80 - 120	<5.0	Col. Unit	3.5	20
7948241	Nitrate plus Nitrite (N)	2015/06/26	99	80 - 120	99	80 - 120	<0.0020	mg/L	NC	25
7948242	Nitrite (N)	2015/06/26	98	80 - 120	104	80 - 120	<0.0020	mg/L	NC	25
7948358	Alkalinity (PP as CaCO3)	2015/06/27					<0.50	mg/L	NC	20
7948358	Alkalinity (Total as CaCO3)	2015/06/27	94	80 - 120	102	80 - 120	<0.50	mg/L	0.82	20
7948358	Bicarbonate (HCO3)	2015/06/27					<0.50	mg/L	0.87	20
7948358	Carbonate (CO3)	2015/06/27					<0.50	mg/L	NC	20
7948358	Hydroxide (OH)	2015/06/27					<0.50	mg/L	NC	20
7948360	Total Ammonia (N)	2015/06/26	98	80 - 120	97	80 - 120	<0.0050	mg/L	NC	20
7948361	pH	2015/06/27			102	97 - 103			1.8	N/A
7948362	Conductivity	2015/06/27			101	80 - 120	1.1, RDL=1.0	uS/cm	1.3	20
7948394	Dissolved Organic Carbon (C)	2015/06/30	100	80 - 120	105	80 - 120	<0.50	mg/L	NC	20
7948458	Fluoride (F)	2015/06/26			106	80 - 120	<0.010	mg/L		
7948459	Fluoride (F)	2015/06/26	106	80 - 120	104	80 - 120	<0.010	mg/L	NC	20
7948915	Total Suspended Solids	2015/06/29			107	80 - 120	<1.0	mg/L		
7950238	Total Aluminum (Al)	2015/06/29	107	80 - 120	108	80 - 120	<0.0030	mg/L	8.5	20
7950238	Total Antimony (Sb)	2015/06/29	105	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
7950238	Total Arsenic (As)	2015/06/29	101	80 - 120	101	80 - 120	<0.000020	mg/L	1.5	20
7950238	Total Barium (Ba)	2015/06/29	NC	80 - 120	105	80 - 120	<0.00010	mg/L	3.0	20
7950238	Total Beryllium (Be)	2015/06/29	109	80 - 120	106	80 - 120	0.000010, RDL=0.000010	mg/L	NC	20
7950238	Total Bismuth (Bi)	2015/06/29	104	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
7950238	Total Boron (B)	2015/06/29					<0.050	mg/L	NC	20
7950238	Total Cadmium (Cd)	2015/06/29	100	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
7950238	Total Chromium (Cr)	2015/06/29	102	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
7950238	Total Cobalt (Co)	2015/06/29	100	80 - 120	99	80 - 120	<0.000010	mg/L	NC	20
7950238	Total Copper (Cu)	2015/06/29	104	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
7950238	Total Iron (Fe)	2015/06/29	NC	80 - 120	109	80 - 120	<0.0050	mg/L	1.2	20
7950238	Total Lead (Pb)	2015/06/29	104	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7950238	Total Lithium (Li)	2015/06/29	102	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
7950238	Total Manganese (Mn)	2015/06/29	NC	80 - 120	102	80 - 120	<0.00010	mg/L	0.62	20
7950238	Total Molybdenum (Mo)	2015/06/29	NC	80 - 120	104	80 - 120	<0.000050	mg/L	1.1	20
7950238	Total Nickel (Ni)	2015/06/29	102	80 - 120	102	80 - 120	<0.00010	mg/L	2.1	20
7950238	Total Phosphorus (P)	2015/06/29					<0.010	mg/L	NC	20
7950238	Total Selenium (Se)	2015/06/29	94	80 - 120	91	80 - 120	<0.000040	mg/L	NC	20
7950238	Total Silicon (Si)	2015/06/29					<0.10	mg/L	4.8	20
7950238	Total Silver (Ag)	2015/06/29	117	80 - 120	94	80 - 120	0.0000057, RDL=0.0000050	mg/L	NC	20
7950238	Total Strontium (Sr)	2015/06/29	NC	80 - 120	96	80 - 120	<0.000050	mg/L	0.16	20
7950238	Total Thallium (Tl)	2015/06/29	93	80 - 120	93	80 - 120	<0.0000020	mg/L	NC	20
7950238	Total Tin (Sn)	2015/06/29	105	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
7950238	Total Titanium (Ti)	2015/06/29	101	80 - 120	100	80 - 120	<0.0050	mg/L	NC	20
7950238	Total Uranium (U)	2015/06/29	115	80 - 120	108	80 - 120	<0.0000050	mg/L	3.1	20
7950238	Total Vanadium (V)	2015/06/29	106	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
7950238	Total Zinc (Zn)	2015/06/29	96	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
7950238	Total Zirconium (Zr)	2015/06/29					<0.00010	mg/L	NC	20
7950501	Strong Acid Dissoc. Cyanide (CN)	2015/06/29	104	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
7950510	Weak Acid Dissoc. Cyanide (CN)	2015/06/29	103	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
7950580	Dissolved Aluminum (Al)	2015/06/29	100	80 - 120	110	80 - 120	<0.00050	mg/L	NC	20
7950580	Dissolved Antimony (Sb)	2015/06/29	99	80 - 120	111	80 - 120	<0.000020	mg/L	NC	20
7950580	Dissolved Arsenic (As)	2015/06/29	99	80 - 120	108	80 - 120	<0.000020	mg/L	NC	20
7950580	Dissolved Barium (Ba)	2015/06/29	104	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
7950580	Dissolved Beryllium (Be)	2015/06/29	100	80 - 120	110	80 - 120	<0.000010	mg/L	NC	20
7950580	Dissolved Bismuth (Bi)	2015/06/29	97	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
7950580	Dissolved Boron (B)	2015/06/29					<0.010	mg/L	NC	20
7950580	Dissolved Cadmium (Cd)	2015/06/29	98	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
7950580	Dissolved Chromium (Cr)	2015/06/29	96	80 - 120	107	80 - 120	<0.00010	mg/L	NC	20
7950580	Dissolved Cobalt (Co)	2015/06/29	98	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
7950580	Dissolved Copper (Cu)	2015/06/29	96	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20
7950580	Dissolved Iron (Fe)	2015/06/29	106	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7950580	Dissolved Lead (Pb)	2015/06/29	99	80 - 120	109	80 - 120	<0.0000050	mg/L	NC	20
7950580	Dissolved Lithium (Li)	2015/06/29	100	80 - 120	109	80 - 120	<0.00050	mg/L	NC	20
7950580	Dissolved Manganese (Mn)	2015/06/29	94	80 - 120	106	80 - 120	<0.000050	mg/L	NC	20
7950580	Dissolved Molybdenum (Mo)	2015/06/29	96	80 - 120	109	80 - 120	<0.000050	mg/L	NC	20
7950580	Dissolved Nickel (Ni)	2015/06/29	96	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
7950580	Dissolved Phosphorus (P)	2015/06/29					0.0025, RDL=0.0020	mg/L		
7950580	Dissolved Selenium (Se)	2015/06/29	97	80 - 120	107	80 - 120	<0.000040	mg/L	NC	20
7950580	Dissolved Silicon (Si)	2015/06/29					<0.050	mg/L	NC	20
7950580	Dissolved Silver (Ag)	2015/06/29	93	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
7950580	Dissolved Strontium (Sr)	2015/06/29	93	80 - 120	110	80 - 120	<0.000050	mg/L	NC	20
7950580	Dissolved Thallium (Tl)	2015/06/29	95	80 - 120	105	80 - 120	<0.0000020	mg/L	NC	20
7950580	Dissolved Tin (Sn)	2015/06/29	99	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
7950580	Dissolved Titanium (Ti)	2015/06/29	95	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
7950580	Dissolved Uranium (U)	2015/06/29	104	80 - 120	105	80 - 120	<0.0000020	mg/L	NC	20
7950580	Dissolved Vanadium (V)	2015/06/29	98	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
7950580	Dissolved Zinc (Zn)	2015/06/29	102	80 - 120	106	80 - 120	<0.00010	mg/L	NC	20
7950580	Dissolved Zirconium (Zr)	2015/06/29					<0.00010	mg/L	NC	20
7950665	Dissolved Phosphorus (P)	2015/06/29	NC	80 - 120	94	80 - 120	<0.0020	mg/L	0.51	20
7950668	Total Phosphorus (P)	2015/06/29			95	80 - 120	<0.0020	mg/L		
7950670	Total Phosphorus (P)	2015/06/29	96	80 - 120	95	80 - 120	<0.0020	mg/L	0.32	20
7951325	Dissolved Chloride (Cl)	2015/06/29	100	80 - 120	104	80 - 120	<0.50	mg/L		
7951485	Total Mercury (Hg)	2015/06/30	107	80 - 120	116	80 - 120	<0.0000020	mg/L	NC	20
7951514	Dissolved Mercury (Hg)	2015/06/30	89	80 - 120	88	80 - 120	<0.0000020	mg/L	NC	20
7952019	Dissolved Organic Carbon (C)	2015/06/30	98	80 - 120	105	80 - 120	<0.50	mg/L	4.6	20
7953116	Dissolved Lithium (Li)	2015/07/02			102	80 - 120	<0.00050	mg/L		
7953116	Dissolved Phosphorus (P)	2015/07/02					<0.0020	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7953116	Dissolved Silicon (Si)	2015/07/02					<0.050	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Blank Spike outside acceptance criteria (10% of analytes failure allowed).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B553960
Report Date: 2015/07/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Name Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnab 65-8566

CHAIN OF CUSTODY RECORD

08409568

BBY FCD-00077/05

Page 1 2

B553960

Invoice Information		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name: BMC MINERALS LTD.	Company Name: ALEXCO ENVIRONMENTAL	Quotation #: B50743		x Regular TAT 5 days (Most analyses)
Contact Name:	Contact Name: KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 530-1130 WEST PENDER ST	Address: UNIT 3 151 INDUCSTRIAL RD	Project #: BMC-15-01		Rush TAT (Surcharges will be applied)
Vancouver, BC PC: V6E 4A4	Whitehorse, YK PC: V1A 2V3	Site Location: Kudz Ze Kayah		Same Day / 2 Days / 1 Day / 3 Days
Phone:	Phone: (867) 668-6463	Site #:		
Email:	Email: kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
BC CSR Soil / BC CSR Water / CCME (Specify) / Other (Specify) / Drinking Water / BC Water Quality	Return Cooler / Ship Sample Bottles (Please Specify) / USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	~~KZ-8~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
2	~~KZ-8~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
3	KZ-9	MN5100	2015/06/23	15:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
4	KZ-13	MN5101	2015/06/24	8:57	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
5	~~KZ-15~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
6	~~KZ-16~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
7	~~KZ-18~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
8	KZ-19	MN5102	2015/06/23	17:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
9	KZ-21	MN5103	2015/06/23	12:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
10	KZ-22	MN5104	2015/06/23	10:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA	NA	9.9.8
NA	NA	7.9.7

COOLING MEDIA PRESENT Y / N

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2015/06/24		Signature Redacted	2015/06/25	13:25	B553960

Maxxam
A Bureau Veritas Group Company

Burnaby: 460 66

CHAIN OF CUSTODY RECORD

08409569

BBY FCD-00077/05

Page 2 2

B553960

Invoice Information		Project Information		Turnaround Time (TAT) Required
Company Name: BMC MINERALS LTD.	Company Name: ALEXCO ENVIRONMENTAL	Quotation #: B50743		[x] Regular TAT 5 days (Most analyses)
Contact Name:	Contact Name: KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 530-1130 WEST PENDER ST	Address: UNIT 3 151 INDUCSTRIAL RD	Project #: BMC-15-01		Rush TAT (Surcharges will be applied)
Vancouver, BC PC: V6E 4A4	Whitehorse, YK PC: V1A 2V3	Site Location: Kudz Ze Kayah		[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:	Phone: (867) 668-6463	Site #:		Date Required:
Email:	Email: kwoloshyn@alexcoresource.com	Sampled By:		Rush Confirmation #:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-26	MN5134	2015/06/23	8:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
2	KZ-28	MN5140	2015/06/23	13:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
3	Trip Blank	MN5141	—	—	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
4	KZ-9 west seep	MN5142	2015/06/24	10:23	water		x					x	x	x	x							3		analyses included
5	KZ-9 east seep	MN5143	2015/06/24	10:35	water		x					x	x	x	x							3		under "general"
6	seep 3	MN5144	2015/06/24	11:36	water		x					x	x	x	x							3		
7	seep 4	MN5145	2015/06/24	12:26	water		x					x	x	x	v							3		
8	seep 5	MN5146	2015/06/24	12:40	water		x					x	x	x	x							3		
9																								
10																								

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA	NA	9.9 8
NA	NA	7.9 7

COOLING MEDIA PRESENT (Y) N

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2015/06/24		Signature Redacted	2015/06/25	13:25	B553960

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08412400, 08412401

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/08/13
Report #: R2023357
Version: 2 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B565281
Received: 2015/07/30, 14:15

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	11	N/A	2015/07/31	BBY6SOP-00037	SM 22 2310 B m
Acidity pH 4.5 & pH 8.3 (as CaCO3)	4	N/A	2015/08/01	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	12	2015/07/31	2015/07/31	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	1	2015/07/31	2015/08/01	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	2	2015/08/01	2015/08/01	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	15	N/A	2015/08/04	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	13	N/A	2015/08/04	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	13	N/A	2015/08/11	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	15	N/A	2015/08/01	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	12	N/A	2015/08/05	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2015/08/05	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	12	N/A	2015/07/31	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	3	N/A	2015/08/01	BBY6SOP-00026	SM 22 2510 B m
Fluoride	14	N/A	2015/08/04	BBY6SOP-00048	SM 22 4500-F C m
Fluoride	1	N/A	2015/08/05	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	13	N/A	2015/08/05	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	14	N/A	2015/08/05	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	1	N/A	2015/08/06	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	13	N/A	2015/08/05	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	12	2015/08/04	2015/08/04	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	1	2015/08/05	2015/08/05	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	13	N/A	2015/08/05	BBY WI-00033	SM 22 1030E
Ion Balance	2	N/A	2015/08/06	BBY WI-00033	SM 22 1030E
Sum of cations, anions	15	N/A	2015/08/05	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	14	N/A	2015/08/05	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2015/08/06	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	15	N/A	2015/08/04	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	13	N/A	2015/08/05	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	13	N/A	2015/08/04	BBY7SOP-00002	EPA 6020A R1 m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08412400, 08412401

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/08/13
Report #: R2023357
Version: 2 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B565281
Received: 2015/07/30, 14:15

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Ammonia-N (Unpreserved)	12	N/A	2015/08/04	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Unpreserved)	1	N/A	2015/08/06	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	2	N/A	2015/07/31	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrate+Nitrite (N) (low level)	13	N/A	2015/08/01	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	2	N/A	2015/07/31	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	13	N/A	2015/08/01	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	2	N/A	2015/07/31	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	13	N/A	2015/08/05	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	14	N/A	2015/07/31	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	12	N/A	2015/07/31	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (2)	3	N/A	2015/08/01	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	15	N/A	2015/08/04	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	13	2015/08/01	2015/08/01	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	13	N/A	2015/08/01	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	13	2015/08/05	2015/08/05	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MU0670		MU0671		MU0672		
Sampling Date		2015/07/29 12:10		2015/07/28 11:50		2015/07/29 10:30		
COC Number		08412400		08412400		08412400		
	Units	KZ-2	QC Batch	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	7988724	<0.50	7988725	<0.50	0.50	7988724
Acidity (pH 8.3)	mg/L	<0.50	7988724	<0.50	7988725	<0.50	0.50	7988724
Calculated Parameters								
Anion Sum	meq/L	1.8	7987551	2.6	7987551	3.1	N/A	7987551
Cation Sum	meq/L	1.9	7987551	2.8	7987551	3.2	N/A	7987551
Filter and HNO3 Preservation	N/A	LAB	7987125	LAB	7987125	LAB	N/A	7987125
Ion Balance	N/A	1.0	7987550	1.1	7987550	1.0	0.010	7987550
Nitrate (N)	mg/L	0.0636	7987554	0.0112	7987554	0.0340	0.0020	7987554
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	7989913	<0.00050	7989913	<0.00050	0.00050	7989913
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	7998702	<0.00050	7998702	0.00068 (1)	0.00050	7998702
Fluoride (F)	mg/L	0.037	7992222	0.054	7992222	0.066	0.010	7992222
Dissolved Organic Carbon (C)	mg/L	<0.50	7991672	1.83	7991672	0.56	0.50	7991672
Alkalinity (Total as CaCO3)	mg/L	53.3	7988005	99.4	7988005	124	0.50	7988005
Alkalinity (PP as CaCO3)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7988005
Bicarbonate (HCO3)	mg/L	65.0	7988005	121	7988005	151	0.50	7988005
Carbonate (CO3)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7988005
Hydroxide (OH)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7988005
Anions								
Dissolved Sulphate (SO4)	mg/L	36.5	7990425	31.6	7990425	28.2	0.50	7990425
Dissolved Chloride (Cl)	mg/L	<0.50	7990423	<0.50	7990423	<0.50	0.50	7990423
MISCELLANEOUS								
True Colour	Col. Unit	5.3	7988701	12.3 (2)	7988701	11.0	5.0	7988701
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0022	7988713	0.0036 (2)	7988713	0.0027	0.0020	7988713
Total Ammonia (N)	mg/L	0.0122 (3)	7990718	0.0062 (3)	7990718	0.0100 (3)	0.0050	7990718
Nitrate plus Nitrite (N)	mg/L	0.0636	7988755	0.0112 (2)	7988755	0.0340	0.0020	7988755
Nitrite (N)	mg/L	<0.0020	7988756	<0.0020 (2)	7988756	<0.0020	0.0020	7988756
Total Phosphorus (P)	mg/L	0.0036	7988709	0.0034 (2)	7988709	<0.0020	0.0020	7988711
Physical Properties								
Conductivity	uS/cm	184	7987998	256	7987998	289	1.0	7987998

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Weak Acid Dissociable CN > Strong Acid Dissociable CN. Results are within limits of uncertainty(MU).
(2) Sample analysed past recommended hold time.
(3) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MU0670		MU0671		MU0672		
Sampling Date		2015/07/29 12:10		2015/07/28 11:50		2015/07/29 10:30		
COC Number		08412400		08412400		08412400		
	Units	KZ-2	QC Batch	KZ-7	QC Batch	KZ-9	RDL	QC Batch
pH	pH	7.75	7987996	8.01	7987996	7.90	N/A	7987996
Physical Properties								
Total Suspended Solids	mg/L	<1.0	7990678	<1.0 (1)	7990000	1.2	1.0	7990678

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MU0673		MU0674		MU0675		
Sampling Date		2015/07/29 14:35		2015/07/28 13:05		2015/07/28 14:00		
COC Number		08412400		08412400		08412400		
	Units	KZ-13	QC Batch	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	7988724	<0.50	7988724	<0.50	0.50	7988725
Acidity (pH 8.3)	mg/L	<0.50	7988724	<0.50	7988724	<0.50	0.50	7988725
Calculated Parameters								
Anion Sum	meq/L	1.4	7987551	3.0	7987551	2.7	N/A	7987551
Cation Sum	meq/L	1.5	7987551	3.2	7987551	2.9	N/A	7987551
Filter and HNO3 Preservation	N/A	LAB	7987125	LAB	7987125	LAB	N/A	7987125
Ion Balance	N/A	1.0	7987550	1.1	7987550	1.1	0.010	7987550
Nitrate (N)	mg/L	0.0198	7987554	0.0153	7987554	0.0178	0.0020	7987554
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00061	7989913	0.00050	7989913	<0.00050	0.00050	7989913
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00070 (1)	7998702	0.00069 (1)	7998702	0.00085	0.00050	7998702
Fluoride (F)	mg/L	0.043	7992222	0.074	7992283	0.065	0.010	7992222
Dissolved Organic Carbon (C)	mg/L	1.80	7991672	0.93	7991672	<0.50	0.50	7991672
Alkalinity (Total as CaCO3)	mg/L	51.7	7988005	125	7988005	115	0.50	7987981
Alkalinity (PP as CaCO3)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7987981
Bicarbonate (HCO3)	mg/L	63.1	7988005	153	7988005	140	0.50	7987981
Carbonate (CO3)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7987981
Hydroxide (OH)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7987981
Anions								
Dissolved Sulphate (SO4)	mg/L	11.6	7990425	23.1	7990425	19.2	0.50	7990425
Dissolved Chloride (Cl)	mg/L	<0.50	7990423	<0.50	7990423	<0.50	0.50	7990423
MISCELLANEOUS								
True Colour	Col. Unit	18.7	7988701	8.7 (2)	7988701	8.3 (2)	5.0	7988702
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0045	7988713	0.0025 (2)	7988713	<0.0020 (2)	0.0020	7988713
Total Ammonia (N)	mg/L	0.0102 (3)	7990718	<0.0050 (3)	7990722	0.0114 (3)	0.0050	7990722
Nitrate plus Nitrite (N)	mg/L	0.0198	7988755	0.0153 (2)	7988755	0.0178 (2)	0.0020	7988755
Nitrite (N)	mg/L	<0.0020	7988756	<0.0020 (2)	7988756	<0.0020 (2)	0.0020	7988756
Total Phosphorus (P)	mg/L	0.0038	7988709	0.0028 (2)	7988711	<0.0020 (2)	0.0020	7988711
Physical Properties								
Conductivity	uS/cm	142	7987998	282	7987998	257	1.0	7987991

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Weak Acid Dissociable CN > Strong Acid Dissociable CN. Results are within limits of uncertainty(MU).
(2) Sample analysed past recommended hold time.
(3) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MU0673		MU0674		MU0675		
Sampling Date		2015/07/29 14:35		2015/07/28 13:05		2015/07/28 14:00		
COC Number		08412400		08412400		08412400		
	Units	KZ-13	QC Batch	KZ-15	QC Batch	KZ-16	RDL	QC Batch
pH	pH	7.78	7987996	8.08	7987996	8.04	N/A	7987992
Physical Properties								
Total Suspended Solids	mg/L	1.0	7990678	<1.0 (1)	7990000	<1.0 (1)	1.0	7990000

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MU0676		MU0677		MU0678		
Sampling Date		2015/07/28 15:00		2015/07/29 12:45		2015/07/28 17:00		
COC Number		08412400		08412400		08412400		
	Units	KZ-17	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	7988724	<0.50	7988724	<0.50	0.50	7988729
Acidity (pH 8.3)	mg/L	<0.50	7988724	<0.50	7988724	<0.50	0.50	7988729
Calculated Parameters								
Anion Sum	meq/L	3.4	7987551	0.0000	7987551	4.5	N/A	7987551
Cation Sum	meq/L	3.8	7987551	0.0041	7987551	4.8	N/A	7987551
Filter and HNO3 Preservation	N/A	LAB	7987125	LAB	7987125	LAB	N/A	7987125
Ion Balance	N/A	1.1	7987550	NC	7987550	1.1	0.010	7987550
Nitrate (N)	mg/L	0.0269	7987554	<0.0020	7987554	0.0025	0.0020	7987554
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	7989913	<0.00050	7989913	0.00105	0.00050	7989913
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00065 (1)	7998702	<0.00050	7998702	0.00126 (1)	0.00050	7998702
Fluoride (F)	mg/L	0.100	7992222	<0.010	7992222	0.170	0.010	7992222
Dissolved Organic Carbon (C)	mg/L	1.82	7991672	0.85	7991672	7.20	0.50	7991672
Alkalinity (Total as CaCO3)	mg/L	143	7988005	<0.50	7988005	183	0.50	7988005
Alkalinity (PP as CaCO3)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7988005
Bicarbonate (HCO3)	mg/L	174	7988005	<0.50	7988005	223	0.50	7988005
Carbonate (CO3)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7988005
Hydroxide (OH)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7988005
Anions								
Dissolved Sulphate (SO4)	mg/L	26.7	7990425	<0.50	7990425	37.7	0.50	7990425
Dissolved Chloride (Cl)	mg/L	<0.50	7990423	<0.50	7990423	0.76	0.50	7990423
MISCELLANEOUS								
True Colour	Col. Unit	8.6 (2)	7988701	<5.0	7988701	57.7 (2)	5.0	7988701
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0030 (2)	7988713	0.0022	7988713	0.0124 (2)	0.0020	7988713
Total Ammonia (N)	mg/L	<0.0050 (3)	7990718	0.0104 (3)	7990722	0.0053 (3)	0.0050	7990722
Nitrate plus Nitrite (N)	mg/L	0.0269 (2)	7988755	<0.0020	7988755	0.0025 (2)	0.0020	7988755
Nitrite (N)	mg/L	<0.0020 (2)	7988756	<0.0020	7988756	<0.0020 (2)	0.0020	7988756
Total Phosphorus (P)	mg/L	0.0030 (2)	7988711	<0.0020	7988711	0.0116 (2)	0.0020	7988709
Physical Properties								
Conductivity	uS/cm	323	7987998	<1.0	7987998	407	1.0	7987998

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Weak Acid Dissociable CN > Strong Acid Dissociable CN. Results are within limits of uncertainty(MU).
(2) Sample analysed past recommended hold time.
(3) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MU0676		MU0677		MU0678		
Sampling Date		2015/07/28 15:00		2015/07/29 12:45		2015/07/28 17:00		
COC Number		08412400		08412400		08412400		
	Units	KZ-17	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
pH	pH	8.06	7987996	5.47	7987996	8.21	N/A	7987996
Physical Properties								
Total Suspended Solids	mg/L	1.0 (1)	7990000	<1.0	7990678	2.0 (1)	1.0	7990000

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MU0679		MU0691		MU0692		
Sampling Date		2015/07/28 15:50		2015/07/29 09:00		2015/07/28		
COC Number		08412400		08412401		08412401		
	Units	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	7988725	<0.50	7988724	<0.50	0.50	7988724
Acidity (pH 8.3)	mg/L	<0.50	7988725	<0.50	7988724	<0.50	0.50	7988724
Calculated Parameters								
Anion Sum	meq/L	4.0	7987551	4.2	7987551	3.4	N/A	7987551
Cation Sum	meq/L	4.3	7987551	4.5	7987551	3.8	N/A	7987551
Filter and HNO3 Preservation	N/A	LAB	7987125	LAB	7987125	LAB	N/A	7987125
Ion Balance	N/A	1.1	7987550	1.1	7987550	1.1	0.010	7987550
Nitrate (N)	mg/L	0.0033	7987554	0.0079	7987554	0.0284	0.0020	7987554
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00085	7989913	0.00060	7989913	0.00055	0.00050	7989913
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00091 (1)	7998702	0.00067 (1)	7998702	0.00061 (1)	0.00050	7998702
Fluoride (F)	mg/L	0.120	7992222	0.120	7992222	0.100	0.010	7992222
Dissolved Organic Carbon (C)	mg/L	3.04	7991672	3.32	7991672	1.65	0.50	7991672
Alkalinity (Total as CaCO3)	mg/L	165	7988005	176	7988005	144	0.50	7988005
Alkalinity (PP as CaCO3)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7988005
Bicarbonate (HCO3)	mg/L	201	7988005	214	7988005	176	0.50	7988005
Carbonate (CO3)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7988005
Hydroxide (OH)	mg/L	<0.50	7988005	<0.50	7988005	<0.50	0.50	7988005
Anions								
Dissolved Sulphate (SO4)	mg/L	32.7	7990425	32.3	7990425	26.8	0.50	7990425
Dissolved Chloride (Cl)	mg/L	0.50	7990423	0.55	7990423	<0.50	0.50	7990423
MISCELLANEOUS								
True Colour	Col. Unit	32.2 (2)	7988701	27.7	7988701	8.1 (2)	5.0	7988701
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0090 (2)	7988713	0.0052	7988713	0.0030 (2)	0.0020	7988713
Total Ammonia (N)	mg/L	<0.0050 (3)	7990718	0.0130 (3)	7990722	<0.0050 (3)	0.0050	7990718
Nitrate plus Nitrite (N)	mg/L	0.0033 (2)	7988755	0.0079	7988755	0.0284 (2)	0.0020	7988753
Nitrite (N)	mg/L	<0.0020 (2)	7988756	<0.0020	7988756	<0.0020 (2)	0.0020	7988754
Total Phosphorus (P)	mg/L	0.0058 (2)	7988711	0.0036	7988711	0.0030 (2)	0.0020	7988711
Physical Properties								
Conductivity	uS/cm	362	7987998	383	7987998	321	1.0	7987998

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Weak Acid Dissociable CN > Strong Acid Dissociable CN. Results are within limits of uncertainty(MU).
(2) Sample analysed past recommended hold time.
(3) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MU0679		MU0691		MU0692		
Sampling Date		2015/07/28 15:50		2015/07/29 09:00		2015/07/28		
COC Number		08412400		08412401		08412401		
	Units	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
pH	pH	8.19	7987996	8.24	7987996	7.98	N/A	7987996
Physical Properties								
Total Suspended Solids	mg/L	1.4 (1)	7990000	1.6	7990678	<1.0 (1)	1.0	7990000

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MU0693		MU0694	MU0695		
Sampling Date		2015/07/30 14:15		2015/07/29 11:30	2015/07/29 11:20		
COC Number		08412401		08412401	08412401		
	Units	TRIP BLANK	QC Batch	KZ-9 EAST SEEP	KZ-9 WEST SEEP	RDL	QC Batch
Misc. Inorganics							
Acidity (pH 4.5)	mg/L	<0.50	7988725	<0.50	<0.50	0.50	7988729
Acidity (pH 8.3)	mg/L	<0.50	7988725	188	<0.50	0.50	7988729
Calculated Parameters							
Anion Sum	meq/L	0.00050	7987551	19	5.2	N/A	7987551
Cation Sum	meq/L	0.0011	7987551	21	5.4	N/A	7987551
Filter and HNO3 Preservation	N/A			LAB	LAB	N/A	7987125
Ion Balance	N/A	NC	7987550	1.1	1.1	0.010	7987550
Nitrate (N)	mg/L	<0.0020	7987554	0.0142	0.384	0.0020	7987554
Misc. Inorganics							
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	7989913			0.00050	
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	7998702			0.00050	
Fluoride (F)	mg/L	0.010	7992222	0.860	0.061	0.010	7992243
Dissolved Organic Carbon (C)	mg/L	0.63 (1)	7988816			0.50	
Alkalinity (Total as CaCO3)	mg/L	<0.50	7988005	951	218	0.50	7988779
Alkalinity (PP as CaCO3)	mg/L	<0.50	7988005	<0.50	<0.50	0.50	7988779
Bicarbonate (HCO3)	mg/L	<0.50	7988005	1160	266	0.50	7988779
Carbonate (CO3)	mg/L	<0.50	7988005	<0.50	<0.50	0.50	7988779
Hydroxide (OH)	mg/L	<0.50	7988005	<0.50	<0.50	0.50	7988779
Anions							
Dissolved Sulphate (SO4)	mg/L	<0.50	7990425	18.8	37.6	0.50	7990402
Dissolved Chloride (Cl)	mg/L	<0.50	7990423	1.5	<0.50	0.50	7990401
MISCELLANEOUS							
True Colour	Col. Unit	<5.0	7988701	44.8	<5.0	5.0	7988701
Nutrients							
Dissolved Phosphorus (P)	mg/L	<0.0020	7988713			0.0020	
Total Ammonia (N)	mg/L	<0.0050	7993707			0.0050	
Nitrate plus Nitrite (N)	mg/L	<0.0020	7988755	0.0142	0.384	0.0020	7988160
Nitrite (N)	mg/L	<0.0020	7988756	<0.0020	<0.0020	0.0020	7988161
Total Phosphorus (P)	mg/L	<0.0020	7988711			0.0020	
Physical Properties							
Conductivity	uS/cm	1.3	7987998	1560	470	1.0	7988782
pH	pH	5.97	7987996	6.71	8.12	N/A	7988781

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MU0693		MU0694	MU0695		
Sampling Date		2015/07/30 14:15		2015/07/29 11:30	2015/07/29 11:20		
COC Number		08412401		08412401	08412401		
	Units	TRIP BLANK	QC Batch	KZ-9 EAST SEEP	KZ-9 WEST SEEP	RDL	QC Batch
Physical Properties							
Total Suspended Solids	mg/L	<1.0	7990678			1.0	
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MU0670		MU0671		MU0672		
Sampling Date		2015/07/29 12:10		2015/07/28 11:50		2015/07/29 10:30		
COC Number		08412400		08412400		08412400		
	Units	KZ-2	QC Batch	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	90.7	7987220	137	7987220	156	0.50	7987220
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	7991944	<0.0000020	7991944	<0.0000020	0.0000020	7991954
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00416	7989823	0.00186	7989823	0.00165	0.00050	7989823
Dissolved Antimony (Sb)	mg/L	0.000028	7989823	0.000099	7989823	0.000066	0.000020	7989823
Dissolved Arsenic (As)	mg/L	0.000104	7989823	0.000252	7989823	0.000212	0.000020	7989823
Dissolved Barium (Ba)	mg/L	0.0566	7989823	0.0735	7989823	0.0794	0.000020	7989823
Dissolved Beryllium (Be)	mg/L	<0.000010	7989823	<0.000010	7989823	<0.000010	0.000010	7989823
Dissolved Bismuth (Bi)	mg/L	<0.0000050	7989823	<0.0000050	7989823	<0.0000050	0.0000050	7989823
Dissolved Boron (B)	mg/L	<0.010	7989823	<0.010	7989823	<0.010	0.010	7989823
Dissolved Cadmium (Cd)	mg/L	0.000204	7989823	0.0000977	7989823	0.0000399	0.0000050	7989823
Dissolved Chromium (Cr)	mg/L	<0.00010	7989823	<0.00010	7989823	<0.00010	0.00010	7989823
Dissolved Cobalt (Co)	mg/L	0.0000082	7989823	0.0000143	7989823	0.0000459	0.0000050	7989823
Dissolved Copper (Cu)	mg/L	0.000623	7989823	0.000558	7989823	0.000382	0.000050	7989823
Dissolved Iron (Fe)	mg/L	0.0019	7989823	0.0570	7989823	0.0855	0.0010	7989823
Dissolved Lead (Pb)	mg/L	0.0000929 (1)	7993398	0.0000137	7989823	<0.0000050	0.0000050	7989823
Dissolved Lithium (Li)	mg/L	0.00101	7989823	0.00150	7989823	0.00219	0.00050	7989823
Dissolved Manganese (Mn)	mg/L	0.000123	7989823	0.0131	7989823	0.0409	0.000050	7989823
Dissolved Molybdenum (Mo)	mg/L	0.000617	7989823	0.000486	7989823	0.000589	0.000050	7989823
Dissolved Nickel (Ni)	mg/L	0.000332	7989823	0.000433	7989823	0.000332	0.000020	7989823
Dissolved Phosphorus (P)	mg/L	0.0082	7989823	<0.0020	7989823	<0.0020	0.0020	7989823
Dissolved Selenium (Se)	mg/L	0.000600	7989823	0.000718	7989823	0.000625	0.000040	7989823
Dissolved Silicon (Si)	mg/L	2.25	7989823	2.53	7989823	2.82	0.050	7989823
Dissolved Silver (Ag)	mg/L	<0.0000050	7989823	<0.0000050	7989823	<0.0000050	0.0000050	7989823
Dissolved Strontium (Sr)	mg/L	0.0998	7989823	0.152	7989823	0.178	0.000050	7989823
Dissolved Thallium (Tl)	mg/L	0.0000035	7989823	0.0000027	7989823	<0.0000020	0.0000020	7989823
Dissolved Tin (Sn)	mg/L	<0.00020	7989823	<0.00020	7989823	<0.00020	0.00020	7989823
Dissolved Titanium (Ti)	mg/L	<0.00050	7989823	<0.00050	7989823	<0.00050	0.00050	7989823
Dissolved Uranium (U)	mg/L	0.00173	7989823	0.000865	7989823	0.000964	0.0000020	7989823
Dissolved Vanadium (V)	mg/L	<0.00020	7989823	<0.00020	7989823	<0.00020	0.00020	7989823
Dissolved Zinc (Zn)	mg/L	0.0242	7989823	0.0196	7989823	0.00646	0.00010	7989823
Dissolved Zirconium (Zr)	mg/L	<0.00010	7989823	<0.00010	7989823	<0.00010	0.00010	7989823

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MU0670		MU0671		MU0672		
Sampling Date		2015/07/29 12:10		2015/07/28 11:50		2015/07/29 10:30		
COC Number		08412400		08412400		08412400		
	Units	**KZ-2**	**QC Batch**	**KZ-7**	**QC Batch**	**KZ-9**	**RDL**	**QC Batch**
Dissolved Calcium (Ca)	mg/L	31.0	7987221	45.2	7987221	52.2	0.050	7987221
Dissolved Magnesium (Mg)	mg/L	3.22	7987221	5.78	7987221	6.32	0.050	7987221
Dissolved Potassium (K)	mg/L	1.81	7987221	1.55	7987221	1.49	0.050	7987221
Dissolved Sodium (Na)	mg/L	0.686	7987221	0.931	7987221	1.07	0.050	7987221
Dissolved Sulphur (S)	mg/L	12.7	7987221	10.9	7987221	10.3	3.0	7987221
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MU0673		MU0674	MU0675	MU0676		
Sampling Date		2015/07/29 14:35		2015/07/28 13:05	2015/07/28 14:00	2015/07/28 15:00		
COC Number		08412400		08412400	08412400	08412400		
	Units	KZ-13	QC Batch	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	70.5	7992800	156	141	184	0.50	7987220
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	7991954	<0.0000020	<0.0000020	<0.0000020	0.0000020	7991954
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00715	7989823	0.00168	0.00158	0.00127	0.00050	7989823
Dissolved Antimony (Sb)	mg/L	0.000028	7989823	0.000033	0.000021	0.000055	0.000020	7989823
Dissolved Arsenic (As)	mg/L	0.000249	7989823	0.000386	0.000317	0.000423	0.000020	7989823
Dissolved Barium (Ba)	mg/L	0.109	7989823	0.0667	0.0606	0.0732	0.000020	7989823
Dissolved Beryllium (Be)	mg/L	<0.000010	7989823	<0.000010	<0.000010	<0.000010	0.000010	7989823
Dissolved Bismuth (Bi)	mg/L	<0.0000050	7989823	<0.0000050	<0.0000050	<0.0000050	0.0000050	7989823
Dissolved Boron (B)	mg/L	<0.010	7989823	<0.010	<0.010	<0.010	0.010	7989823
Dissolved Cadmium (Cd)	mg/L	0.0000175	7989823	0.0000209	0.0000150	0.0000233	0.0000050	7989823
Dissolved Chromium (Cr)	mg/L	<0.00010	7989823	<0.00010	<0.00010	<0.00010	0.00010	7989823
Dissolved Cobalt (Co)	mg/L	0.0000219	7989823	0.0000186	0.0000133	0.0000143	0.0000050	7989823
Dissolved Copper (Cu)	mg/L	0.000435	7989823	0.000353	0.000338	0.000406	0.000050	7989823
Dissolved Iron (Fe)	mg/L	0.0311	7989823	0.0127	0.0045	0.0198	0.0010	7989823
Dissolved Lead (Pb)	mg/L	<0.0000050	7989823	<0.0000050	<0.0000050	<0.0000050	0.0000050	7989823
Dissolved Lithium (Li)	mg/L	0.00127	7989823	0.00187	0.00138	0.00280	0.00050	7989823
Dissolved Manganese (Mn)	mg/L	0.0168	7989823	0.0119	0.00284	0.0168	0.000050	7989823
Dissolved Molybdenum (Mo)	mg/L	0.000566	7989823	0.000839	0.000527	0.00138	0.000050	7989823
Dissolved Nickel (Ni)	mg/L	0.000492	7989823	0.000424	0.000359	0.000639	0.000020	7989823
Dissolved Phosphorus (P)	mg/L	0.0049	7989823	<0.0020	<0.0020	<0.0020	0.0020	7989823
Dissolved Selenium (Se)	mg/L	0.000138	7989823	0.000481	0.000431	0.000526	0.000040	7989823
Dissolved Silicon (Si)	mg/L	2.47	7989823	2.88	2.75	3.13	0.050	7989823
Dissolved Silver (Ag)	mg/L	<0.0000050	7989823	<0.0000050	<0.0000050	<0.0000050	0.0000050	7989823
Dissolved Strontium (Sr)	mg/L	0.0758	7989823	0.162	0.152	0.189	0.000050	7989823
Dissolved Thallium (Tl)	mg/L	0.0000024	7989823	<0.0000020	<0.0000020	<0.0000020	0.0000020	7989823
Dissolved Tin (Sn)	mg/L	<0.00020	7989823	<0.00020	<0.00020	<0.00020	0.00020	7989823
Dissolved Titanium (Ti)	mg/L	<0.00050	7989823	<0.00050	<0.00050	<0.00050	0.00050	7989823
Dissolved Uranium (U)	mg/L	0.000565	7989823	0.00174	0.00114	0.00260	0.0000020	7989823
Dissolved Vanadium (V)	mg/L	<0.00020	7989823	<0.00020	<0.00020	<0.00020	0.00020	7989823
Dissolved Zinc (Zn)	mg/L	0.00179	7989823	0.00125	0.00026	0.00218	0.00010	7989823
Dissolved Zirconium (Zr)	mg/L	<0.00010	7989823	<0.00010	<0.00010	<0.00010	0.00010	7989823
Dissolved Calcium (Ca)	mg/L	23.7	7993010	48.3	44.7	55.4	0.050	7987221

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MU0673		MU0674	MU0675	MU0676		
Sampling Date		2015/07/29 14:35		2015/07/28 13:05	2015/07/28 14:00	2015/07/28 15:00		
COC Number		08412400		08412400	08412400	08412400		
	Units	KZ-13	QC Batch	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	2.77	7993010	8.65	7.22	11.0	0.050	7987221
Dissolved Potassium (K)	mg/L	1.48	7993010	1.31	1.26	1.51	0.050	7987221
Dissolved Sodium (Na)	mg/L	0.989	7993010	1.06	1.03	1.20	0.050	7987221
Dissolved Sulphur (S)	mg/L	4.9	7993010	8.1	6.9	9.4	3.0	7987221
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MU0677	MU0678	MU0679	MU0691	MU0692		
Sampling Date		2015/07/29 12:45	2015/07/28 17:00	2015/07/28 15:50	2015/07/29 09:00	2015/07/28		
COC Number		08412400	08412400	08412400	08412401	08412401		
	Units	KZ-19	KZ-21	KZ-22	KZ-26	KZ-28	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	<0.50	237	210	222	184	0.50	7987220
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	7991954
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	<0.00050	0.00537	0.00456	0.00196	0.00199	0.00050	7989823
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000139	0.000086	0.000094	0.000056	0.000020	7989823
Dissolved Arsenic (As)	mg/L	<0.000020	0.00191	0.00126	0.000836	0.000441	0.000020	7989823
Dissolved Barium (Ba)	mg/L	<0.000020	0.0617	0.0673	0.0715	0.0755	0.000020	7989823
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	7989823
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7989823
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7989823
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.0000085	0.0000114	0.0000085	0.0000268	0.0000050	7989823
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00012	<0.00010	<0.00010	<0.00010	0.00010	7989823
Dissolved Cobalt (Co)	mg/L	<0.0000050	0.0000539	0.0000346	0.0000180	0.0000166	0.0000050	7989823
Dissolved Copper (Cu)	mg/L	<0.000050	0.000564	0.000490	0.000565	0.000413	0.000050	7989823
Dissolved Iron (Fe)	mg/L	<0.0010	0.157	0.0869	0.0357	0.0228	0.0010	7989823
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7989823
Dissolved Lithium (Li)	mg/L	<0.00050	0.00392	0.00316	0.00446	0.00294	0.00050	7989823
Dissolved Manganese (Mn)	mg/L	<0.000050	0.0166	0.00916	0.00285	0.0183	0.000050	7989823
Dissolved Molybdenum (Mo)	mg/L	<0.000050	0.00171	0.00130	0.00120	0.00136	0.000050	7989823
Dissolved Nickel (Ni)	mg/L	<0.000020	0.00302	0.00168	0.00135	0.000633	0.000020	7989823
Dissolved Phosphorus (P)	mg/L	0.0053	0.0057	0.0241	0.0025	<0.0020	0.0020	7989823
Dissolved Selenium (Se)	mg/L	<0.000040	0.000525	0.000553	0.000511	0.000548	0.000040	7989823
Dissolved Silicon (Si)	mg/L	<0.050	4.17	3.68	3.92	3.16	0.050	7989823
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7989823
Dissolved Strontium (Sr)	mg/L	<0.000050	0.186	0.187	0.203	0.186	0.000050	7989823
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	7989823
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7989823
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	7989823
Dissolved Uranium (U)	mg/L	<0.0000020	0.00299	0.00238	0.00233	0.00256	0.0000020	7989823
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7989823
Dissolved Zinc (Zn)	mg/L	<0.00010	0.00094	0.00111	0.00035	0.00239	0.00010	7989823
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	7989823
Dissolved Calcium (Ca)	mg/L	<0.050	58.9	56.1	58.9	55.5	0.050	7987221

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MU0677	MU0678	MU0679	MU0691	MU0692		
Sampling Date		2015/07/29 12:45	2015/07/28 17:00	2015/07/28 15:50	2015/07/29 09:00	2015/07/28		
COC Number		08412400	08412400	08412400	08412401	08412401		
	Units	**KZ-19**	**KZ-21**	**KZ-22**	**KZ-26**	**KZ-28**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	<0.050	21.9	16.8	18.2	10.9	0.050	7987221
Dissolved Potassium (K)	mg/L	<0.050	1.36	1.36	1.41	1.50	0.050	7987221
Dissolved Sodium (Na)	mg/L	<0.050	1.42	1.39	1.49	1.19	0.050	7987221
Dissolved Sulphur (S)	mg/L	<3.0	13.3	11.7	11.3	9.5	3.0	7987221
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MU0693	MU0694	MU0695		
Sampling Date		2015/07/30 14:15	2015/07/29 11:30	2015/07/29 11:20		
COC Number		08412401	08412401	08412401		
	Units	TRIP BLANK	KZ-9 EAST SEEP	KZ-9 WEST SEEP	RDL	QC Batch
Misc. Inorganics						
Dissolved Hardness (CaCO3)	mg/L	<0.50	982	268	0.50	7987220
Elements						
Dissolved Mercury (Hg)	mg/L	<0.0000020			0.0000020	7991944
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	<0.00050	0.126	0.00120	0.00050	7989823
Dissolved Antimony (Sb)	mg/L	<0.000020	<0.000020	0.000023	0.000020	7989823
Dissolved Arsenic (As)	mg/L	<0.000020	0.00275	0.000121	0.000020	7989823
Dissolved Barium (Ba)	mg/L	<0.000020	0.166	0.204	0.000020	7989823
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000333	<0.000010	0.000010	7989823
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	7989823
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	7989823
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.0000752	0.0000324	0.0000050	7989823
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00021	0.00010	7989823
Dissolved Cobalt (Co)	mg/L	<0.0000050	0.00274	0.0000056	0.0000050	7989823
Dissolved Copper (Cu)	mg/L	<0.000050	<0.000050	<0.000050	0.000050	7989823
Dissolved Iron (Fe)	mg/L	<0.0010	13.0	0.0011	0.0010	7989823
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	7989823
Dissolved Lithium (Li)	mg/L	<0.00050	0.0824	0.00191	0.00050	7989823
Dissolved Manganese (Mn)	mg/L	<0.000050	2.17	0.000216	0.000050	7989823
Dissolved Molybdenum (Mo)	mg/L	<0.000050	0.000511	0.00133	0.000050	7989823
Dissolved Nickel (Ni)	mg/L	<0.000020	0.00836	0.000103	0.000020	7989823
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0030	<0.0020	0.0020	7989823
Dissolved Selenium (Se)	mg/L	<0.000040	<0.000040	0.00308	0.000040	7989823
Dissolved Silicon (Si)	mg/L	<0.050	18.3	3.43	0.050	7989823
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	7989823
Dissolved Strontium (Sr)	mg/L	<0.000050	1.16	0.284	0.000050	7989823
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	7989823
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	7989823
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	7989823
Dissolved Uranium (U)	mg/L	<0.0000020	0.00189	0.00303	0.0000020	7989823
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	7989823
Dissolved Zinc (Zn)	mg/L	<0.00010	0.0337	0.00053	0.00010	7989823
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00063	<0.00010	0.00010	7989823
Dissolved Calcium (Ca)	mg/L	<0.050	333	90.3	0.050	7987221

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MU0693	MU0694	MU0695		
Sampling Date		2015/07/30 14:15	2015/07/29 11:30	2015/07/29 11:20		
COC Number		08412401	08412401	08412401		
	Units	TRIP BLANK	KZ-9 EAST SEEP	KZ-9 WEST SEEP	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	<0.050	36.4	10.3	0.050	7987221
Dissolved Potassium (K)	mg/L	<0.050	5.68	1.28	0.050	7987221
Dissolved Sodium (Na)	mg/L	<0.050	9.46	1.21	0.050	7987221
Dissolved Sulphur (S)	mg/L	<3.0	6.9	13.6	3.0	7987221
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MU0670	MU0671	MU0672	MU0673	MU0674		
Sampling Date		2015/07/29 12:10	2015/07/28 11:50	2015/07/29 10:30	2015/07/29 14:35	2015/07/28 13:05		
COC Number		08412400	08412400	08412400	08412400	08412400		
	Units	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	92.5	137	159	70.8	157	0.50	7987284
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	7989982
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00841	0.0227	0.0260	0.0567	0.0169	0.00050	7990297
Total Antimony (Sb)	mg/L	0.000025	0.000105	0.000063	0.000033	0.000038	0.000020	7990297
Total Arsenic (As)	mg/L	0.000101	0.000401	0.000303	0.000276	0.000433	0.000020	7990297
Total Barium (Ba)	mg/L	0.0547	0.0754	0.0815	0.105	0.0670	0.000020	7990297
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	7990297
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7990297
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7990297
Total Cadmium (Cd)	mg/L	0.000205	0.000169	0.0000703	0.0000275	0.0000229	0.0000050	7990297
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00015	<0.00010	0.00010	7990297
Total Cobalt (Co)	mg/L	0.0000092	0.0000499	0.0000864	0.0000634	0.0000374	0.0000050	7990297
Total Copper (Cu)	mg/L	0.000637	0.000866	0.000542	0.000575	0.000425	0.000050	7990297
Total Iron (Fe)	mg/L	0.0081	0.311	0.431	0.141	0.0917	0.0010	7990297
Total Lead (Pb)	mg/L	0.0000518	0.000137	0.0000966	0.0000698	0.0000233	0.0000050	7990297
Total Lithium (Li)	mg/L	0.00096	0.00129	0.00233	0.00122	0.00208	0.00050	7990297
Total Manganese (Mn)	mg/L	0.000203	0.0374	0.0549	0.0455	0.0230	0.000050	7990297
Total Molybdenum (Mo)	mg/L	0.000651	0.000508	0.000563	0.000595	0.000854	0.000050	7990297
Total Nickel (Ni)	mg/L	0.000302	0.000429	0.000475	0.000600	0.000483	0.000020	7990297
Total Phosphorus (P)	mg/L	0.0023	0.0073	0.0046	0.0239	0.0228	0.0020	7990297
Total Selenium (Se)	mg/L	0.000621	0.000729	0.000640	0.000152	0.000470	0.000040	7990297
Total Silicon (Si)	mg/L	2.27	2.55	2.92	2.54	2.90	0.050	7990297
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7990297
Total Strontium (Sr)	mg/L	0.0997	0.148	0.171	0.0751	0.160	0.000050	7990297
Total Thallium (Tl)	mg/L	0.0000041	0.0000027	<0.0000020	0.0000023	<0.0000020	0.0000020	7990297
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7990297
Total Titanium (Ti)	mg/L	<0.00050	0.00077	0.00173	0.00238	0.00051	0.00050	7990297
Total Uranium (U)	mg/L	0.00171	0.000872	0.000989	0.000568	0.00171	0.0000020	7990297
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00026	<0.00020	0.00020	7990297
Total Zinc (Zn)	mg/L	0.0244	0.0298	0.00980	0.00353	0.00208	0.00010	7990297
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	7990297
Total Calcium (Ca)	mg/L	31.7	45.3	53.0	23.7	48.6	0.050	7987552
Total Magnesium (Mg)	mg/L	3.26	5.77	6.38	2.80	8.67	0.050	7987552

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MU0670	MU0671	MU0672	MU0673	MU0674		
Sampling Date		2015/07/29 12:10	2015/07/28 11:50	2015/07/29 10:30	2015/07/29 14:35	2015/07/28 13:05		
COC Number		08412400	08412400	08412400	08412400	08412400		
	Units	**KZ-2**	**KZ-7**	**KZ-9**	**KZ-13**	**KZ-15**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	1.76	1.56	1.53	1.74	1.34	0.050	7987552
Total Sodium (Na)	mg/L	0.659	0.933	1.06	1.09	1.08	0.050	7987552
Total Sulphur (S)	mg/L	13.1	11.3	10.3	4.7	8.0	3.0	7987552
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MU0675	MU0676	MU0677	MU0678	MU0679		
Sampling Date		2015/07/28 14:00	2015/07/28 15:00	2015/07/29 12:45	2015/07/28 17:00	2015/07/28 15:50		
COC Number		08412400	08412400	08412400	08412400	08412400		
	Units	**KZ-16**	**KZ-17**	**KZ-19**	**KZ-21**	**KZ-22**	**RDL**	**QC Batch**
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	137	176	<0.50	231	204	0.50	7987284
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	7989982
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00267	0.0106	0.00065	0.0415	0.0170	0.00050	7990297
Total Antimony (Sb)	mg/L	0.000020	0.000052	<0.000020	0.000152	0.000091	0.000020	7990297
Total Arsenic (As)	mg/L	0.000315	0.000578	<0.000020	0.00291	0.00167	0.000020	7990297
Total Barium (Ba)	mg/L	0.0594	0.0732	<0.000020	0.0612	0.0666	0.000020	7990297
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	7990297
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7990297
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	7990297
Total Cadmium (Cd)	mg/L	0.0000162	0.0000341	<0.0000050	0.0000168	0.0000268	0.0000050	7990297
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00018	0.00010	0.00010	7990297
Total Cobalt (Co)	mg/L	0.0000208	0.0000457	<0.0000050	0.000109	0.0000681	0.0000050	7990297
Total Copper (Cu)	mg/L	0.000370	0.000493	<0.000050	0.000678	0.000547	0.000050	7990297
Total Iron (Fe)	mg/L	0.0162	0.116	<0.0010	0.488	0.254	0.0010	7990297
Total Lead (Pb)	mg/L	<0.0000050	0.0000315	<0.0000050	0.0000412	0.0000279	0.0000050	7990297
Total Lithium (Li)	mg/L	0.00161	0.00301	<0.00050	0.00385	0.00359	0.00050	7990297
Total Manganese (Mn)	mg/L	0.00506	0.0372	<0.000050	0.0510	0.0279	0.000050	7990297
Total Molybdenum (Mo)	mg/L	0.000504	0.00135	<0.000050	0.00177	0.00131	0.000050	7990297
Total Nickel (Ni)	mg/L	0.000343	0.000664	0.000079	0.00318	0.00189	0.000020	7990297
Total Phosphorus (P)	mg/L	0.0022	0.0132	<0.0020	0.0389	0.0222	0.0020	7990297
Total Selenium (Se)	mg/L	0.000447	0.000555	<0.000040	0.000549	0.000512	0.000040	7990297
Total Silicon (Si)	mg/L	2.78	3.14	<0.050	4.20	3.71	0.050	7990297
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	7990297
Total Strontium (Sr)	mg/L	0.143	0.179	<0.000050	0.182	0.190	0.000050	7990297
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	7990297
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	7990297
Total Titanium (Ti)	mg/L	<0.00050	0.00051	<0.00050	0.00113	0.00059	0.00050	7990297
Total Uranium (U)	mg/L	0.00113	0.00245	<0.0000020	0.00283	0.00243	0.0000020	7990297
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00025	<0.00020	0.00020	7990297
Total Zinc (Zn)	mg/L	0.00026	0.00345	<0.00010	0.00282	0.00629	0.00010	7990297
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00013	<0.00010	0.00010	7990297
Total Calcium (Ca)	mg/L	42.6	52.8	<0.050	56.4	54.3	0.050	7987552
Total Magnesium (Mg)	mg/L	7.33	10.8	<0.050	22.0	16.7	0.050	7987552

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MU0675	MU0676	MU0677	MU0678	MU0679		
Sampling Date		2015/07/28 14:00	2015/07/28 15:00	2015/07/29 12:45	2015/07/28 17:00	2015/07/28 15:50		
COC Number		08412400	08412400	08412400	08412400	08412400		
	Units	**KZ-16**	**KZ-17**	**KZ-19**	**KZ-21**	**KZ-22**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	1.22	1.45	<0.050	1.33	1.32	0.050	7987552
Total Sodium (Na)	mg/L	1.01	1.13	<0.050	1.46	1.34	0.050	7987552
Total Sulphur (S)	mg/L	7.2	9.7	<3.0	14.4	12.4	3.0	7987552
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MU0691	MU0692		MU0693		
Sampling Date		2015/07/29 09:00	2015/07/28		2015/07/30 14:15		
COC Number		08412401	08412401		08412401		
	Units	KZ-26	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	213	177	7987284	<0.50	0.50	7987284
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	7989982	<0.0000020	0.0000020	7991960
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0129	0.0172	7990297	<0.00050	0.00050	7990297
Total Antimony (Sb)	mg/L	0.000098	0.000058	7990297	<0.000020	0.000020	7990297
Total Arsenic (As)	mg/L	0.00106	0.000612	7990297	<0.000020	0.000020	7990297
Total Barium (Ba)	mg/L	0.0683	0.0777	7990297	<0.000020	0.000020	7990297
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	7990297	<0.000010	0.000010	7990297
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	7990297	<0.0000050	0.0000050	7990297
Total Boron (B)	mg/L	<0.010	<0.010	7990297	<0.010	0.010	7990297
Total Cadmium (Cd)	mg/L	0.0000149	0.0000393	7990297	<0.0000050	0.0000050	7990297
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	7990297	<0.00010	0.00010	7990297
Total Cobalt (Co)	mg/L	0.0000460	0.0000563	7990297	<0.0000050	0.0000050	7990297
Total Copper (Cu)	mg/L	0.000675	0.000520	7990297	<0.000050	0.000050	7990297
Total Iron (Fe)	mg/L	0.134	0.150	7990297	<0.0010	0.0010	7990297
Total Lead (Pb)	mg/L	0.0000272	0.0000534	7990297	<0.0000050	0.0000050	7990297
Total Lithium (Li)	mg/L	0.00376	0.00291	7990297	<0.00050	0.00050	7990297
Total Manganese (Mn)	mg/L	0.0104	0.0352	7990297	<0.000050	0.000050	7990297
Total Molybdenum (Mo)	mg/L	0.00121	0.00141	7990297	<0.000050	0.000050	7990297
Total Nickel (Ni)	mg/L	0.00146	0.000709	7990297	<0.000020	0.000020	7990297
Total Phosphorus (P)	mg/L	0.0124	0.0048	7990297	<0.0020	0.0020	7990297
Total Selenium (Se)	mg/L	0.000484	0.000537	7990297	<0.000040	0.000040	7990297
Total Silicon (Si)	mg/L	3.86	3.31	7990297	<0.050	0.050	7990297
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	7990297	<0.0000050	0.0000050	7990297
Total Strontium (Sr)	mg/L	0.198	0.179	7990297	<0.000050	0.000050	7990297
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	7990297	<0.0000020	0.0000020	7990297
Total Tin (Sn)	mg/L	<0.00020	<0.00020	7990297	<0.00020	0.00020	7990297
Total Titanium (Ti)	mg/L	<0.00050	0.00112	7990297	<0.00050	0.00050	7990297
Total Uranium (U)	mg/L	0.00237	0.00256	7990297	<0.0000020	0.0000020	7990297
Total Vanadium (V)	mg/L	<0.00020	<0.00020	7990297	<0.00020	0.00020	7990297
Total Zinc (Zn)	mg/L	0.00086	0.00354	7990297	<0.00010	0.00010	7990297
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	7990297	<0.00010	0.00010	7990297
Total Calcium (Ca)	mg/L	56.5	53.1	7987552	<0.050	0.050	7987552
Total Magnesium (Mg)	mg/L	17.6	10.7	7987552	<0.050	0.050	7987552

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MU0691	MU0692		MU0693		
Sampling Date		2015/07/29 09:00	2015/07/28		2015/07/30 14:15		
COC Number		08412401	08412401		08412401		
	Units	**KZ-26**	**KZ-28**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	1.34	1.45	7987552	<0.050	0.050	7987552
Total Sodium (Na)	mg/L	1.49	1.14	7987552	<0.050	0.050	7987552
Total Sulphur (S)	mg/L	12.3	9.7	7987552	<3.0	3.0	7987552
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	7.3°C
Package 2	9.7°C
Package 3	9.3°C

In order to provide the lowest possible reporting limits, the analytical techniques for cyanide have been pushed to their absolute limit. At low levels, it is sometimes observed that WAD cyanide values are > SAD values. In general, the difference is due to the statistical variability of the analysis.

There is an analytical uncertainty (Mu) associated with every measurement. The uncertainty is expressed as a 95% confidence interval. (If a measurement is repeated 20 times, 19 of the results would fall within the interval). At levels near the detection limit, the uncertainty for SAD cyanide is ± 0.0008 mg/L and 0.0007 mg/L for WAD cyanide. The combined uncertainty for the 2 measurements is ± 0.001 mg/L. For clarity, if a sample containing 0.001 mg/L WAD cyanide was analyzed 20 times, 19 of the results would be normally distributed between 0.0017 and 0.0003 mg/L.

If the true SAD and WAD values are the same, there is a 50% probability the measured WAD value will be greater than the SAD value and statistically, by chance alone, by as much as 0.001 mg/L. Thus, in this data set, in cases where WAD > SAD, the difference is not statistically significant.

Sample MU0677-01 : Effective October 1, 2013, the BC MOE SAMPLE PRESERVATION & HOLDING TIME REQUIREMENTS states that Mercury in water requires a glass or PTFE container with Hydrochloric Acid (HCl) preservation. Sample container and preservation received was not in compliance. Maxxam added HCl to stabilize Mercury in this sample prior to analysis. Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Sample MU0693-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Sample MU0670, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7987981	Alkalinity (PP as CaCO3)	2015/07/31					<0.50	mg/L	NC	20
7987981	Alkalinity (Total as CaCO3)	2015/07/31	NC	80 - 120	98	80 - 120	0.51, RDL=0.50	mg/L	0.48	20
7987981	Bicarbonate (HCO3)	2015/07/31					0.62, RDL=0.50	mg/L	0.48	20
7987981	Carbonate (CO3)	2015/07/31					<0.50	mg/L	NC	20
7987981	Hydroxide (OH)	2015/07/31					<0.50	mg/L	NC	20
7987991	Conductivity	2015/07/31			101	80 - 120	<1.0	uS/cm	0.86	20
7987992	pH	2015/07/31			101	97 - 103			0.38	N/A
7987996	pH	2015/07/31			101	97 - 103			0.68	N/A
7987998	Conductivity	2015/07/31			102	80 - 120	1.0, RDL=1.0	uS/cm	NC	20
7988005	Alkalinity (PP as CaCO3)	2015/07/31					<0.50	mg/L	NC	20
7988005	Alkalinity (Total as CaCO3)	2015/07/31	96	80 - 120	99	80 - 120	<0.50	mg/L	7.6	20
7988005	Bicarbonate (HCO3)	2015/07/31					<0.50	mg/L	7.6	20
7988005	Carbonate (CO3)	2015/07/31					<0.50	mg/L	NC	20
7988005	Hydroxide (OH)	2015/07/31					<0.50	mg/L	NC	20
7988160	Nitrate plus Nitrite (N)	2015/07/31	104	80 - 120	107	80 - 120	<0.0020	mg/L	NC	25
7988161	Nitrite (N)	2015/07/31	105	80 - 120	104	80 - 120	<0.0020	mg/L	NC	25
7988701	True Colour	2015/08/01			100	80 - 120	<5.0	Col. Unit	NC	20
7988702	True Colour	2015/08/01			105	80 - 120	<5.0	Col. Unit	NC	20
7988709	Total Phosphorus (P)	2015/08/01	NC	80 - 120	102	80 - 120	<0.0020	mg/L	1.1	20
7988711	Total Phosphorus (P)	2015/08/01	94	80 - 120	107	80 - 120	<0.0020	mg/L	NC	20
7988713	Dissolved Phosphorus (P)	2015/08/01	95	80 - 120	94	80 - 120	<0.0020	mg/L	5.4	20
7988724	Acidity (pH 4.5)	2015/07/31					<0.50	mg/L	NC	20
7988724	Acidity (pH 8.3)	2015/07/31			98	80 - 120	<0.50	mg/L	NC	20
7988725	Acidity (pH 4.5)	2015/08/01					<0.50	mg/L	NC	20
7988725	Acidity (pH 8.3)	2015/08/01			99	80 - 120	<0.50	mg/L	NC	20
7988729	Acidity (pH 4.5)	2015/08/01					<0.50	mg/L		
7988729	Acidity (pH 8.3)	2015/08/01			102	80 - 120	<0.50	mg/L		
7988753	Nitrate plus Nitrite (N)	2015/08/01	97	80 - 120	104	80 - 120	<0.0020	mg/L	1.8	25
7988754	Nitrite (N)	2015/08/01	96	80 - 120	102	80 - 120	<0.0020	mg/L	NC	25
7988755	Nitrate plus Nitrite (N)	2015/08/01			104	80 - 120	<0.0020	mg/L		
7988756	Nitrite (N)	2015/08/01			104	80 - 120	<0.0020	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7988779	Alkalinity (PP as CaCO3)	2015/08/01					<0.50	mg/L	NC	20
7988779	Alkalinity (Total as CaCO3)	2015/08/01	N/C	80 - 120	104	80 - 120	<0.50	mg/L	NC	20
7988779	Bicarbonate (HCO3)	2015/08/01					<0.50	mg/L	NC	20
7988779	Carbonate (CO3)	2015/08/01					<0.50	mg/L	NC	20
7988779	Hydroxide (OH)	2015/08/01					<0.50	mg/L	NC	20
7988781	pH	2015/08/01			101	97 - 103			0.33 (1)	N/A
7988782	Conductivity	2015/08/01			99	80 - 120	<1.0	uS/cm	1.2	20
7988816	Dissolved Organic Carbon (C)	2015/08/05	107	80 - 120	106	80 - 120	<0.50	mg/L	NC	20
7989823	Dissolved Aluminum (Al)	2015/08/04	101	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
7989823	Dissolved Antimony (Sb)	2015/08/04	107	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
7989823	Dissolved Arsenic (As)	2015/08/04	103	80 - 120	101	80 - 120	<0.000020	mg/L	1.9	20
7989823	Dissolved Barium (Ba)	2015/08/04	NC	80 - 120	109	80 - 120	<0.000020	mg/L	1.7	20
7989823	Dissolved Beryllium (Be)	2015/08/04	98	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
7989823	Dissolved Bismuth (Bi)	2015/08/04	101	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
7989823	Dissolved Boron (B)	2015/08/04					<0.010	mg/L	NC	20
7989823	Dissolved Cadmium (Cd)	2015/08/04	100	80 - 120	101	80 - 120	<0.0000050	mg/L	4.2	20
7989823	Dissolved Chromium (Cr)	2015/08/04	103	80 - 120	105	80 - 120	<0.00010	mg/L	NC	20
7989823	Dissolved Cobalt (Co)	2015/08/04	102	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
7989823	Dissolved Copper (Cu)	2015/08/04	100	80 - 120	109	80 - 120	<0.000050	mg/L	3.2	20
7989823	Dissolved Iron (Fe)	2015/08/04	103	80 - 120	114	80 - 120	<0.0010	mg/L	0.044	20
7989823	Dissolved Lead (Pb)	2015/08/04	103	80 - 120	109	80 - 120	<0.0000050	mg/L	NC	20
7989823	Dissolved Lithium (Li)	2015/08/04	96	80 - 120	100	80 - 120	<0.00050	mg/L	6.0	20
7989823	Dissolved Manganese (Mn)	2015/08/04	NC	80 - 120	106	80 - 120	<0.000050	mg/L	0.19	20
7989823	Dissolved Molybdenum (Mo)	2015/08/04	NC	80 - 120	101	80 - 120	<0.000050	mg/L	2.0	20
7989823	Dissolved Nickel (Ni)	2015/08/04	99	80 - 120	107	80 - 120	<0.000020	mg/L	2.0	20
7989823	Dissolved Phosphorus (P)	2015/08/04					<0.0020	mg/L	NC	20
7989823	Dissolved Selenium (Se)	2015/08/04	102	80 - 120	99	80 - 120	<0.000040	mg/L	2.2	20
7989823	Dissolved Silicon (Si)	2015/08/04					<0.050	mg/L	3.6	20
7989823	Dissolved Silver (Ag)	2015/08/04	105	80 - 120	87	80 - 120	<0.0000050	mg/L	NC	20
7989823	Dissolved Strontium (Sr)	2015/08/04	NC	80 - 120	100	80 - 120	<0.000050	mg/L	0.80	20
7989823	Dissolved Thallium (Tl)	2015/08/04	98	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7989823	Dissolved Tin (Sn)	2015/08/04	117	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
7989823	Dissolved Titanium (Ti)	2015/08/04	101	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
7989823	Dissolved Uranium (U)	2015/08/04	108	80 - 120	112	80 - 120	<0.0000020	mg/L	1.2	20
7989823	Dissolved Vanadium (V)	2015/08/04	103	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
7989823	Dissolved Zinc (Zn)	2015/08/04	100	80 - 120	108	80 - 120	<0.00010	mg/L	1.7	20
7989823	Dissolved Zirconium (Zr)	2015/08/04					<0.00010	mg/L	NC	20
7989913	Strong Acid Dissoc. Cyanide (CN)	2015/08/04	105	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
7989982	Total Mercury (Hg)	2015/08/04	96	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
7990000	Total Suspended Solids	2015/08/05			92	80 - 120	<1.0	mg/L		
7990297	Total Aluminum (Al)	2015/08/04	NC	80 - 120	104	80 - 120	<0.00050	mg/L	5.7	20
7990297	Total Antimony (Sb)	2015/08/04	98	80 - 120	102	80 - 120	<0.000020	mg/L	6.2	20
7990297	Total Arsenic (As)	2015/08/04	108	80 - 120	101	80 - 120	<0.000020	mg/L	18	20
7990297	Total Barium (Ba)	2015/08/04	NC	80 - 120	106	80 - 120	<0.000020	mg/L	6.7	20
7990297	Total Beryllium (Be)	2015/08/04	98	80 - 120	97	80 - 120	<0.000010	mg/L	NC	20
7990297	Total Bismuth (Bi)	2015/08/04	102	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
7990297	Total Boron (B)	2015/08/04					<0.010	mg/L	NC	20
7990297	Total Cadmium (Cd)	2015/08/04	98	80 - 120	105	80 - 120	<0.0000050	mg/L	1.8	20
7990297	Total Chromium (Cr)	2015/08/04	101	80 - 120	104	80 - 120	<0.00010	mg/L	2.6	20
7990297	Total Cobalt (Co)	2015/08/04	NC	80 - 120	107	80 - 120	<0.0000050	mg/L	4.8	20
7990297	Total Copper (Cu)	2015/08/04	NC	80 - 120	107	80 - 120	<0.000050	mg/L	5.2	20
7990297	Total Iron (Fe)	2015/08/04	NC	80 - 120	107	80 - 120	<0.0010	mg/L	5.0	20
7990297	Total Lead (Pb)	2015/08/04	105	80 - 120	104	80 - 120	<0.0000050	mg/L	0.85	20
7990297	Total Lithium (Li)	2015/08/04	94	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
7990297	Total Manganese (Mn)	2015/08/04	NC	80 - 120	105	80 - 120	<0.000050	mg/L	4.4	20
7990297	Total Molybdenum (Mo)	2015/08/04	NC	80 - 120	97	80 - 120	<0.000050	mg/L	0.45	20
7990297	Total Nickel (Ni)	2015/08/04	NC	80 - 120	107	80 - 120	<0.000020	mg/L	3.0	20
7990297	Total Phosphorus (P)	2015/08/04					<0.0020	mg/L	4.2	20
7990297	Total Selenium (Se)	2015/08/04	102	80 - 120	97	80 - 120	<0.000040	mg/L	NC	20
7990297	Total Silicon (Si)	2015/08/04					<0.050	mg/L	5.1	20
7990297	Total Silver (Ag)	2015/08/04	110	80 - 120	84	80 - 120	<0.0000050	mg/L	NC	20
7990297	Total Strontium (Sr)	2015/08/04	NC	80 - 120	100	80 - 120	<0.000050	mg/L	5.0	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7990297	Total Thallium (Tl)	2015/08/04	103	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
7990297	Total Tin (Sn)	2015/08/04	NC	80 - 120	100	80 - 120	<0.00020	mg/L	2.0	20
7990297	Total Titanium (Ti)	2015/08/04	93	80 - 120	106	80 - 120	<0.00050	mg/L	0.22	20
7990297	Total Uranium (U)	2015/08/04	115	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
7990297	Total Vanadium (V)	2015/08/04	NC	80 - 120	105	80 - 120	<0.00020	mg/L	5.5	20
7990297	Total Zinc (Zn)	2015/08/04	NC	80 - 120	107	80 - 120	<0.00010	mg/L	3.5	20
7990297	Total Zirconium (Zr)	2015/08/04					<0.00010	mg/L	NC	20
7990401	Dissolved Chloride (Cl)	2015/08/04			99	80 - 120	<0.50	mg/L		
7990402	Dissolved Sulphate (SO4)	2015/08/04			91	80 - 120	<0.50	mg/L		
7990423	Dissolved Chloride (Cl)	2015/08/04	98	80 - 120	95	80 - 120	<0.50	mg/L	NC	20
7990425	Dissolved Sulphate (SO4)	2015/08/04	90	80 - 120	91	80 - 120	<0.50	mg/L	NC	20
7990678	Total Suspended Solids	2015/08/05			101	80 - 120	<1.0	mg/L		
7990718	Total Ammonia (N)	2015/08/04	100	80 - 120	104	80 - 120	<0.0050	mg/L	NC	20
7990722	Total Ammonia (N)	2015/08/04	100	80 - 120	101	80 - 120	<0.0050	mg/L	6.4	20
7991672	Dissolved Organic Carbon (C)	2015/08/05	91	80 - 120	108	80 - 120	0.70, RDL=0.50	mg/L	NC	20
7991944	Dissolved Mercury (Hg)	2015/08/05	109	80 - 120	108	80 - 120	<0.0000020	mg/L	NC	20
7991954	Dissolved Mercury (Hg)	2015/08/05	101	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
7991960	Total Mercury (Hg)	2015/08/05	86	80 - 120	94	80 - 120	<0.0000020	mg/L	NC	20
7992222	Fluoride (F)	2015/08/04	102	80 - 120	98	80 - 120	<0.010	mg/L	0	20
7992243	Fluoride (F)	2015/08/04			96	80 - 120	<0.010	mg/L		
7992283	Fluoride (F)	2015/08/05			96	80 - 120	0.011, RDL=0.010	mg/L	1.3	20
7993398	Dissolved Lead (Pb)	2015/08/06			100	80 - 120	<0.0000050	mg/L		
7993707	Total Ammonia (N)	2015/08/06	107	80 - 120	102	80 - 120	<0.0050	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	Units	Value (%)	QC Limits
7998702	Weak Acid Dissoc. Cyanide (CN)	2015/08/11	96	80 - 120	99	80 - 120	0.00058, RDL=0.00050	mg/L	NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) pH result is less than the lowest calibration standard of pH 4.00

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B565281
Report Date: 2015/08/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Name Data Validation Coordinator

Signature Redacted

Name Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTOD

08412400

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUCSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL Y / (N) — Present / Intact

COOLER TEMPERATURES

COOLING MEDIA PRESENT (Y) / N

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	Present	Intact	COOLER TEMPERATURES	COMMENTS
1	KZ-2	MU0670	2015/07/29	12:10	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12			N/A	7.8.7	D.Hg was field filtered
2	KZ-7	MU0671	2015/07/28	11:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12			N/A	10.10.9	
3	KZ-9	MU0672	2015/07/29	10:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12			N/A	10.8.10	
4	KZ-13	MU0673	2015/07/29	14:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12					
5	KZ-15	MU0674	2015/07/28	13:05	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12					
6	KZ-16	MU0675	2015/07/28	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12					
7	KZ-17	MU0676	2015/07/28	15:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12					
8	KZ-19	MU0677	2015/07/29	12:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12					
9	KZ-21	MU0678	2015/07/28	17:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12					
10	KZ-22	MU0679	2015/07/28	15:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12					

B565281

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2015/07/29	19:00	Signature Redacted	2015/07/30	14:15	B565281

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTO[illegible]

08412401

BBY FCD-00077/05

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUCSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-26	MU0691	2015/07/29	9:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		D. Hg was field filtered
2	KZ-28	MU0692	2015/07/28		Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		↓
3	Trip Blank	MU0693			Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
4	KZ-9 East Seep	MU0694	2015/07/29	11:30	"		x		x			x	x	x	x							4		General package, anions & D. metals (excl. Hg)
5	KZ-9 West Seep	MU0695	2015/07/29	11:20	"		x		x			x	x	x	x							4		"
6																								
7																								
8																								
9																								
10																								

B565281

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
	N/A	7.8.7
	N/A	10.10.9
	N/A	10.8.10

COOLING MEDIA PRESENT (Y) / N

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2015/07/29	19:00	Signature Redacted	2015/07/30	14:15	B565281

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08413030, 08413031

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/09/02
Report #: R2034525
Version: 4 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B573429
Received: 2015/08/25, 14:05

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	13	N/A	2015/08/26	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	8	2015/08/26	2015/08/26	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	5	2015/08/26	2015/08/27	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	13	N/A	2015/08/26	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	13	N/A	2015/08/27	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	13	N/A	2015/08/26	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	13	N/A	2015/08/26	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) -Lab Filtered (1, 2)	1	N/A	2015/08/31	EENVSOP-00060	MMCW 119 1996 m
Carbon (DOC) (1, 2)	12	N/A	2015/09/01	EENVSOP-00060	MMCW 119 1996 m
Conductance - water	8	N/A	2015/08/26	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	5	N/A	2015/08/27	BBY6SOP-00026	SM 22 2510 B m
Fluoride	13	N/A	2015/08/26	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	6	N/A	2015/08/31	BBY7SOP-00002	EPA 6020a R1 m
Hardness Total (calculated as CaCO3)	7	N/A	2015/09/01	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	13	N/A	2015/09/01	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	13	N/A	2015/08/31	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	11	2015/08/30	2015/08/31	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	2	2015/08/31	2015/08/31	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	13	N/A	2015/09/01	BBY WI-00033	SM 22 1030E
Sum of cations, anions	13	N/A	2015/09/01	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	13	N/A	2015/09/01	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	13	N/A	2015/08/31	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Digested LL (total)	7	2015/08/28	2015/09/01	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	6	N/A	2015/08/31	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	7	N/A	2015/09/01	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	1	N/A	2015/08/29	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	5	N/A	2015/08/31	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	13	N/A	2015/08/26	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	13	N/A	2015/08/26	BBY6SOP-00010	SM 22 4500-NO3- I m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08413030, 08413031

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/09/02
Report #: R2034525
Version: 4 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B573429
Received: 2015/08/25, 14:05

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrite (N) (low level)	13	N/A	2015/08/26	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	13	N/A	2015/08/26	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	13	N/A	2015/08/26	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (3)	8	N/A	2015/08/26	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (3)	5	N/A	2015/08/27	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	12	N/A	2015/08/26	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	1	N/A	2015/08/27	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	13	2015/08/26	2015/08/27	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	13	N/A	2015/08/27	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	12	2015/08/28	2015/08/29	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	1	2015/08/31	2015/09/01	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Maxxam Edmonton Environmental
(2) DOC present in the sample should be considered as non-purgeable DOC.
(3) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MZ0030		MZ0031		MZ0032		
Sampling Date		2015/08/23 16:15		2015/08/23 12:40		2015/08/23 11:00		
COC Number		08413030		08413030		08413030		
	UNITS	KZ-2	QC Batch	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	8016251	<0.50	8016251	<0.50	0.50	8016251
Acidity (pH 8.3)	mg/L	<0.50	8016251	<0.50	8016251	0.80	0.50	8016251
Calculated Parameters								
Anion Sum	meq/L	1.8	8015350	2.5	8015350	2.9	N/A	8015350
Cation Sum	meq/L	1.9	8015350	2.6	8015350	3.0	N/A	8015350
Filter and HNO3 Preservation	N/A	LAB	8015900	LAB	8015900	LAB	N/A	8015900
Ion Balance	N/A	1.0	8015349	1.0	8015349	1.0	0.010	8015349
Nitrate (N)	mg/L	0.105	8014148	0.0107	8014148	0.0387	0.0020	8014148
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8016701	<0.00050	8016701	<0.00050	0.00050	8016701
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00088	8016938	<0.00050	8016938	<0.00050	0.00050	8016938
Fluoride (F)	mg/L	0.035	8016544	0.056	8016543	0.063	0.010	8016544
Dissolved Organic Carbon (C)	mg/L	0.68	8023893	1.8	8023893	1.7	0.50	8023893
Alkalinity (Total as CaCO3)	mg/L	48.3	8016771	92.5	8016747	114	0.50	8016747
Alkalinity (PP as CaCO3)	mg/L	<0.50	8016771	<0.50	8016747	<0.50	0.50	8016747
Bicarbonate (HCO3)	mg/L	59.0	8016771	113	8016747	139	0.50	8016747
Carbonate (CO3)	mg/L	<0.50	8016771	<0.50	8016747	<0.50	0.50	8016747
Hydroxide (OH)	mg/L	<0.50	8016771	<0.50	8016747	<0.50	0.50	8016747
Anions								
Dissolved Sulphate (SO4)	mg/L	38.3	8017443	32.4	8017490	31.0	0.50	8017490
Dissolved Chloride (Cl)	mg/L	<0.50	8017438	<0.50	8017479	<0.50	0.50	8017479
MISCELLANEOUS								
True Colour	Col. Unit	6.4	8017042	13.0	8017042	13.3	5.0	8017042
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0037	8018688	0.0029	8018688	0.0024	0.0020	8018688
Total Ammonia (N)	mg/L	<0.0050	8016958	<0.0050	8016958	<0.0050	0.0050	8016958
Nitrate plus Nitrite (N)	mg/L	0.105	8016929	0.0107	8016876	0.0407	0.0020	8016929
Nitrite (N)	mg/L	<0.0020	8016931	<0.0020	8016878	0.0020	0.0020	8016931
Total Phosphorus (P)	mg/L	0.0041	8018685	0.0035	8018685	0.0059	0.0020	8018685
Physical Properties								
Conductivity	uS/cm	183	8016772	250	8016750	283	1.0	8016750
pH	pH	7.77	8016773	7.92	8016751	7.95	N/A	8016751

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MZ0030		MZ0031		MZ0032		
Sampling Date		2015/08/23 16:15		2015/08/23 12:40		2015/08/23 11:00		
COC Number		08413030		08413030		08413030		
	UNITS	KZ-2	QC Batch	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8019521	1.2	8019521	1.9	1.0	8019521
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MZ0033		MZ0034		MZ0035		
Sampling Date		2015/08/23 14:00		2015/08/22 15:00		2015/08/22 15:50		
COC Number		08413030		08413030		08413030		
	UNITS	KZ-13	QC Batch	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	8016251	<0.50	8016251	<0.50	0.50	8016251
Acidity (pH 8.3)	mg/L	<0.50	8016251	<0.50	8016251	<0.50	0.50	8016251
Calculated Parameters								
Anion Sum	meq/L	1.4	8015350	2.8	8015350	2.5	N/A	8015350
Cation Sum	meq/L	1.4	8015350	2.9	8015350	2.6	N/A	8015350
Filter and HNO3 Preservation	N/A	LAB	8015900	LAB	8015900	LAB	N/A	8015900
Ion Balance	N/A	1.0	8015349	1.0	8015349	1.1	0.010	8015349
Nitrate (N)	mg/L	0.0378	8014148	0.0229	8014148	0.0271	0.0020	8014148
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8016701	<0.00050	8016701	<0.00050	0.00050	8016701
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00056	8016938	<0.00050	8016938	0.00051	0.00050	8016938
Fluoride (F)	mg/L	0.044	8016544	0.065	8016543	0.054	0.010	8016544
Dissolved Organic Carbon (C)	mg/L	2.7	8023893	1.4	8023893	1.3	0.50	8023893
Alkalinity (Total as CaCO3)	mg/L	53.8	8016771	115	8016771	101	0.50	8016771
Alkalinity (PP as CaCO3)	mg/L	<0.50	8016771	<0.50	8016771	<0.50	0.50	8016771
Bicarbonate (HCO3)	mg/L	65.6	8016771	141	8016771	123	0.50	8016771
Carbonate (CO3)	mg/L	<0.50	8016771	<0.50	8016771	<0.50	0.50	8016771
Hydroxide (OH)	mg/L	<0.50	8016771	<0.50	8016771	<0.50	0.50	8016771
Anions								
Dissolved Sulphate (SO4)	mg/L	14.2	8017490	24.4	8017490	21.6	0.50	8017490
Dissolved Chloride (Cl)	mg/L	<0.50	8017479	<0.50	8017479	<0.50	0.50	8017479
MISCELLANEOUS								
True Colour	Col. Unit	18.1	8017042	11.1 (1)	8017042	9.4 (1)	5.0	8017042
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0031	8018688	0.0022 (1)	8018688	<0.0020 (1)	0.0020	8018688
Total Ammonia (N)	mg/L	<0.0050	8016958	0.0059 (1)	8016958	0.0080 (1)	0.0050	8016958
Nitrate plus Nitrite (N)	mg/L	0.0378	8016929	0.0229 (1)	8016876	0.0271 (1)	0.0020	8016929
Nitrite (N)	mg/L	<0.0020	8016931	<0.0020 (1)	8016878	<0.0020 (1)	0.0020	8016931
Total Phosphorus (P)	mg/L	0.0030	8018685	0.0022 (1)	8018684	0.0026 (1)	0.0020	8018685
Physical Properties								
Conductivity	uS/cm	137	8016772	269	8016772	238	1.0	8016772
pH	pH	7.83	8016773	8.05	8016773	8.00	N/A	8016773

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MZ0033		MZ0034		MZ0035		
Sampling Date		2015/08/23 14:00		2015/08/22 15:00		2015/08/22 15:50		
COC Number		08413030		08413030		08413030		
	UNITS	KZ-13	QC Batch	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	1.3	8019521	<1.0	8019493	<1.0	1.0	8019493
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MZ0036		MZ0037		MZ0038		
Sampling Date		2015/08/22 16:35		2015/08/23 13:30		2015/08/23 10:00		
COC Number		08413030		08413030		08413030		
	UNITS	KZ-17	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	8016251	<0.50	8016251	<0.50	0.50	8016251
Acidity (pH 8.3)	mg/L	<0.50	8016251	<0.50	8016251	<0.50	0.50	8016251
Calculated Parameters								
Anion Sum	meq/L	3.4	8015350	2.6	8015350	4.0	N/A	8015350
Cation Sum	meq/L	3.5	8015350	2.7	8015350	4.2	N/A	8015350
Filter and HNO3 Preservation	N/A	LAB	8015900	LAB	8015900	LAB	N/A	8015900
Ion Balance	N/A	1.0	8015349	1.1	8015349	1.1	0.010	8015349
Nitrate (N)	mg/L	0.0209	8014148	0.0125	8014148	<0.0020	0.0020	8014148
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8016701	<0.00050	8016701	<0.00050	0.00050	8016701
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8016938	<0.00050	8016938	<0.00050	0.00050	8016938
Fluoride (F)	mg/L	0.091	8016544	0.052	8016544	0.140	0.010	8016544
Dissolved Organic Carbon (C)	mg/L	1.7	8023893	1.3	8023893	10	0.50	8023893
Alkalinity (Total as CaCO3)	mg/L	137	8016747	92.3	8016771	160	0.50	8016747
Alkalinity (PP as CaCO3)	mg/L	<0.50	8016747	<0.50	8016771	<0.50	0.50	8016747
Bicarbonate (HCO3)	mg/L	168	8016747	113	8016771	196	0.50	8016747
Carbonate (CO3)	mg/L	<0.50	8016747	<0.50	8016771	<0.50	0.50	8016747
Hydroxide (OH)	mg/L	<0.50	8016747	<0.50	8016771	<0.50	0.50	8016747
Anions								
Dissolved Sulphate (SO4)	mg/L	31.2	8019592	33.9	8017443	35.7	0.50	8017490
Dissolved Chloride (Cl)	mg/L	<0.50	8017479	<0.50	8017438	<0.50	0.50	8017479
MISCELLANEOUS								
True Colour	Col. Unit	12.8 (1)	8017042	14.4	8017042	82.6	5.0	8017042
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0032 (1)	8018688	0.0025	8018688	0.0115	0.0020	8018688
Total Ammonia (N)	mg/L	<0.0050 (1)	8016958	<0.0050	8016958	0.0060	0.0050	8016958
Nitrate plus Nitrite (N)	mg/L	0.0233 (1)	8016929	0.0125	8016929	0.0036	0.0020	8016929
Nitrite (N)	mg/L	0.0024 (1)	8016931	<0.0020	8016931	0.0025	0.0020	8016931
Total Phosphorus (P)	mg/L	0.0037 (1)	8018685	0.0029	8018685	0.0128	0.0020	8018685
Physical Properties								
Conductivity	uS/cm	321	8016750	253	8016772	368	1.0	8016750
pH	pH	8.04	8016751	7.97	8016773	8.04	N/A	8016751

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MZ0036		MZ0037		MZ0038		
Sampling Date		2015/08/22 16:35		2015/08/23 13:30		2015/08/23 10:00		
COC Number		08413030		08413030		08413030		
	UNITS	KZ-17	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	1.0	8019493	1.0	8019521	2.4	1.0	8019521
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MZ0039		MZ0055		MZ0056		
Sampling Date		2015/08/23 09:00		2015/08/22 09:25		2015/08/22 12:00		
COC Number		08413030		08413031		08413031		
	UNITS	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	8016251	<0.50	8016251	<0.50	0.50	8016251
Acidity (pH 8.3)	mg/L	<0.50	8016251	<0.50	8016251	<0.50	0.50	8016251
Calculated Parameters								
Anion Sum	meq/L	3.6	8015350	3.5	8015350	0.014	N/A	8015350
Cation Sum	meq/L	3.8	8015350	3.7	8015350	0.0012	N/A	8015350
Filter and HNO3 Preservation	N/A	LAB	8015900	LAB	8015900	LAB	N/A	8015900
Ion Balance	N/A	1.0	8015349	1.0	8015349	0.086	0.010	8015349
Nitrate (N)	mg/L	0.0179	8014148	0.0168	8014148	<0.0020	0.0020	8014148
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8016701	<0.00050	8016701	<0.00050	0.00050	8016701
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8016938	<0.00050	8016938	<0.00050	0.00050	8016938
Fluoride (F)	mg/L	0.100	8016544	0.092	8016544	<0.010	0.010	8016543
Dissolved Organic Carbon (C)	mg/L	6.2	8023893	9.1	8023893	<0.50	0.50	8023893
Alkalinity (Total as CaCO3)	mg/L	148	8016747	145	8016747	0.69	0.50	8016747
Alkalinity (PP as CaCO3)	mg/L	<0.50	8016747	<0.50	8016747	<0.50	0.50	8016747
Bicarbonate (HCO3)	mg/L	180	8016747	177	8016747	0.84	0.50	8016747
Carbonate (CO3)	mg/L	<0.50	8016747	<0.50	8016747	<0.50	0.50	8016747
Hydroxide (OH)	mg/L	<0.50	8016747	<0.50	8016747	<0.50	0.50	8016747
Anions								
Dissolved Sulphate (SO4)	mg/L	32.3	8017443	29.9	8017443	<0.50	0.50	8017490
Dissolved Chloride (Cl)	mg/L	<0.50	8017438	<0.50	8017438	<0.50	0.50	8017479
MISCELLANEOUS								
True Colour	Col. Unit	47.9	8017042	73.5 (1)	8017042	<5.0 (1)	5.0	8017042
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0071	8018688	0.0068 (1)	8018688	<0.0020 (1)	0.0020	8018688
Total Ammonia (N)	mg/L	0.0092	8016958	0.0054 (1)	8016958	0.0066 (1)	0.0050	8016958
Nitrate plus Nitrite (N)	mg/L	0.0179	8016929	0.0194 (1)	8016929	0.0032 (1)	0.0020	8016876
Nitrite (N)	mg/L	<0.0020	8016931	0.0026 (1)	8016931	0.0027 (1)	0.0020	8016878
Total Phosphorus (P)	mg/L	0.0072	8018685	0.0090 (1)	8018685	<0.0020 (1)	0.0020	8018685
Physical Properties								
Conductivity	uS/cm	338	8016750	322	8016750	1.2	1.0	8016750
pH	pH	8.10	8016751	8.11	8016751	6.14	N/A	8016751

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MZ0039		MZ0055		MZ0056		
Sampling Date		2015/08/23 09:00		2015/08/22 09:25		2015/08/22 12:00		
COC Number		08413030		08413031		08413031		
	UNITS	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	3.5	8019521	13.9	8019493	<1.0	1.0	8019493
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MZ0057		
Sampling Date		2015/08/25 14:05		
COC Number		08413031		
	UNITS	TRIP BLANK	RDL	QC Batch
Misc. Inorganics				
Acidity (pH 4.5)	mg/L	<0.50	0.50	8016251
Acidity (pH 8.3)	mg/L	<0.50	0.50	8016251
Calculated Parameters				
Anion Sum	meq/L	0.011	N/A	8015350
Cation Sum	meq/L	0.0012	N/A	8015350
Filter and HNO3 Preservation	N/A	LAB	N/A	8015900
Ion Balance	N/A	0.11	0.010	8015349
Nitrate (N)	mg/L	0.0023	0.0020	8014148
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8016701
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8016938
Fluoride (F)	mg/L	<0.010	0.010	8016544
Alkalinity (Total as CaCO3)	mg/L	0.55	0.50	8016747
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8016747
Bicarbonate (HCO3)	mg/L	0.67	0.50	8016747
Carbonate (CO3)	mg/L	<0.50	0.50	8016747
Hydroxide (OH)	mg/L	<0.50	0.50	8016747
Lab Filtered Inorganics				
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8021903
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8017443
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8017438
MISCELLANEOUS				
True Colour	Col. Unit	<5.0	5.0	8017042
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8018688
Total Ammonia (N)	mg/L	0.0061	0.0050	8016958
Nitrate plus Nitrite (N)	mg/L	0.0023	0.0020	8016929
Nitrite (N)	mg/L	<0.0020	0.0020	8016931
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8018685
Physical Properties				
Conductivity	uS/cm	1.2	1.0	8016750
pH	pH	6.10	N/A	8016751

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MZ0057		
Sampling Date		2015/08/25 14:05		
COC Number		08413031		
	UNITS	TRIP BLANK	RDL	QC Batch
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8021827
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MZ0030	MZ0031		MZ0032		
Sampling Date		2015/08/23 16:15	2015/08/23 12:40		2015/08/23 11:00		
COC Number		08413030	08413030		08413030		
	UNITS	KZ-2	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	89.8	126	8015205	146	0.50	8015205
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8021349	<0.0000020	0.0000020	8021349
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00479	0.00201	8019311	0.00178	0.00050	8019311
Dissolved Antimony (Sb)	mg/L	0.000026	0.000078	8019311	0.000057	0.000020	8019311
Dissolved Arsenic (As)	mg/L	0.000096	0.000233	8019311	0.000210	0.000020	8019311
Dissolved Barium (Ba)	mg/L	0.0491	0.0643	8019311	0.0695	0.000020	8019311
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	8019311	<0.000010	0.000010	8019311
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8019311	<0.0000050	0.0000050	8019311
Dissolved Boron (B)	mg/L	<0.010	<0.010	8019311	<0.010	0.010	8019311
Dissolved Cadmium (Cd)	mg/L	0.000306	0.000102	8019311	0.0000430	0.0000050	8019311
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	8019311	<0.00010	0.00010	8019311
Dissolved Cobalt (Co)	mg/L	0.0000100	0.0000140	8019311	0.0000440	0.0000050	8019311
Dissolved Copper (Cu)	mg/L	0.000774	0.000656	8019311	0.000574	0.000050	8019311
Dissolved Iron (Fe)	mg/L	0.0012	0.0472	8019311	0.101	0.0010	8019311
Dissolved Lead (Pb)	mg/L	0.0000100	0.0000160	8019311	0.0000070	0.0000050	8019311
Dissolved Lithium (Li)	mg/L	0.00058	0.00133	8019311	0.00174	0.00050	8019311
Dissolved Manganese (Mn)	mg/L	0.000116	0.00924	8019311	0.0337	0.000050	8019311
Dissolved Molybdenum (Mo)	mg/L	0.000682	0.000498	8019311	0.000568	0.000050	8019311
Dissolved Nickel (Ni)	mg/L	0.000450	0.000392	8019311	0.000514	0.000020	8025346
Dissolved Phosphorus (P)	mg/L	0.0022	<0.0020	8019311	<0.0020	0.0020	8019311
Dissolved Selenium (Se)	mg/L	0.000552	0.000677	8019311	0.000686	0.000040	8019311
Dissolved Silicon (Si)	mg/L	2.12	2.55	8019311	2.72	0.050	8019311
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	8019311	<0.0000050	0.0000050	8019311
Dissolved Strontium (Sr)	mg/L	0.0882	0.135	8019311	0.156	0.000050	8019311
Dissolved Thallium (Tl)	mg/L	0.0000040	0.0000020	8019311	<0.0000020	0.0000020	8019311
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	8019311	<0.00020	0.00020	8019311
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	8019311	<0.00050	0.00050	8019311
Dissolved Uranium (U)	mg/L	0.00157	0.000831	8019311	0.000908	0.0000020	8019311
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	8019311	<0.00020	0.00020	8019311
Dissolved Zinc (Zn)	mg/L	0.0468	0.0250	8019311	0.00705	0.00010	8019311
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	8019311	<0.00010	0.00010	8019311
Dissolved Calcium (Ca)	mg/L	31.4	42.1	8014246	48.7	0.050	8015351
Dissolved Magnesium (Mg)	mg/L	2.74	5.18	8014246	5.80	0.050	8015351
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MZ0030	MZ0031		MZ0032		
Sampling Date		2015/08/23 16:15	2015/08/23 12:40		2015/08/23 11:00		
COC Number		08413030	08413030		08413030		
	UNITS	**KZ-2**	**KZ-7**	**QC Batch**	**KZ-9**	**RDL**	**QC Batch**
Dissolved Potassium (K)	mg/L	1.41	1.43	8014246	1.39	0.050	8015351
Dissolved Sodium (Na)	mg/L	0.608	0.858	8014246	0.976	0.050	8015351
Dissolved Sulphur (S)	mg/L	13.1	11.6	8014246	10.8	3.0	8015351
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MZ0033	MZ0034	MZ0035		MZ0036		
Sampling Date		2015/08/23 14:00	2015/08/22 15:00	2015/08/22 15:50		2015/08/22 16:35		
COC Number		08413030	08413030	08413030		08413030		
	UNITS	KZ-13	KZ-15	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	64.7	140	125	8015205	169	0.50	8015205
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8021349	<0.0000020	0.0000020	8021349
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00683	0.00175	0.00183	8019311	0.00188	0.00050	8019311
Dissolved Antimony (Sb)	mg/L	0.000024	0.000031	<0.000020	8019311	0.000056	0.000020	8019311
Dissolved Arsenic (As)	mg/L	0.000193	0.000349	0.000287	8019311	0.000485	0.000020	8019311
Dissolved Barium (Ba)	mg/L	0.0935	0.0580	0.0509	8019311	0.0700	0.000020	8019311
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8019311	<0.000010	0.000010	8019311
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8019311	<0.0000050	0.0000050	8019311
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8019311	<0.010	0.010	8019311
Dissolved Cadmium (Cd)	mg/L	0.0000140	0.0000180	0.0000110	8019311	0.0000250	0.0000050	8019311
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8019311	<0.00010	0.00010	8019311
Dissolved Cobalt (Co)	mg/L	0.0000160	0.0000200	0.0000160	8019311	0.0000250	0.0000050	8019311
Dissolved Copper (Cu)	mg/L	0.000474	0.000469	0.000470	8019311	0.000574	0.000050	8019311
Dissolved Iron (Fe)	mg/L	0.0198	0.0174	0.0044	8019311	0.0390	0.0010	8019311
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	8019311	<0.0000050	0.0000050	8019311
Dissolved Lithium (Li)	mg/L	0.00083	0.00144	0.00101	8019311	0.00210	0.00050	8019311
Dissolved Manganese (Mn)	mg/L	0.00842	0.0117	0.00287	8019311	0.0273	0.000050	8019311
Dissolved Molybdenum (Mo)	mg/L	0.000491	0.000758	0.000463	8019311	0.00134	0.000050	8019311
Dissolved Nickel (Ni)	mg/L	0.000392	0.000524 (1)	0.000477	8019311	0.000772	0.000020	8025346
Dissolved Phosphorus (P)	mg/L	<0.0020	<0.0020	<0.0020	8019311	<0.0020	0.0020	8019311
Dissolved Selenium (Se)	mg/L	0.000138	0.000507	0.000447	8019311	0.000668	0.000040	8019311
Dissolved Silicon (Si)	mg/L	2.44	2.69	2.66	8019311	3.09	0.050	8019311
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8019311	<0.0000050	0.0000050	8019311
Dissolved Strontium (Sr)	mg/L	0.0668	0.140	0.127	8019311	0.167	0.000050	8019311
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8019311	<0.0000020	0.0000020	8019311
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8019311	<0.00020	0.00020	8019311
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8019311	<0.00050	0.00050	8019311
Dissolved Uranium (U)	mg/L	0.000403	0.00138	0.000896	8019311	0.00233	0.0000020	8019311
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8019311	<0.00020	0.00020	8019311
Dissolved Zinc (Zn)	mg/L	0.00233	0.00129	0.00037	8019311	0.00280	0.00010	8019311
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8019311	<0.00010	0.00010	8019311
Dissolved Calcium (Ca)	mg/L	21.8	43.5	39.7	8015351	51.1	0.050	8015351

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MZ0033	MZ0034	MZ0035		MZ0036		
Sampling Date		2015/08/23 14:00	2015/08/22 15:00	2015/08/22 15:50		2015/08/22 16:35		
COC Number		08413030	08413030	08413030		08413030		
	UNITS	KZ-13	KZ-15	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	2.50	7.64	6.24	8015351	10.0	0.050	8015351
Dissolved Potassium (K)	mg/L	1.39	1.15	1.07	8015351	1.32	0.050	8015351
Dissolved Sodium (Na)	mg/L	0.961	0.945	0.912	8015351	1.06	0.050	8015351
Dissolved Sulphur (S)	mg/L	4.3	8.1	7.2	8015351	10.3	3.0	8015351
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MZ0037	MZ0038	MZ0039		MZ0055		
Sampling Date		2015/08/23 13:30	2015/08/23 10:00	2015/08/23 09:00		2015/08/22 09:25		
COC Number		08413030	08413030	08413030		08413031		
	UNITS	KZ-19	KZ-21	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	131	208	187	8015205	179	0.50	8015205
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8021349	<0.0000020	0.0000020	8021822
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00204	0.00868	0.00526	8019311	0.00764	0.00050	8019311
Dissolved Antimony (Sb)	mg/L	0.000080	0.000179	0.000113	8019311	0.000138	0.000020	8019311
Dissolved Arsenic (As)	mg/L	0.000214	0.00173	0.00115	8019311	0.000952	0.000020	8019311
Dissolved Barium (Ba)	mg/L	0.0665	0.0497	0.0568	8019311	0.0609	0.000020	8019311
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8019311	<0.000010	0.000010	8019311
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8019311	<0.0000050	0.0000050	8019311
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8019311	<0.010	0.010	8019311
Dissolved Cadmium (Cd)	mg/L	0.0000960	0.0000120	0.0000120	8019311	0.0000120	0.0000050	8019311
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00012	<0.00010	8019311	0.00010	0.00010	8019311
Dissolved Cobalt (Co)	mg/L	0.0000140	0.0000690	0.0000570	8019311	0.0000490	0.0000050	8019311
Dissolved Copper (Cu)	mg/L	0.000632	0.000896	0.000774	8019311	0.00109	0.000050	8019311
Dissolved Iron (Fe)	mg/L	0.0440	0.167	0.0835	8019311	0.0657	0.0010	8019311
Dissolved Lead (Pb)	mg/L	0.0000120	<0.0000050	0.0000110	8019311	0.0000080	0.0000050	8019311
Dissolved Lithium (Li)	mg/L	0.00104	0.00264	0.00263	8019311	0.00291	0.00050	8019311
Dissolved Manganese (Mn)	mg/L	0.00874	0.0232	0.0149	8019311	0.00811	0.000050	8019311
Dissolved Molybdenum (Mo)	mg/L	0.000513	0.00138	0.00107	8019311	0.000958	0.000050	8019311
Dissolved Nickel (Ni)	mg/L	0.000576 (1)	0.00327	0.00190	8019311	0.00184	0.000020	8019311
Dissolved Phosphorus (P)	mg/L	0.0025	0.0069	0.0038	8019311	0.0037	0.0020	8019311
Dissolved Selenium (Se)	mg/L	0.000658	0.000557	0.000517	8019311	0.000470	0.000040	8019311
Dissolved Silicon (Si)	mg/L	2.63	4.59	3.78	8019311	4.36	0.050	8019311
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8019311	<0.0000050	0.0000050	8019311
Dissolved Strontium (Sr)	mg/L	0.135	0.152	0.156	8019311	0.144	0.000050	8019311
Dissolved Thallium (Tl)	mg/L	0.0000020	<0.0000020	<0.0000020	8019311	<0.0000020	0.0000020	8019311
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8019311	<0.00020	0.00020	8019311
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8019311	<0.00050	0.00050	8019311
Dissolved Uranium (U)	mg/L	0.000846	0.00217	0.00198	8019311	0.00171	0.0000020	8019311
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8019311	<0.00020	0.00020	8019311
Dissolved Zinc (Zn)	mg/L	0.0237	0.00195	0.00131	8019311	0.00074	0.00010	8019311
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00013	<0.00010	8019311	0.00011	0.00010	8019311
Dissolved Calcium (Ca)	mg/L	44.0	51.2	49.8	8015351	47.7	0.050	8015351

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MZ0037	MZ0038	MZ0039		MZ0055		
Sampling Date		2015/08/23 13:30	2015/08/23 10:00	2015/08/23 09:00		2015/08/22 09:25		
COC Number		08413030	08413030	08413030		08413031		
	UNITS	KZ-19	KZ-21	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	5.25	19.4	15.1	8015351	14.5	0.050	8015351
Dissolved Potassium (K)	mg/L	1.45	1.00	1.10	8015351	0.942	0.050	8015351
Dissolved Sodium (Na)	mg/L	0.876	1.22	1.19	8015351	1.20	0.050	8015351
Dissolved Sulphur (S)	mg/L	11.8	11.9	10.6	8015351	8.8	3.0	8015351
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MZ0056	MZ0057		
Sampling Date		2015/08/22 12:00	2015/08/25 14:05		
COC Number		08413031	08413031		
	UNITS	KZ-28	TRIP BLANK	RDL	QC Batch
Misc. Inorganics					
Dissolved Hardness (CaCO3)	mg/L	<0.50	<0.50	0.50	8015205
Elements					
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8021822
Dissolved Metals by ICPMS					
Dissolved Aluminum (Al)	mg/L	<0.00050	<0.00050	0.00050	8019311
Dissolved Antimony (Sb)	mg/L	<0.000020	<0.000020	0.000020	8019311
Dissolved Arsenic (As)	mg/L	<0.000020	<0.000020	0.000020	8019311
Dissolved Barium (Ba)	mg/L	<0.000020	<0.000020	0.000020	8019311
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	8019311
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	0.0000050	8019311
Dissolved Boron (B)	mg/L	<0.010	<0.010	0.010	8019311
Dissolved Cadmium (Cd)	mg/L	<0.0000050	<0.0000050	0.0000050	8019311
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00010	8019311
Dissolved Cobalt (Co)	mg/L	<0.0000050	<0.0000050	0.0000050	8019311
Dissolved Copper (Cu)	mg/L	<0.000050	<0.000050	0.000050	8019311
Dissolved Iron (Fe)	mg/L	<0.0010	<0.0010	0.0010	8019311
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000050	8019311
Dissolved Lithium (Li)	mg/L	<0.00050	<0.00050	0.00050	8019311
Dissolved Manganese (Mn)	mg/L	<0.000050	<0.000050	0.000050	8019311
Dissolved Molybdenum (Mo)	mg/L	<0.000050	<0.000050	0.000050	8019311
Dissolved Nickel (Ni)	mg/L	0.000203 (1)	<0.000020	0.000020	8019311
Dissolved Phosphorus (P)	mg/L	<0.0020	<0.0020	0.0020	8019311
Dissolved Selenium (Se)	mg/L	<0.000040	<0.000040	0.000040	8019311
Dissolved Silicon (Si)	mg/L	<0.050	<0.050	0.050	8019311
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	0.0000050	8019311
Dissolved Strontium (Sr)	mg/L	<0.000050	<0.000050	0.000050	8019311
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	8019311
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8019311
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00050	8019311
Dissolved Uranium (U)	mg/L	<0.0000020	<0.0000020	0.0000020	8019311
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	0.00020	8019311
Dissolved Zinc (Zn)	mg/L	<0.00010	<0.00010	0.00010	8019311
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8019311
Dissolved Calcium (Ca)	mg/L	<0.050	<0.050	0.050	8015351

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		MZ0056	MZ0057		
Sampling Date		2015/08/22 12:00	2015/08/25 14:05		
COC Number		08413031	08413031		
	UNITS	KZ-28	TRIP BLANK	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	<0.050	<0.050	0.050	8015351
Dissolved Potassium (K)	mg/L	<0.050	<0.050	0.050	8015351
Dissolved Sodium (Na)	mg/L	<0.050	<0.050	0.050	8015351
Dissolved Sulphur (S)	mg/L	<3.0	<3.0	3.0	8015351
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MZ0030	MZ0035	MZ0036	MZ0037		
Sampling Date		2015/08/23 16:15	2015/08/22 15:50	2015/08/22 16:35	2015/08/23 13:30		
COC Number		08413030	08413030	08413030	08413030		
	UNITS	KZ-2	KZ-16	KZ-17	KZ-19	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	90.3	132	159	134	0.50	8014146
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8021353
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00793	0.00347	0.00452	0.00705	0.00050	8019258
Total Antimony (Sb)	mg/L	0.000037	0.000021	0.000061	0.000083	0.000020	8019258
Total Arsenic (As)	mg/L	0.000124	0.000300	0.000540	0.000327	0.000020	8019258
Total Barium (Ba)	mg/L	0.0545	0.0548	0.0689	0.0685	0.000020	8019258
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8019258
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8019258
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8019258
Total Cadmium (Cd)	mg/L	0.000346	0.0000180	0.0000370	0.000156	0.0000050	8019258
Total Chromium (Cr)	mg/L	<0.00010	0.00020	<0.00010	<0.00010	0.00010	8019258
Total Cobalt (Co)	mg/L	0.0000130	0.0000230	0.0000410	0.0000280	0.0000050	8019258
Total Copper (Cu)	mg/L	0.000785	0.000525	0.000516	0.000785	0.000050	8019258
Total Iron (Fe)	mg/L	0.0067	0.0148	0.124	0.186	0.0010	8019258
Total Lead (Pb)	mg/L	0.0000430	0.0000090	0.0000200	0.0000790	0.0000050	8019258
Total Lithium (Li)	mg/L	0.00083	0.00155	0.00180	0.00142	0.00050	8019258
Total Manganese (Mn)	mg/L	0.000264	0.00470	0.0411	0.0201	0.000050	8019258
Total Molybdenum (Mo)	mg/L	0.000677	0.000475	0.00120	0.000484	0.000050	8019258
Total Nickel (Ni)	mg/L	0.000462	0.000395	0.000644	0.000406	0.000020	8019258
Total Phosphorus (P)	mg/L	0.0022	0.0021	0.0022	0.0026	0.0020	8019258
Total Selenium (Se)	mg/L	0.000543	0.000443	0.000610	0.000671	0.000040	8019258
Total Silicon (Si)	mg/L	2.53	2.97	3.06	3.00	0.050	8019258
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8019258
Total Strontium (Sr)	mg/L	0.102	0.136	0.154	0.145	0.000050	8019258
Total Thallium (Tl)	mg/L	0.0000040	<0.0000020	<0.0000020	0.0000030	0.0000020	8019258
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8019258
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8019258
Total Uranium (U)	mg/L	0.00165	0.000971	0.00226	0.000845	0.0000020	8019258
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8019258
Total Zinc (Zn)	mg/L	0.0542	0.00056	0.00410	0.0328	0.00010	8019258
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8019258
Total Calcium (Ca)	mg/L	31.5	42.4	48.1	45.0	0.050	8014147
Total Magnesium (Mg)	mg/L	2.82	6.31	9.38	5.20	0.050	8014147

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MZ0030	MZ0035	MZ0036	MZ0037		
Sampling Date		2015/08/23 16:15	2015/08/22 15:50	2015/08/22 16:35	2015/08/23 13:30		
COC Number		08413030	08413030	08413030	08413030		
	UNITS	KZ-2	KZ-16	KZ-17	KZ-19	RDL	QC Batch
Total Potassium (K)	mg/L	1.50	1.13	1.26	1.50	0.050	8014147
Total Sodium (Na)	mg/L	0.605	0.881	0.966	0.836	0.050	8014147
Total Sulphur (S)	mg/L	14.1	7.5	9.8	12.0	3.0	8014147
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MZ0056		MZ0057		
Sampling Date		2015/08/22 12:00		2015/08/25 14:05		
COC Number		08413031		08413031		
	UNITS	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	<0.50	8015348	<0.50	0.50	8015348
Elements						
Total Mercury (Hg)	mg/L	<0.0000020	8021353	<0.0000020	0.0000020	8021803
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.00055	8019258	<0.00050	0.00050	8019258
Total Antimony (Sb)	mg/L	<0.000020	8019258	<0.000020	0.000020	8019258
Total Arsenic (As)	mg/L	<0.000020	8019258	<0.000020	0.000020	8019258
Total Barium (Ba)	mg/L	0.000025	8019258	<0.000020	0.000020	8019258
Total Beryllium (Be)	mg/L	<0.000010	8019258	<0.000010	0.000010	8019258
Total Bismuth (Bi)	mg/L	<0.0000050	8019258	<0.0000050	0.0000050	8019258
Total Boron (B)	mg/L	<0.010	8019258	<0.010	0.010	8019258
Total Cadmium (Cd)	mg/L	<0.0000050	8019258	<0.0000050	0.0000050	8019258
Total Chromium (Cr)	mg/L	<0.00010	8019258	<0.00010	0.00010	8019258
Total Cobalt (Co)	mg/L	<0.0000050	8019258	<0.0000050	0.0000050	8019258
Total Copper (Cu)	mg/L	<0.000050	8019258	<0.000050	0.000050	8019258
Total Iron (Fe)	mg/L	<0.0010	8019258	<0.0010	0.0010	8019258
Total Lead (Pb)	mg/L	0.0000060	8019258	<0.0000050	0.0000050	8019258
Total Lithium (Li)	mg/L	<0.00050	8019258	<0.00050	0.00050	8019258
Total Manganese (Mn)	mg/L	<0.000050	8019258	<0.000050	0.000050	8019258
Total Molybdenum (Mo)	mg/L	<0.000050	8019258	<0.000050	0.000050	8019258
Total Nickel (Ni)	mg/L	<0.000020	8019258	<0.000020	0.000020	8019258
Total Phosphorus (P)	mg/L	<0.0020	8019258	<0.0020	0.0020	8019258
Total Selenium (Se)	mg/L	<0.000040	8019258	<0.000040	0.000040	8019258
Total Silicon (Si)	mg/L	<0.050	8019258	<0.050	0.050	8019258
Total Silver (Ag)	mg/L	<0.0000050	8019258	<0.0000050	0.0000050	8019258
Total Strontium (Sr)	mg/L	<0.000050	8019258	<0.000050	0.000050	8019258
Total Thallium (Tl)	mg/L	<0.0000020	8019258	<0.0000020	0.0000020	8019258
Total Tin (Sn)	mg/L	<0.00020	8019258	<0.00020	0.00020	8019258
Total Titanium (Ti)	mg/L	<0.00050	8019258	<0.00050	0.00050	8019258
Total Uranium (U)	mg/L	<0.0000020	8019258	<0.0000020	0.0000020	8019258
Total Vanadium (V)	mg/L	<0.00020	8019258	<0.00020	0.00020	8019258
Total Zinc (Zn)	mg/L	0.00028	8019258	<0.00010	0.00010	8019258
Total Zirconium (Zr)	mg/L	<0.00010	8019258	<0.00010	0.00010	8019258
Total Calcium (Ca)	mg/L	<0.050	8014147	<0.050	0.050	8014147
Total Magnesium (Mg)	mg/L	<0.050	8014147	<0.050	0.050	8014147
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		MZ0056		MZ0057		
Sampling Date		2015/08/22 12:00		2015/08/25 14:05		
COC Number		08413031		08413031		
	UNITS	**KZ-28**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	<0.050	8014147	<0.050	0.050	8014147
Total Sodium (Na)	mg/L	<0.050	8014147	<0.050	0.050	8014147
Total Sulphur (S)	mg/L	<3.0	8014147	<3.0	3.0	8014147
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MZ0031		MZ0032		MZ0033		
Sampling Date		2015/08/23 12:40		2015/08/23 11:00		2015/08/23 14:00		
COC Number		08413030		08413030		08413030		
	UNITS	KZ-7	QC Batch	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	126	8014146	144	8014146	64.1	0.50	8014146
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	8021353	<0.0000020	8021803	<0.0000020	0.0000020	8021353
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0121	8019337	0.0142	8019337	0.0160	0.0030	8019337
Total Antimony (Sb)	mg/L	0.000078	8019337	0.000063	8019337	<0.000050	0.000050	8019337
Total Arsenic (As)	mg/L	0.000329	8019337	0.000279	8019337	0.000236	0.000020	8019337
Total Barium (Ba)	mg/L	0.0614	8019337	0.0685	8019337	0.0907	0.00010	8019337
Total Beryllium (Be)	mg/L	<0.000010	8019337	<0.000010	8019337	<0.000010	0.000010	8019337
Total Bismuth (Bi)	mg/L	<0.000020	8019337	<0.000020	8019337	0.000029	0.000020	8019337
Total Boron (B)	mg/L	<0.050	8019337	<0.050	8019337	<0.050	0.050	8019337
Total Cadmium (Cd)	mg/L	0.000163	8019337	0.0000690	8019337	0.0000310	0.0000050	8019337
Total Chromium (Cr)	mg/L	<0.00050	8019337	<0.00050	8019337	<0.00050	0.00050	8019337
Total Cobalt (Co)	mg/L	0.000035	8019337	0.000061	8019337	0.000032	0.000010	8019337
Total Copper (Cu)	mg/L	0.00110	8019337	0.00096	8019337	0.00103	0.00020	8019337
Total Iron (Fe)	mg/L	0.216	8019337	0.266	8019337	0.0697	0.0050	8019337
Total Lead (Pb)	mg/L	0.000097	8019337	0.000067	8019337	<0.000050	0.000050	8019337
Total Lithium (Li)	mg/L	0.00131	8019337	0.00193	8019337	0.00108	0.00050	8019337
Total Manganese (Mn)	mg/L	0.0231	8019337	0.0405	8019337	0.0197	0.00010	8019337
Total Molybdenum (Mo)	mg/L	0.000511	8019337	0.000576	8019337	0.000496	0.000050	8019337
Total Nickel (Ni)	mg/L	0.00039	8019337	0.00036	8019337	0.00042	0.00010	8019337
Total Phosphorus (P)	mg/L	<0.010	8019337	0.026	8019337	<0.010	0.010	8019337
Total Selenium (Se)	mg/L	0.000596	8019337	0.000690	8019337	0.000123	0.000040	8019337
Total Silicon (Si)	mg/L	2.58	8019337	2.64	8019337	2.34	0.10	8019337
Total Silver (Ag)	mg/L	<0.0000050	8019337	<0.0000050	8019337	<0.0000050	0.0000050	8019337
Total Strontium (Sr)	mg/L	0.129	8019337	0.152	8019337	0.0677	0.000050	8019337
Total Thallium (Tl)	mg/L	0.0000040	8019337	0.0000020	8019337	0.0000020	0.0000020	8019337
Total Tin (Sn)	mg/L	<0.00020	8019337	<0.00020	8019337	<0.00020	0.00020	8019337
Total Titanium (Ti)	mg/L	<0.0050	8019337	<0.0050	8019337	<0.0050	0.0050	8019337
Total Uranium (U)	mg/L	0.000770	8019337	0.000861	8019337	0.000456	0.0000050	8019337
Total Vanadium (V)	mg/L	<0.00050	8019337	<0.00050	8019337	<0.00050	0.00050	8019337
Total Zinc (Zn)	mg/L	0.0317	8019337	0.0103	8019337	0.0045	0.0010	8019337
Total Zirconium (Zr)	mg/L	<0.00010	8019337	<0.00010	8019337	<0.00010	0.00010	8019337
Total Calcium (Ca)	mg/L	42.3	8014147	48.0	8014147	21.7	0.25	8014147
Total Magnesium (Mg)	mg/L	4.88	8014147	5.76	8014147	2.43	0.25	8014147
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MZ0031		MZ0032		MZ0033		
Sampling Date		2015/08/23 12:40		2015/08/23 11:00		2015/08/23 14:00		
COC Number		08413030		08413030		08413030		
	UNITS	KZ-7	QC Batch	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Total Potassium (K)	mg/L	1.26	8014147	1.30	8014147	1.28	0.25	8014147
Total Sodium (Na)	mg/L	0.83	8014147	0.97	8014147	0.96	0.25	8014147
Total Sulphur (S)	mg/L	<15	8014147	<15	8014147	<15	15	8014147
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MZ0034	MZ0038	MZ0039		MZ0055		
Sampling Date		2015/08/22 15:00	2015/08/23 10:00	2015/08/23 09:00		2015/08/22 09:25		
COC Number		08413030	08413030	08413030		08413031		
	UNITS	KZ-15	KZ-21	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	141	201	185	8014146	176	0.50	8015348
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8021353	<0.0000020	0.0000020	8021353
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0057	0.0270	0.0214	8019337	0.141	0.0030	8019337
Total Antimony (Sb)	mg/L	<0.000050	0.000173	0.000115	8019337	0.000156	0.000050	8019337
Total Arsenic (As)	mg/L	0.000380	0.00215	0.00141	8019337	0.00149	0.000020	8019337
Total Barium (Ba)	mg/L	0.0533	0.0482	0.0541	8019337	0.0576	0.00010	8019337
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8019337	0.000012	0.000010	8019337
Total Bismuth (Bi)	mg/L	<0.000020	<0.000020	<0.000020	8019337	<0.000020	0.000020	8019337
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	8019337	<0.050	0.050	8019337
Total Cadmium (Cd)	mg/L	0.0000260	0.0000250	0.0000270	8019337	0.0000400	0.0000050	8019337
Total Chromium (Cr)	mg/L	<0.00050	<0.00050	<0.00050	8019337	<0.00050	0.00050	8019337
Total Cobalt (Co)	mg/L	0.000026	0.000118	0.000093	8019337	0.000203	0.000010	8019337
Total Copper (Cu)	mg/L	0.00072	0.00120	0.00134	8019337	0.00183	0.00020	8019337
Total Iron (Fe)	mg/L	0.0607	0.386	0.230	8019337	0.477	0.0050	8019337
Total Lead (Pb)	mg/L	<0.000050	<0.000050	0.000074	8019337	0.000241	0.000050	8019337
Total Lithium (Li)	mg/L	0.00165	0.00325	0.00264	8019337	0.00371	0.00050	8019337
Total Manganese (Mn)	mg/L	0.0177	0.0562	0.0294	8019337	0.0394	0.00010	8019337
Total Molybdenum (Mo)	mg/L	0.000698	0.00140	0.00114	8019337	0.000947	0.000050	8019337
Total Nickel (Ni)	mg/L	0.00043	0.00338	0.00200	8019337	0.00249	0.00010	8019337
Total Phosphorus (P)	mg/L	<0.010	0.020	0.012	8019337	0.023	0.010	8019337
Total Selenium (Se)	mg/L	0.000474	0.000489	0.000477	8019337	0.000455	0.000040	8019337
Total Silicon (Si)	mg/L	2.54	4.07	3.51	8019337	4.02	0.10	8019337
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8019337	<0.0000050	0.0000050	8019337
Total Strontium (Sr)	mg/L	0.142	0.153	0.158	8019337	0.144	0.000050	8019337
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8019337	0.0000030	0.0000020	8019337
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8019337	<0.00020	0.00020	8019337
Total Titanium (Ti)	mg/L	<0.0050	<0.0050	<0.0050	8019337	<0.0050	0.0050	8019337
Total Uranium (U)	mg/L	0.00132	0.00208	0.00194	8019337	0.00163	0.0000050	8019337
Total Vanadium (V)	mg/L	<0.00050	<0.00050	<0.00050	8019337	0.00055	0.00050	8019337
Total Zinc (Zn)	mg/L	0.0035	0.0037	0.0031	8019337	0.0038	0.0010	8019337
Total Zirconium (Zr)	mg/L	<0.00010	0.00015	<0.00010	8019337	0.00021	0.00010	8019337
Total Calcium (Ca)	mg/L	43.5	48.6	48.6	8014147	46.3	0.25	8014147
Total Magnesium (Mg)	mg/L	7.80	19.4	15.4	8014147	14.8	0.25	8014147

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		MZ0034	MZ0038	MZ0039		MZ0055		
Sampling Date		2015/08/22 15:00	2015/08/23 10:00	2015/08/23 09:00		2015/08/22 09:25		
COC Number		08413030	08413030	08413030		08413031		
	UNITS	KZ-15	KZ-21	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Total Potassium (K)	mg/L	1.00	0.86	0.97	8014147	0.86	0.25	8014147
Total Sodium (Na)	mg/L	0.90	1.17	1.15	8014147	1.21	0.25	8014147
Total Sulphur (S)	mg/L	<15	<15	<15	8014147	<15	15	8014147
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: MZ0030
Sample ID: KZ-2
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Name Redacted
Alkalinity - Water	AT/ALK	8016771	2015/08/26	2015/08/27	
Chloride by Automated Colourimetry	KONE/COL	8017438	N/A	2015/08/26	
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	
Conductance - water	AT/ALK	8016772	N/A	2015/08/27	
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	
Hardness Total (calculated as CaCO3)	CALC	8014146	N/A	2015/08/31	
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021349	N/A	2015/08/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	
Ion Balance	CALC	8015349	N/A	2015/09/01	
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8014246	N/A	2015/09/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/08/31	
Elements by ICPMS Low Level (total)	ICP/CRCM	8019258	N/A	2015/08/31	
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	
pH Water	AT/ALK	8016773	N/A	2015/08/27	
Sulphate by Automated Colourimetry	KONE/COL	8017443	N/A	2015/08/26	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	
Total Suspended Solids-Low Level	BAL/BAL	8019521	2015/08/28	2015/08/29	

Maxxam ID: MZ0030 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8017438	N/A	2015/08/26	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	
Sulphate by Automated Colourimetry	KONE/COL	8017443	N/A	2015/08/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: MZ0031
Sample ID: KZ-7
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Name Redacted
Alkalinity - Water	AT/ALK	8016747	2015/08/26	2015/08/26	
Chloride by Automated Colourimetry	KONE/COL	8017479	N/A	2015/08/26	
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	
Conductance - water	AT/ALK	8016750	N/A	2015/08/26	
Fluoride	ISE/ISE	8016543	N/A	2015/08/26	
Hardness Total (calculated as CaCO3)	CALC	8014146	N/A	2015/09/01	
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021349	N/A	2015/08/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	
Ion Balance	CALC	8015349	N/A	2015/09/01	
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8014246	N/A	2015/09/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8019337	2015/08/28	2015/09/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/09/01	
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016876	N/A	2015/08/26	
Nitrite (N) (low level)	TRAA/COL	8016878	N/A	2015/08/26	
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	
pH Water	AT/ALK	8016751	N/A	2015/08/26	
Sulphate by Automated Colourimetry	KONE/COL	8017490	N/A	2015/08/26	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	
Total Suspended Solids-Low Level	BAL/BAL	8019521	2015/08/28	2015/08/29	

Maxxam ID: MZ0031 Dup
Sample ID: KZ-7
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016876	N/A	2015/08/26	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8016878	N/A	2015/08/26	

Maxxam ID: MZ0032
Sample ID: KZ-9
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Name Redacted
Alkalinity - Water	AT/ALK	8016747	2015/08/26	2015/08/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: MZ0032
Sample ID: KZ-9
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8017479	N/A	2015/08/26	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	
Conductance - water	AT/ALK	8016750	N/A	2015/08/26	
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	
Hardness Total (calculated as CaCO3)	CALC	8014146	N/A	2015/09/01	
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021349	N/A	2015/08/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8021803	2015/08/31	2015/08/31	
Ion Balance	CALC	8015349	N/A	2015/09/01	
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8019337	2015/08/28	2015/09/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/09/01	
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	
pH Water	AT/ALK	8016751	N/A	2015/08/26	
Sulphate by Automated Colourimetry	KONE/COL	8017490	N/A	2015/08/26	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	
Total Suspended Solids-Low Level	BAL/BAL	8019521	2015/08/28	2015/08/29	

Maxxam ID: MZ0033
Sample ID: KZ-13
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Name Redacted
Alkalinity - Water	AT/ALK	8016771	2015/08/26	2015/08/27	
Chloride by Automated Colourimetry	KONE/COL	8017479	N/A	2015/08/26	
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	
Conductance - water	AT/ALK	8016772	N/A	2015/08/27	
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	
Hardness Total (calculated as CaCO3)	CALC	8014146	N/A	2015/09/01	
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021349	N/A	2015/08/31	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: MZ0033
Sample ID: KZ-13
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	Name Redacted
Ion Balance	CALC	8015349	N/A	2015/09/01	
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8019337	2015/08/28	2015/09/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/09/01	
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	
pH Water	AT/ALK	8016773	N/A	2015/08/27	
Sulphate by Automated Colourimetry	KONE/COL	8017490	N/A	2015/08/26	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	
Total Suspended Solids-Low Level	BAL/BAL	8019521	2015/08/28	2015/08/29	

Maxxam ID: MZ0034
Sample ID: KZ-15
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Name Redacted
Alkalinity - Water	AT/ALK	8016771	2015/08/26	2015/08/27	
Chloride by Automated Colourimetry	KONE/COL	8017479	N/A	2015/08/26	
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	
Conductance - water	AT/ALK	8016772	N/A	2015/08/27	
Fluoride	ISE/ISE	8016543	N/A	2015/08/26	
Hardness Total (calculated as CaCO3)	CALC	8014146	N/A	2015/09/01	
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021349	N/A	2015/08/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	
Ion Balance	CALC	8015349	N/A	2015/09/01	
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8019337	2015/08/28	2015/09/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/09/01	
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016876	N/A	2015/08/26	
Nitrite (N) (low level)	TRAA/COL	8016878	N/A	2015/08/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: MZ0034
Sample ID: KZ-15
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	Name Redacted
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	
pH Water	AT/ALK	8016773	N/A	2015/08/27	
Sulphate by Automated Colourimetry	KONE/COL	8017490	N/A	2015/08/26	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	
Total Phosphorus - unpreserved	KONE/COL	8018684	N/A	2015/08/27	
Total Suspended Solids-Low Level	BAL/BAL	8019493	2015/08/28	2015/08/29	

Maxxam ID: MZ0034 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	Name Redacted
Total Phosphorus - unpreserved	KONE/COL	8018684	N/A	2015/08/27	

Maxxam ID: MZ0035
Sample ID: KZ-16
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Name Redacted
Alkalinity - Water	AT/ALK	8016771	2015/08/26	2015/08/27	
Chloride by Automated Colourimetry	KONE/COL	8017479	N/A	2015/08/26	
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	
Conductance - water	AT/ALK	8016772	N/A	2015/08/27	
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	
Hardness Total (calculated as CaCO3)	CALC	8014146	N/A	2015/08/31	
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021349	N/A	2015/08/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	
Ion Balance	CALC	8015349	N/A	2015/09/01	
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/08/31	
Elements by ICPMS Low Level (total)	ICP/CRCM	8019258	N/A	2015/08/31	
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: MZ0035
Sample ID: KZ-16
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH Water	AT/ALK	8016773	N/A	2015/08/27	Name Redacted
Sulphate by Automated Colourimetry	KONE/COL	8017490	N/A	2015/08/26	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	
Total Suspended Solids-Low Level	BAL/BAL	8019493	2015/08/28	2015/08/29	

Maxxam ID: MZ0035 Dup
Sample ID: KZ-16
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	Simon Chan

Maxxam ID: MZ0036
Sample ID: KZ-17
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Name Redacted
Alkalinity - Water	AT/ALK	8016747	2015/08/26	2015/08/26	
Chloride by Automated Colourimetry	KONE/COL	8017479	N/A	2015/08/26	
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	
Conductance - water	AT/ALK	8016750	N/A	2015/08/26	
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	
Hardness Total (calculated as CaCO3)	CALC	8014146	N/A	2015/08/31	
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021349	N/A	2015/08/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	
Ion Balance	CALC	8015349	N/A	2015/09/01	
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/08/31	
Elements by ICPMS Low Level (total)	ICP/CRCM	8019258	N/A	2015/08/29	
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	
pH Water	AT/ALK	8016751	N/A	2015/08/26	
Sulphate by Automated Colourimetry	KONE/COL	8019592	N/A	2015/08/27	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: MZ0036
Sample ID: KZ-17
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	Name Redacted
Total Suspended Solids-Low Level	BAL/BAL	8019493	2015/08/28	2015/08/29	

Maxxam ID: MZ0037
Sample ID: KZ-19
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Name Redacted
Alkalinity - Water	AT/ALK	8016771	2015/08/26	2015/08/27	
Chloride by Automated Colourimetry	KONE/COL	8017438	N/A	2015/08/26	
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	
Conductance - water	AT/ALK	8016772	N/A	2015/08/27	
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	
Hardness Total (calculated as CaCO3)	CALC	8014146	N/A	2015/08/31	
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021349	N/A	2015/08/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	
Ion Balance	CALC	8015349	N/A	2015/09/01	
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/08/31	
Elements by ICPMS Low Level (total)	ICP/CRCM	8019258	N/A	2015/08/31	
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	
pH Water	AT/ALK	8016773	N/A	2015/08/27	
Sulphate by Automated Colourimetry	KONE/COL	8017443	N/A	2015/08/26	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	
Total Suspended Solids-Low Level	BAL/BAL	8019521	2015/08/28	2015/08/29	

Maxxam ID: MZ0038
Sample ID: KZ-21
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Name Redacted
Alkalinity - Water	AT/ALK	8016747	2015/08/26	2015/08/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: MZ0038
Sample ID: KZ-21
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8017479	N/A	2015/08/26	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	
Conductance - water	AT/ALK	8016750	N/A	2015/08/26	
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	
Hardness Total (calculated as CaCO3)	CALC	8014146	N/A	2015/09/01	
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021349	N/A	2015/08/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	
Ion Balance	CALC	8015349	N/A	2015/09/01	
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8019337	2015/08/28	2015/09/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/09/01	
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	
pH Water	AT/ALK	8016751	N/A	2015/08/26	
Sulphate by Automated Colourimetry	KONE/COL	8017490	N/A	2015/08/26	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	
Total Suspended Solids-Low Level	BAL/BAL	8019521	2015/08/28	2015/08/29	

Maxxam ID: MZ0038 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Name Redacted
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	

Maxxam ID: MZ0039
Sample ID: KZ-22
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Name Redacted
Alkalinity - Water	AT/ALK	8016747	2015/08/26	2015/08/26	
Chloride by Automated Colourimetry	KONE/COL	8017438	N/A	2015/08/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: MZ0039
Sample ID: KZ-22
Matrix: Water

Collected: 2015/08/23
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	
Conductance - water	AT/ALK	8016750	N/A	2015/08/26	
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	
Hardness Total (calculated as CaCO3)	CALC	8014146	N/A	2015/09/01	
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021349	N/A	2015/08/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	
Ion Balance	CALC	8015349	N/A	2015/09/01	
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8019337	2015/08/28	2015/09/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/09/01	
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	
pH Water	AT/ALK	8016751	N/A	2015/08/26	
Sulphate by Automated Colourimetry	KONE/COL	8017443	N/A	2015/08/26	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	
Total Suspended Solids-Low Level	BAL/BAL	8019521	2015/08/28	2015/08/29	

Maxxam ID: MZ0055
Sample ID: KZ-26
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Name Redacted
Alkalinity - Water	AT/ALK	8016747	2015/08/26	2015/08/26	
Chloride by Automated Colourimetry	KONE/COL	8017438	N/A	2015/08/26	
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	
Conductance - water	AT/ALK	8016750	N/A	2015/08/26	
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	
Hardness Total (calculated as CaCO3)	CALC	8015348	N/A	2015/09/01	
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021822	N/A	2015/08/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: MZ0055
Sample ID: KZ-26
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance	CALC	8015349	N/A	2015/09/01	Name Redacted
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8019337	2015/08/28	2015/09/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/09/01	
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	
pH Water	AT/ALK	8016751	N/A	2015/08/26	
Sulphate by Automated Colourimetry	KONE/COL	8017443	N/A	2015/08/26	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	
Total Suspended Solids-Low Level	BAL/BAL	8019493	2015/08/28	2015/08/29	

Maxxam ID: MZ0056
Sample ID: KZ-28
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Name Redacted
Alkalinity - Water	AT/ALK	8016747	2015/08/26	2015/08/26	
Chloride by Automated Colourimetry	KONE/COL	8017479	N/A	2015/08/26	
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	
Carbon (DOC)	TECH	8023893	N/A	2015/09/01	
Conductance - water	AT/ALK	8016750	N/A	2015/08/26	
Fluoride	ISE/ISE	8016543	N/A	2015/08/26	
Hardness Total (calculated as CaCO3)	CALC	8015348	N/A	2015/08/31	
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021822	N/A	2015/08/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8021353	2015/08/30	2015/08/31	
Ion Balance	CALC	8015349	N/A	2015/09/01	
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/08/31	
Elements by ICPMS Low Level (total)	ICP/CRCM	8019258	N/A	2015/08/31	
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016876	N/A	2015/08/26	
Nitrite (N) (low level)	TRAA/COL	8016878	N/A	2015/08/26	
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: MZ0056
Sample ID: KZ-28
Matrix: Water

Collected: 2015/08/22
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	Name Redacted
pH Water	AT/ALK	8016751	N/A	2015/08/26	
Sulphate by Automated Colourimetry	KONE/COL	8017490	N/A	2015/08/26	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	
Total Suspended Solids-Low Level	BAL/BAL	8019493	2015/08/28	2015/08/29	

Maxxam ID: MZ0057
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/08/25
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8016251	N/A	2015/08/26	Name Redacted
Alkalinity - Water	AT/ALK	8016747	2015/08/26	2015/08/26	
Chloride by Automated Colourimetry	KONE/COL	8017438	N/A	2015/08/26	
Cyanide SAD (strong acid dissociable)	TECH/COL	8016701	N/A	2015/08/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8016938	N/A	2015/08/26	
Colour (True) by Kone Lab	KONE	8017042	N/A	2015/08/26	
Carbon (DOC) -Lab Filtered	TECH	8021903	N/A	2015/08/31	
Conductance - water	AT/ALK	8016750	N/A	2015/08/26	
Fluoride	ISE/ISE	8016544	N/A	2015/08/26	
Hardness Total (calculated as CaCO3)	CALC	8015348	N/A	2015/08/31	
Hardness (calculated as CaCO3)	CALC	8015205	N/A	2015/09/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8021822	N/A	2015/08/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8021803	2015/08/31	2015/08/31	
Ion Balance	CALC	8015349	N/A	2015/09/01	
Sum of cations, anions	CALC	8015350	N/A	2015/09/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8015351	N/A	2015/09/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8019311	N/A	2015/08/31	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8014147	N/A	2015/08/31	
Elements by ICPMS Low Level (total)	ICP/CRCM	8019258	N/A	2015/08/31	
Ammonia-N (Unpreserved)	KONE/COL	8016958	N/A	2015/08/26	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	
Nitrogen - Nitrate (as N)	CALC	8014148	N/A	2015/08/26	
Filter and HNO3 Preserve for Metals	ICP	8015900	N/A	2015/08/26	
pH Water	AT/ALK	8016751	N/A	2015/08/26	
Sulphate by Automated Colourimetry	KONE/COL	8017443	N/A	2015/08/26	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8018688	2015/08/26	2015/08/27	
Total Phosphorus - unpreserved	KONE/COL	8018685	N/A	2015/08/27	
Total Suspended Solids-Low Level	BAL/BAL	8021827	2015/08/31	2015/09/01	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: MZ0057 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/08/25
Shipped:
Received: 2015/08/25

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8021803	2015/08/31	2015/08/31	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8016929	N/A	2015/08/26	
Nitrite (N) (low level)	TRAA/COL	8016931	N/A	2015/08/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.0°C
Package 2	5.3°C
Package 3	5.7°C

Sample MZ0031-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample MZ0032-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample MZ0033-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample MZ0034-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample MZ0038-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample MZ0039-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample MZ0055-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample MZ0032, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample MZ0036, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8016251	Acidity (pH 4.5)	2015/08/26					<0.50	mg/L	NC	20
8016251	Acidity (pH 8.3)	2015/08/26			102	80 - 120	<0.50	mg/L	NC	20
8016543	Fluoride (F)	2015/08/26	NC	80 - 120	100	80 - 120	<0.010	mg/L	0	20
8016544	Fluoride (F)	2015/08/26	104	80 - 120	100	80 - 120	<0.010	mg/L	1.8	20
8016701	Strong Acid Dissoc. Cyanide (CN)	2015/08/27	104	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8016747	Alkalinity (PP as CaCO3)	2015/08/26					<0.50	mg/L	NC	20
8016747	Alkalinity (Total as CaCO3)	2015/08/26	NC	80 - 120	97	80 - 120	0.53, RDL=0.50	mg/L	7.6	20
8016747	Bicarbonate (HCO3)	2015/08/26					0.65, RDL=0.50	mg/L	7.6	20
8016747	Carbonate (CO3)	2015/08/26					<0.50	mg/L	NC	20
8016747	Hydroxide (OH)	2015/08/26					<0.50	mg/L	NC	20
8016750	Conductivity	2015/08/26			100	80 - 120	1.1, RDL=1.0	uS/cm	0.54	20
8016751	pH	2015/08/26			102	97 - 103			0.40	N/A
8016771	Alkalinity (PP as CaCO3)	2015/08/26					<0.50	mg/L	NC	20
8016771	Alkalinity (Total as CaCO3)	2015/08/26	NC	80 - 120	99	80 - 120	<0.50	mg/L	0.21	20
8016771	Bicarbonate (HCO3)	2015/08/26					<0.50	mg/L	0.21	20
8016771	Carbonate (CO3)	2015/08/26					<0.50	mg/L	NC	20
8016771	Hydroxide (OH)	2015/08/26					<0.50	mg/L	NC	20
8016772	Conductivity	2015/08/26			102	80 - 120	1.3, RDL=1.0	uS/cm	0.77	20
8016773	pH	2015/08/26			102	97 - 103			0.25	N/A
8016876	Nitrate plus Nitrite (N)	2015/08/26	107	80 - 120	109	80 - 120	<0.0020	mg/L	3.8	25
8016878	Nitrite (N)	2015/08/26	100	80 - 120	103	80 - 120	<0.0020	mg/L	NC	25
8016929	Nitrate plus Nitrite (N)	2015/08/26	106	80 - 120	106	80 - 120	<0.0020	mg/L	NC	25
8016931	Nitrite (N)	2015/08/26	103	80 - 120	103	80 - 120	<0.0020	mg/L	NC	25
8016938	Weak Acid Dissoc. Cyanide (CN)	2015/08/26	104	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8016958	Total Ammonia (N)	2015/08/26	96	80 - 120	103	80 - 120	0.0056, RDL=0.0050	mg/L	NC	20
8017042	True Colour	2015/08/26			99	80 - 120	<5.0	Col. Unit	0.41	20
8017438	Dissolved Chloride (Cl)	2015/08/26	94	80 - 120	98	80 - 120	<0.50	mg/L	NC	20
8017443	Dissolved Sulphate (SO4)	2015/08/26	NC	80 - 120	95	80 - 120	<0.50	mg/L	0.49	20
8017479	Dissolved Chloride (Cl)	2015/08/26			98	80 - 120	<0.50	mg/L		
8017490	Dissolved Sulphate (SO4)	2015/08/26			94	80 - 120	<0.50	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8018684	Total Phosphorus (P)	2015/08/27	97	80 - 120	100	80 - 120	<0.0020	mg/L	NC	20
8018685	Total Phosphorus (P)	2015/08/27			101	80 - 120	<0.0020	mg/L		
8018688	Dissolved Phosphorus (P)	2015/08/27	95	80 - 120	99	80 - 120	<0.0020	mg/L	NC	20
8019258	Total Aluminum (Al)	2015/08/31	98	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8019258	Total Antimony (Sb)	2015/08/31	94	80 - 120	109	80 - 120	<0.000020	mg/L	NC	20
8019258	Total Arsenic (As)	2015/08/31	96	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8019258	Total Barium (Ba)	2015/08/31	98	80 - 120	108	80 - 120	<0.000020	mg/L	NC	20
8019258	Total Beryllium (Be)	2015/08/31	99	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8019258	Total Bismuth (Bi)	2015/08/31	97	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8019258	Total Boron (B)	2015/08/31					<0.010	mg/L	NC	20
8019258	Total Cadmium (Cd)	2015/08/31	96	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8019258	Total Chromium (Cr)	2015/08/31	102	80 - 120	107	80 - 120	<0.00010	mg/L	NC	20
8019258	Total Cobalt (Co)	2015/08/31	103	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8019258	Total Copper (Cu)	2015/08/31	103	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20
8019258	Total Iron (Fe)	2015/08/31	103	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20
8019258	Total Lead (Pb)	2015/08/31	101	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8019258	Total Lithium (Li)	2015/08/31	98	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8019258	Total Manganese (Mn)	2015/08/31	99	80 - 120	105	80 - 120	<0.000050	mg/L	NC	20
8019258	Total Molybdenum (Mo)	2015/08/31	92	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8019258	Total Nickel (Ni)	2015/08/31	101	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
8019258	Total Phosphorus (P)	2015/08/31					<0.0020	mg/L		
8019258	Total Selenium (Se)	2015/08/31	96	80 - 120	101	80 - 120	<0.000040	mg/L	NC	20
8019258	Total Silicon (Si)	2015/08/31					<0.050	mg/L	NC	20
8019258	Total Silver (Ag)	2015/08/31	96	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8019258	Total Strontium (Sr)	2015/08/31	92	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8019258	Total Thallium (Tl)	2015/08/31	98	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8019258	Total Tin (Sn)	2015/08/31	91	80 - 120	107	80 - 120	<0.00020	mg/L	NC	20
8019258	Total Titanium (Ti)	2015/08/31	96	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8019258	Total Uranium (U)	2015/08/31	99	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
8019258	Total Vanadium (V)	2015/08/31	101	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8019258	Total Zinc (Zn)	2015/08/31	106	80 - 120	107	80 - 120	0.00012, RDL=0.00010	mg/L	NC	20
8019258	Total Zirconium (Zr)	2015/08/31					<0.00010	mg/L	NC	20
8019311	Dissolved Aluminum (Al)	2015/08/31	102	80 - 120	112	80 - 120	<0.00050	mg/L	NC	20
8019311	Dissolved Antimony (Sb)	2015/08/31	103	80 - 120	114	80 - 120	<0.000020	mg/L	NC	20
8019311	Dissolved Arsenic (As)	2015/08/31	97	80 - 120	111	80 - 120	<0.000020	mg/L	NC	20
8019311	Dissolved Barium (Ba)	2015/08/31	102	80 - 120	116	80 - 120	<0.000020	mg/L	1.2	20
8019311	Dissolved Beryllium (Be)	2015/08/31	98	80 - 120	106	80 - 120	<0.000010	mg/L	NC	20
8019311	Dissolved Bismuth (Bi)	2015/08/31	103	80 - 120	117	80 - 120	<0.0000050	mg/L	NC	20
8019311	Dissolved Boron (B)	2015/08/31					<0.010	mg/L	NC	20
8019311	Dissolved Cadmium (Cd)	2015/08/31	97	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8019311	Dissolved Chromium (Cr)	2015/08/31	102	80 - 120	112	80 - 120	<0.00010	mg/L	NC	20
8019311	Dissolved Cobalt (Co)	2015/08/31	104	80 - 120	113	80 - 120	<0.0000050	mg/L	NC	20
8019311	Dissolved Copper (Cu)	2015/08/31	105	80 - 120	115	80 - 120	<0.000050	mg/L	NC	20
8019311	Dissolved Iron (Fe)	2015/08/31	106	80 - 120	113	80 - 120	<0.0010	mg/L	NC	20
8019311	Dissolved Lead (Pb)	2015/08/31	106	80 - 120	118	80 - 120	<0.0000050	mg/L	3.5	20
8019311	Dissolved Lithium (Li)	2015/08/31	97	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8019311	Dissolved Manganese (Mn)	2015/08/31	101	80 - 120	112	80 - 120	<0.000050	mg/L	NC	20
8019311	Dissolved Molybdenum (Mo)	2015/08/31	101	80 - 120	107	80 - 120	<0.000050	mg/L	NC	20
8019311	Dissolved Nickel (Ni)	2015/08/31	103	80 - 120	113	80 - 120	<0.000020	mg/L	NC	20
8019311	Dissolved Phosphorus (P)	2015/08/31					<0.0020	mg/L		
8019311	Dissolved Selenium (Se)	2015/08/31	97	80 - 120	106	80 - 120	<0.000040	mg/L	NC	20
8019311	Dissolved Silicon (Si)	2015/08/31					<0.050	mg/L	NC	20
8019311	Dissolved Silver (Ag)	2015/08/31	105	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8019311	Dissolved Strontium (Sr)	2015/08/31	94	80 - 120	108	80 - 120	<0.000050	mg/L	7.2	20
8019311	Dissolved Thallium (Tl)	2015/08/31	105	80 - 120	115	80 - 120	<0.0000020	mg/L	NC	20
8019311	Dissolved Tin (Sn)	2015/08/31	100	80 - 120	111	80 - 120	<0.00020	mg/L	NC	20
8019311	Dissolved Titanium (Ti)	2015/08/31	98	80 - 120	111	80 - 120	<0.00050	mg/L	NC	20
8019311	Dissolved Uranium (U)	2015/08/31	103	80 - 120	117	80 - 120	<0.0000020	mg/L	NC	20
8019311	Dissolved Vanadium (V)	2015/08/31	102	80 - 120	110	80 - 120	<0.00020	mg/L	NC	20
8019311	Dissolved Zinc (Zn)	2015/08/31	103	80 - 120	112	80 - 120	<0.00010	mg/L	7.0	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8019311	Dissolved Zirconium (Zr)	2015/08/31					<0.00010	mg/L	NC	20
8019337	Total Aluminum (Al)	2015/09/01	NC	80 - 120	109	80 - 120	<0.0030	mg/L	7.4	20
8019337	Total Antimony (Sb)	2015/09/01	107	80 - 120	105	80 - 120	<0.000050	mg/L	NC	20
8019337	Total Arsenic (As)	2015/09/01	97	80 - 120	99	80 - 120	<0.000020	mg/L	1.2	20
8019337	Total Barium (Ba)	2015/09/01	NC	80 - 120	98	80 - 120	<0.00010	mg/L	2.9	20
8019337	Total Beryllium (Be)	2015/09/01	98	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8019337	Total Bismuth (Bi)	2015/09/01	106	80 - 120	109	80 - 120	<0.000020	mg/L	NC	20
8019337	Total Boron (B)	2015/09/01					<0.050	mg/L	NC	20
8019337	Total Cadmium (Cd)	2015/09/01	102	80 - 120	101	80 - 120	0.0000090, RDL=0.0000050	mg/L	NC	20
8019337	Total Chromium (Cr)	2015/09/01	102	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8019337	Total Cobalt (Co)	2015/09/01	101	80 - 120	102	80 - 120	<0.000010	mg/L	2.5	20
8019337	Total Copper (Cu)	2015/09/01	98	80 - 120	105	80 - 120	0.00038, RDL=0.00020	mg/L	9.2	20
8019337	Total Iron (Fe)	2015/09/01	NC	80 - 120	111	80 - 120	<0.0050	mg/L	5.2	20
8019337	Total Lead (Pb)	2015/09/01	104	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8019337	Total Lithium (Li)	2015/09/01	99	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8019337	Total Manganese (Mn)	2015/09/01	NC	80 - 120	102	80 - 120	<0.00010	mg/L	1.1	20
8019337	Total Molybdenum (Mo)	2015/09/01	101	80 - 120	106	80 - 120	<0.000050	mg/L	NC	20
8019337	Total Nickel (Ni)	2015/09/01	101	80 - 120	100	80 - 120	<0.00010	mg/L	1.4	20
8019337	Total Phosphorus (P)	2015/09/01					<0.010	mg/L	NC	20
8019337	Total Selenium (Se)	2015/09/01	96	80 - 120	100	80 - 120	<0.000040	mg/L	NC	20
8019337	Total Silicon (Si)	2015/09/01					<0.10	mg/L	4.2	20
8019337	Total Silver (Ag)	2015/09/01	104	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8019337	Total Strontium (Sr)	2015/09/01	NC	80 - 120	105	80 - 120	<0.000050	mg/L	0.99	20
8019337	Total Thallium (Tl)	2015/09/01	106	80 - 120	101	80 - 120	0.0000020, RDL=0.0000020	mg/L	NC	20
8019337	Total Tin (Sn)	2015/09/01	103	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8019337	Total Titanium (Ti)	2015/09/01	NC	80 - 120	111	80 - 120	<0.0050	mg/L	NC	20
8019337	Total Uranium (U)	2015/09/01	111	80 - 120	103	80 - 120	<0.0000050	mg/L	2.1	20
8019337	Total Vanadium (V)	2015/09/01	98	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8019337	Total Zinc (Zn)	2015/09/01	99	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8019337	Total Zirconium (Zr)	2015/09/01					<0.00010	mg/L	16	20
8019493	Total Suspended Solids	2015/08/29			100	80 - 120	<1.0	mg/L		
8019521	Total Suspended Solids	2015/08/29			99	80 - 120	<1.0	mg/L		
8019592	Dissolved Sulphate (SO4)	2015/08/27	116	80 - 120	98	80 - 120	<0.50	mg/L		
8021349	Dissolved Mercury (Hg)	2015/08/31	106	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8021353	Total Mercury (Hg)	2015/08/31	94	80 - 120	105	80 - 120	<0.0000020	mg/L	NC	20
8021803	Total Mercury (Hg)	2015/08/31	103	80 - 120	85	80 - 120	<0.0000020	mg/L	NC	20
8021822	Dissolved Mercury (Hg)	2015/08/31	97	80 - 120	109	80 - 120	<0.0000020	mg/L	NC	20
8021827	Total Suspended Solids	2015/09/01			102	80 - 120	<1.0	mg/L		
8021903	Dissolved Organic Carbon (C)	2015/08/31	NC	80 - 120	101	80 - 120	<0.50	mg/L	4.5	20
8023893	Dissolved Organic Carbon (C)	2015/09/01	105	80 - 120	98	80 - 120	<0.50	mg/L	NC	20
8025346	Dissolved Nickel (Ni)	2015/09/02			105	80 - 120	<0.000020	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B573429
Report Date: 2015/09/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Name Data Validation Coordinator

Signature Redacted

Name Senior Analyst

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

08413031

BBY FCD-00077/05

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUCSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

Rush Confirmation #:

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-26	MZ0055	2015/08/22	9:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
2	KZ-28	MZ0056	2015/08/22	12:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
3	Trip Blank	MZ0057	—	—	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
4																				
5																				
6																				
7																				
8																				
9																				
10																				

LABORATORY USE ONLY

CUSTODY SEAL Y / (N)		COOLER TEMPERATURES
Present	Intact	
NA		5.7 c

COOLING MEDIA PRESENT (Y) / N

COMMENTS

B573429

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2015/08/24	9:30	Signature Redacted	2015/08/25	14:05	B573429

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

08413030

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)	
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:	
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUCSTRIAL RD	Project #:	BMC-15-01
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah
Phone:		Phone:	(867) 668-6463	Site #:	
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	

Turnaround Time (TAT) Required

[x] Regular TAT 5 days (Most analyses)

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Rush TAT (Surcharges will be applied)

[ ] Same Day [ ] 2 Days
[ ] 1 Day [ ] 3 Days

Date Required:

Rush Confirmation #:

Regulatory Criteria

[ ] BC CSR Soil [ ] BC CSR Water
[ ] CCME (Specify) [ ] Other (Specify)
[ ] Drinking Water [ ] BC Water Quality

Special Instructions

[ ] Return Cooler
[ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2	MZ0030	2015/08/23	16:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
2	KZ-7	MZ0031	2015/08/23	12:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
3	KZ-9	MZ0032	2015/08/23	11:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
4	KZ-13	MZ0033	2015/08/23	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
5	KZ-15	MZ0034	2015/08/22	15:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
6	KZ-16	MZ0035	2015/08/22	15:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
7	KZ-17	MZ0036	2015/08/22	16:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
8	KZ-19	MZ0037	2015/08/23	13:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
9	KZ-21	MZ0038	2015/08/23	10:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
10	KZ-22	MZ0039	2015/08/23	9:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		576

COOLING MEDIA PRESENT Y / N

2015/08/25

COMMENTS

B573429

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2015/08/24	9:30	Signature Redacted	2015/08/25	14:05	B573429

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08411728, 08411735

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/09/22
Report #: R2045907
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B579823
Received: 2015/09/14, 10:25

Sample Matrix: Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	14	N/A	2015/09/15	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	14	2015/09/15	2015/09/15	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	14	N/A	2015/09/16	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	14	N/A	2015/09/17	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	14	N/A	2015/09/17	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	14	N/A	2015/09/16	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) (1, 2)	14	N/A	2015/09/18	CAL SOP-00077	MMCW 119 1996 m
Conductance - water	14	N/A	2015/09/15	BBY6SOP-00026	SM 22 2510 B m
Fluoride	14	N/A	2015/09/17	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	4	N/A	2015/09/18	BBY7SOP-00002	EPA 6020a R1 m
Hardness Total (calculated as CaCO3)	10	N/A	2015/09/21	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	7	N/A	2015/09/18	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	6	N/A	2015/09/21	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	1	N/A	2015/09/22	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	14	N/A	2015/09/18	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	8	2015/09/18	2015/09/18	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	6	2015/09/21	2015/09/21	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	7	N/A	2015/09/18	BBY WI-00033	SM 22 1030E
Ion Balance	7	N/A	2015/09/21	BBY WI-00033	SM 22 1030E
Sum of cations, anions	10	N/A	2015/09/18	Calc	
Sum of cations, anions	4	N/A	2015/09/21	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	7	N/A	2015/09/18	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	6	N/A	2015/09/21	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2015/09/22	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	14	N/A	2015/09/18	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	4	N/A	2015/09/18	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	10	N/A	2015/09/21	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	4	N/A	2015/09/17	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	10	N/A	2015/09/18	BBY7SOP-00002	EPA 6020A R1 m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08411728, 08411735

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/09/22
Report #: R2045907
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B579823
Received: 2015/09/14, 10:25

Sample Matrix: Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Ammonia-N (Unpreserved)	14	N/A	2015/09/15	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	14	N/A	2015/09/15	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	14	N/A	2015/09/15	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	14	N/A	2015/09/16	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	14	N/A	2015/09/15	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (3)	14	N/A	2015/09/15	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	14	N/A	2015/09/16	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	14	2015/09/15	2015/09/15	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	14	N/A	2015/09/15	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	14	2015/09/15	2015/09/16	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Maxxam Calgary Environmental
(2) DOC present in the sample should be considered as non-purgeable DOC.
(3) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NC8377		NC8378	NC8379		NC8380		
Sampling Date		2015/09/11 14:35		2015/09/11 08:20	2015/09/10 16:45		2015/09/11 11:25		
COC Number		08411728		08411728	08411728		08411728		
	UNITS	KZ-2	QC Batch	KZ-7	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Misc. Inorganics									
Acidity (pH 4.5)	mg/L	<0.50	8038217	<0.50	<0.50	8038217	<0.50	0.50	8038318
Acidity (pH 8.3)	mg/L	<0.50	8038217	<0.50	<0.50	8038217	<0.50	0.50	8038318
Calculated Parameters									
Anion Sum	meq/L	1.8	8037624	2.8	3.1	8037624	1.4	N/A	8037624
Cation Sum	meq/L	1.9	8037624	2.9	3.4	8037624	1.5	N/A	8037624
Filter and HNO3 Preservation	N/A	LAB	8037935	LAB	LAB	8037935	LAB	N/A	8037935
Ion Balance	N/A	1.1	8036928	1.0	1.1	8036928	1.1	0.010	8036928
Nitrate (N)	mg/L	0.0796	8037518	0.0116	0.0453	8037518	0.0246	0.0020	8037518
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00066	8041430	0.00072	0.00071	8041430	0.00080	0.00050	8041430
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00060	8041503	0.00072	0.00077	8041503	0.00059	0.00050	8041503
Fluoride (F)	mg/L	0.034	8041939	0.051	0.059	8041939	0.044	0.010	8041939
Dissolved Organic Carbon (C)	mg/L	0.81	8042082	1.8	1.6	8042082	3.0	0.50	8042082
Alkalinity (Total as CaCO3)	mg/L	48.9	8038493	97.9	120	8038513	56.3	0.50	8038513
Alkalinity (PP as CaCO3)	mg/L	<0.50	8038493	<0.50	<0.50	8038513	<0.50	0.50	8038513
Bicarbonate (HCO3)	mg/L	59.7	8038493	119	146	8038513	68.7	0.50	8038513
Carbonate (CO3)	mg/L	<0.50	8038493	<0.50	<0.50	8038513	<0.50	0.50	8038513
Hydroxide (OH)	mg/L	<0.50	8038493	<0.50	<0.50	8038513	<0.50	0.50	8038513
Anions									
Dissolved Sulphate (SO4)	mg/L	40.2	8040315	38.4	33.8	8040318	12.4	0.50	8040315
Dissolved Chloride (Cl)	mg/L	<0.50	8040314	0.74	<0.50	8040317	<0.50	0.50	8040314
MISCELLANEOUS									
True Colour	Col. Unit	7.0 (1)	8038979	12.7 (1)	12.6 (2)	8040936	19.0 (1)	5.0	8040936
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	8038989	0.0024 (1)	0.0023 (2)	8038989	0.0030 (1)	0.0020	8038989
Total Ammonia (N)	mg/L	0.0051 (1)	8039022	<0.0050 (1)	<0.0050 (2)	8039022	<0.0050 (1)	0.0050	8039022
Nitrate plus Nitrite (N)	mg/L	0.0796 (1)	8039053	0.0116 (1)	0.0453 (3)	8039053	0.0246 (1)	0.0020	8039053
Nitrite (N)	mg/L	<0.0020 (1)	8039054	<0.0020 (1)	<0.0020 (3)	8039054	<0.0020 (1)	0.0020	8039054
Total Phosphorus (P)	mg/L	<0.0020 (1)	8038987	0.0028 (1)	0.0022 (2)	8038987	0.0029 (1)	0.0020	8038987

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(2) Sample arrived to laboratory past recommended hold time.

(3) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NC8377		NC8378	NC8379		NC8380		
Sampling Date		2015/09/11 14:35		2015/09/11 08:20	2015/09/10 16:45		2015/09/11 11:25		
COC Number		08411728		08411728	08411728		08411728		
	UNITS	KZ-2	QC Batch	KZ-7	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Physical Properties									
Conductivity	uS/cm	188	8038495	266	298	8038515	134	1.0	8038515
pH	pH	7.86	8038496	8.14	8.13	8038516	8.02	N/A	8038516
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8038171	1.9	1.5	8038171	1.7	1.0	8038171

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NC8381		NC8382	NC8383		NC8384		
Sampling Date		2015/09/09 14:50		2015/09/09 16:00	2015/09/09 17:08		2015/09/08 14:45		
COC Number		08411728		08411728	08411728		08411728		
	UNITS	KZ-15	QC Batch	KZ-16	KZ-17	QC Batch	KZ-19	RDL	QC Batch
Misc. Inorganics									
Acidity (pH 4.5)	mg/L	<0.50	8038318	<0.50	<0.50	8038217	<0.50	0.50	8038318
Acidity (pH 8.3)	mg/L	<0.50	8038318	<0.50	<0.50	8038217	<0.50	0.50	8038318
Calculated Parameters									
Anion Sum	meq/L	2.8	8037624	2.5	3.4	8037624	0.017	N/A	8037624
Cation Sum	meq/L	3.0	8037624	2.5	3.3	8037624	0.0010	N/A	8037624
Filter and HNO3 Preservation	N/A	LAB	8037935	LAB	LAB	8037935	LAB	N/A	8037935
Ion Balance	N/A	1.1	8036928	1.0	0.97	8036928	0.060 (1)	0.010	8036928
Nitrate (N)	mg/L	0.0429	8037518	0.0492	0.0193	8037518	<0.0020	0.0020	8037518
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00074	8041430	0.00078	0.00078	8041430	0.00065	0.00050	8041430
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00062	8041503	0.00062	0.00068	8041503	0.00062	0.00050	8041503
Fluoride (F)	mg/L	0.064	8041939	0.054	0.087	8041939	<0.010	0.010	8041939
Dissolved Organic Carbon (C)	mg/L	1.7	8042082	1.5	2.2	8042082	<0.50	0.50	8042082
Alkalinity (Total as CaCO3)	mg/L	114	8038513	102	136	8038500	0.84	0.50	8038513
Alkalinity (PP as CaCO3)	mg/L	<0.50	8038513	<0.50	<0.50	8038500	<0.50	0.50	8038513
Bicarbonate (HCO3)	mg/L	139	8038513	125	166	8038500	1.02	0.50	8038513
Carbonate (CO3)	mg/L	<0.50	8038513	<0.50	<0.50	8038500	<0.50	0.50	8038513
Hydroxide (OH)	mg/L	<0.50	8038513	<0.50	<0.50	8038500	<0.50	0.50	8038513
Anions									
Dissolved Sulphate (SO4)	mg/L	23.9	8040318	20.0	31.4	8040315	<0.50	0.50	8040318
Dissolved Chloride (Cl)	mg/L	<0.50	8040317	<0.50	0.61	8040314	<0.50	0.50	8040317
MISCELLANEOUS									
True Colour	Col. Unit	9.5 (2)	8040936	8.4 (2)	11.7 (2)	8038979	<5.0 (2)	5.0	8040936
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020 (2)	8038989	<0.0020 (2)	0.0026 (2)	8038989	<0.0020 (2)	0.0020	8038989
Total Ammonia (N)	mg/L	<0.0050 (2)	8039022	0.0086 (2)	0.0067 (2)	8039022	<0.0050 (2)	0.0050	8039022
Nitrate plus Nitrite (N)	mg/L	0.0429 (2)	8039053	0.0492 (2)	0.0193 (2)	8039053	<0.0020 (2)	0.0020	8039053
Nitrite (N)	mg/L	<0.0020 (2)	8039054	<0.0020 (2)	<0.0020 (2)	8039054	<0.0020 (2)	0.0020	8039054
Total Phosphorus (P)	mg/L	0.0029 (2)	8038987	<0.0020 (2)	0.0029 (2)	8038987	<0.0020 (2)	0.0020	8038987
Physical Properties									
Conductivity	uS/cm	267	8038515	237	319	8038504	1.2	1.0	8038515

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

(2) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NC8381		NC8382	NC8383		NC8384		
Sampling Date		2015/09/09 14:50		2015/09/09 16:00	2015/09/09 17:08		2015/09/08 14:45		
COC Number		08411728		08411728	08411728		08411728		
	UNITS	KZ-15	QC Batch	KZ-16	KZ-17	QC Batch	KZ-19	RDL	QC Batch
pH	pH	8.17	8038516	8.17	8.25	8038505	6.20	N/A	8038516
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8038171	<1.0	<1.0	8038171	<1.0	1.0	8038158

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NC8385		NC8386		NC8411		
Sampling Date		2015/09/09 12:30		2015/09/09 09:40		2015/09/08 14:00		
COC Number		08411728		08411728		08411735		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	8038217	<0.50	8038318	<0.50	0.50	8038217
Acidity (pH 8.3)	mg/L	<0.50	8038217	<0.50	8038318	<0.50	0.50	8038217
Calculated Parameters								
Anion Sum	meq/L	4.4	8037624	3.8	8037624	3.8	N/A	8037624
Cation Sum	meq/L	4.5	8037624	3.9	8037624	4.0	N/A	8037624
Filter and HNO3 Preservation	N/A	LAB	8037935	LAB	8037935	LAB	N/A	8037935
Ion Balance	N/A	1.0	8036928	1.0	8036928	1.0	0.010	8036928
Nitrate (N)	mg/L	<0.0020	8037518	0.0192	8037518	0.0090	0.0020	8037518
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00098	8041430	0.00091	8041430	0.00099	0.00050	8041430
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00090	8041503	0.00087	8041503	0.00095	0.00050	8041503
Fluoride (F)	mg/L	0.150	8041939	0.110	8041939	0.100	0.010	8041939
Dissolved Organic Carbon (C)	mg/L	6.9	8042082	4.5	8042082	5.6	0.50	8042082
Alkalinity (Total as CaCO3)	mg/L	177	8038500	153	8038513	158	0.50	8038513
Alkalinity (PP as CaCO3)	mg/L	<0.50	8038500	<0.50	8038513	0.57	0.50	8038513
Bicarbonate (HCO3)	mg/L	216	8038500	187	8038513	191	0.50	8038513
Carbonate (CO3)	mg/L	<0.50	8038500	<0.50	8038513	0.68	0.50	8038513
Hydroxide (OH)	mg/L	<0.50	8038500	<0.50	8038513	<0.50	0.50	8038513
Anions								
Dissolved Sulphate (SO4)	mg/L	38.0	8040315	32.8	8040315	31.1	0.50	8040315
Dissolved Chloride (Cl)	mg/L	0.77	8040314	0.62	8040314	0.88	0.50	8040314
MISCELLANEOUS								
True Colour	Col. Unit	52.9 (1)	8038979	30.0 (1)	8040936	36.3 (1)	5.0	8040936
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0086 (1)	8038989	0.0046 (1)	8038989	0.0034 (1)	0.0020	8038989
Total Ammonia (N)	mg/L	0.0087 (1)	8039022	<0.0050 (1)	8039022	<0.0050 (1)	0.0050	8039022
Nitrate plus Nitrite (N)	mg/L	<0.0020 (1)	8039053	0.0192 (1)	8039053	0.0090 (1)	0.0020	8039053
Nitrite (N)	mg/L	<0.0020 (1)	8039054	<0.0020 (1)	8039054	<0.0020 (1)	0.0020	8039054
Total Phosphorus (P)	mg/L	0.0085 (1)	8038987	0.0048 (1)	8038987	0.0037 (1)	0.0020	8038987
Physical Properties								
Conductivity	uS/cm	405	8038504	343	8038515	348	1.0	8038515
pH	pH	8.25	8038505	8.25	8038516	8.31	N/A	8038516

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NC8385		NC8386		NC8411		
Sampling Date		2015/09/09 12:30		2015/09/09 09:40		2015/09/08 14:00		
COC Number		08411728		08411728		08411735		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	1.3	8038171	1.3	8038171	2.2	1.0	8038158
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NC8412		NC8413	NC8414		
Sampling Date		2015/09/09 10:45		2015/09/14 10:25	2015/09/11 17:45		
COC Number		08411735		08411735	08411735		
	UNITS	KZ-28	QC Batch	TRIP BLANK	KZ-15	RDL	QC Batch
Misc. Inorganics							
Acidity (pH 4.5)	mg/L	<0.50	8038217	<0.50	<0.50	0.50	8038217
Acidity (pH 8.3)	mg/L	<0.50	8038217	<0.50	<0.50	0.50	8038217
Calculated Parameters							
Anion Sum	meq/L	3.8	8037624	0.018	2.8	N/A	8037624
Cation Sum	meq/L	3.9	8037624	0.0020	3.0	N/A	8037624
Filter and HNO3 Preservation	N/A	LAB	8037935	LAB	LAB	N/A	8037935
Ion Balance	N/A	1.0	8036928	0.11 (1)	1.1	0.010	8036928
Nitrate (N)	mg/L	0.0197	8037518	<0.0020	0.0299	0.0020	8037518
Misc. Inorganics							
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00094	8041430	<0.00050	0.00074	0.00050	8041475
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00079	8041503	<0.00050	0.00074	0.00050	8041503
Fluoride (F)	mg/L	0.110	8041939	<0.010	0.067	0.010	8041939
Dissolved Organic Carbon (C)	mg/L	4.5	8042082	<0.50	1.8	0.50	8042082
Alkalinity (Total as CaCO3)	mg/L	154	8038513	0.88	112	0.50	8038513
Alkalinity (PP as CaCO3)	mg/L	<0.50	8038513	<0.50	<0.50	0.50	8038513
Bicarbonate (HCO3)	mg/L	187	8038513	1.07	137	0.50	8038513
Carbonate (CO3)	mg/L	<0.50	8038513	<0.50	<0.50	0.50	8038513
Hydroxide (OH)	mg/L	<0.50	8038513	<0.50	<0.50	0.50	8038513
Anions							
Dissolved Sulphate (SO4)	mg/L	32.6	8040315	<0.50	25.3	0.50	8040315
Dissolved Chloride (Cl)	mg/L	<0.50	8040314	<0.50	1.7	0.50	8040314
MISCELLANEOUS							
True Colour	Col. Unit	29.0 (2)	8040936	<5.0	9.2 (3)	5.0	8040936
Nutrients							
Dissolved Phosphorus (P)	mg/L	0.0049 (2)	8038989	<0.0020	0.0025 (2)	0.0020	8038989
Total Ammonia (N)	mg/L	0.0051 (2)	8039022	0.0085	0.0093 (3)	0.0050	8039022
Nitrate plus Nitrite (N)	mg/L	0.0197 (2)	8039053	<0.0020	0.0299 (3)	0.0020	8039053
Nitrite (N)	mg/L	<0.0020 (2)	8039054	<0.0020	<0.0020 (3)	0.0020	8039054
Total Phosphorus (P)	mg/L	0.0049 (2)	8038987	<0.0020	<0.0020 (2)	0.0020	8038987

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

(2) Sample arrived to laboratory past recommended hold time.

(3) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NC8412		NC8413	NC8414		
Sampling Date		2015/09/09 10:45		2015/09/14 10:25	2015/09/11 17:45		
COC Number		08411735		08411735	08411735		
	UNITS	KZ-28	QC Batch	TRIP BLANK	KZ-15	RDL	QC Batch
Physical Properties							
Conductivity	uS/cm	342	8038515	<1.0	262	1.0	8038515
pH	pH	8.27	8038516	5.86	8.07	N/A	8038516
Physical Properties							
Total Suspended Solids	mg/L	1.2	8038171	<1.0	<1.0	1.0	8038171

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NC8377	NC8378	NC8379		NC8380		
Sampling Date		2015/09/11 14:35	2015/09/11 08:20	2015/09/10 16:45		2015/09/11 11:25		
COC Number		08411728	08411728	08411728		08411728		
	UNITS	KZ-2	KZ-7	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	93.3	139	167	8036746	70.9	0.50	8036746
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8042926	<0.0000020	0.0000020	8042926
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00484	0.00376	0.00452	8039492	0.00873	0.00050	8039492
Dissolved Antimony (Sb)	mg/L	0.000022	0.000094	0.000061	8039492	0.000029	0.000020	8039492
Dissolved Arsenic (As)	mg/L	0.000103	0.000318	0.000218	8039492	0.000196	0.000020	8039492
Dissolved Barium (Ba)	mg/L	0.0530	0.0693	0.0773	8039492	0.0932	0.000020	8039492
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8039492	<0.000010	0.000010	8039492
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8039492	<0.0000050	0.0000050	8039492
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8039492	<0.010	0.010	8039492
Dissolved Cadmium (Cd)	mg/L	0.000275	0.000170	0.0000710	8039492	0.0000240	0.0000050	8039492
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8039492	<0.00010	0.00010	8039492
Dissolved Cobalt (Co)	mg/L	0.0000100	0.0000280	0.0000350	8039492	0.0000180	0.0000050	8039492
Dissolved Copper (Cu)	mg/L	0.000652	0.000716	0.000574	8039492	0.000484	0.000050	8039492
Dissolved Iron (Fe)	mg/L	0.0011	0.0528	0.101	8039492	0.0187	0.0010	8039492
Dissolved Lead (Pb)	mg/L	0.0000100	0.0000450	0.0000170	8039492	0.0000060	0.0000050	8039492
Dissolved Lithium (Li)	mg/L	0.00111	0.00174	0.00216	8039492	0.00175	0.00050	8039492
Dissolved Manganese (Mn)	mg/L	0.000119	0.0175	0.0264	8039492	0.00609	0.000050	8039492
Dissolved Molybdenum (Mo)	mg/L	0.000589	0.000448	0.000527	8039492	0.000485	0.000050	8039492
Dissolved Nickel (Ni)	mg/L	0.000408	0.000537	0.000350	8039492	0.000412	0.000020	8039492
Dissolved Phosphorus (P)	mg/L	0.0038	0.0053	0.0029	8039492	0.0030	0.0020	8039492
Dissolved Selenium (Se)	mg/L	0.000635	0.000750	0.000876	8039492	0.000153	0.000040	8039492
Dissolved Silicon (Si)	mg/L	2.28	2.72	2.97	8039492	2.69	0.050	8046091
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8039492	<0.0000050	0.0000050	8039492
Dissolved Strontium (Sr)	mg/L	0.105	0.170	0.173	8039492	0.0695	0.000050	8039492
Dissolved Thallium (Tl)	mg/L	0.0000030	0.0000030	<0.0000020	8039492	<0.0000020	0.0000020	8039492
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8039492	<0.00020	0.00020	8039492
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8039492	<0.00050	0.00050	8039492
Dissolved Uranium (U)	mg/L	0.00182	0.00108	0.00118	8039492	0.000521	0.0000020	8039492
Dissolved Vanadium (V)	mg/L	0.00022	<0.00020	<0.00020	8039492	0.00023	0.00020	8039492
Dissolved Zinc (Zn)	mg/L	0.0405	0.0475	0.0129	8039492	0.00297	0.00010	8039492
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8039492	<0.00010	0.00010	8039492
Dissolved Calcium (Ca)	mg/L	32.3	44.6	56.2	8036747	24.2	0.050	8036747

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NC8377	NC8378	NC8379		NC8380		
Sampling Date		2015/09/11 14:35	2015/09/11 08:20	2015/09/10 16:45		2015/09/11 11:25		
COC Number		08411728	08411728	08411728		08411728		
	UNITS	KZ-2	KZ-7	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	3.07	6.75	6.40	8036747	2.57	0.050	8036747
Dissolved Potassium (K)	mg/L	1.67	1.87	1.58	8036747	1.42	0.050	8036747
Dissolved Sodium (Na)	mg/L	0.677	0.977	0.976	8036747	0.936	0.050	8036747
Dissolved Sulphur (S)	mg/L	14.0	14.5	11.3	8036747	4.4	3.0	8036747
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NC8381	NC8382		NC8383	NC8384		
Sampling Date		2015/09/09 14:50	2015/09/09 16:00		2015/09/09 17:08	2015/09/08 14:45		
COC Number		08411728	08411728		08411728	08411728		
	UNITS	KZ-15	KZ-16	QC Batch	KZ-17	KZ-19	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	146	124	8036746	161	<0.50	0.50	8036746
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8042926	<0.0000020	<0.0000020	0.0000020	8042926
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00806 (1)	0.00546 (1)	8046091	0.00334	0.00285	0.00050	8040034
Dissolved Antimony (Sb)	mg/L	0.000028	<0.000020	8039492	0.000054	<0.000020	0.000020	8040034
Dissolved Arsenic (As)	mg/L	0.000359	0.000274	8039492	0.000439	0.000037	0.000020	8040034
Dissolved Barium (Ba)	mg/L	0.0592	0.0566	8039492	0.0696	0.000025	0.000020	8040034
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	8039492	<0.000010	<0.000010	0.000010	8040034
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8039492	<0.0000050	<0.0000050	0.0000050	8040034
Dissolved Boron (B)	mg/L	<0.010	<0.010	8039492	<0.010	<0.010	0.010	8040034
Dissolved Cadmium (Cd)	mg/L	0.0000220	0.0000140	8039492	0.0000280	<0.0000050	0.0000050	8040034
Dissolved Chromium (Cr)	mg/L	0.00013	<0.00010	8039492	<0.00010	<0.00010	0.00010	8040034
Dissolved Cobalt (Co)	mg/L	0.0000190	0.0000150	8039492	0.0000240	<0.0000050	0.0000050	8040034
Dissolved Copper (Cu)	mg/L	0.000536	0.000402	8039492	0.000426	<0.000050	0.000050	8040034
Dissolved Iron (Fe)	mg/L	0.0201	0.0045	8039492	0.0486	0.0020	0.0010	8040034
Dissolved Lead (Pb)	mg/L	0.0000050	<0.0000050	8039492	0.0000090	<0.0000050	0.0000050	8040034
Dissolved Lithium (Li)	mg/L	0.00221	0.00191	8039492	0.00227	<0.00050	0.00050	8040034
Dissolved Manganese (Mn)	mg/L	0.0120	0.00291	8039492	0.0258	<0.000050	0.000050	8040034
Dissolved Molybdenum (Mo)	mg/L	0.000672	0.000410	8039492	0.00116	<0.000050	0.000050	8040034
Dissolved Nickel (Ni)	mg/L	0.000447	0.000299	8039492	0.000507	0.000031	0.000020	8040034
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0025	8039492	<0.0020	<0.0020	0.0020	8040034
Dissolved Selenium (Se)	mg/L	0.000602	0.000449	8039492	0.000826	<0.000040	0.000040	8040034
Dissolved Silicon (Si)	mg/L	2.83	2.62	8039492	2.97	<0.050	0.050	8040034
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	8039492	<0.0000050	<0.0000050	0.0000050	8040034
Dissolved Strontium (Sr)	mg/L	0.148	0.127	8039492	0.158	<0.000050	0.000050	8040034
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8039492	<0.0000020	<0.0000020	0.0000020	8040034
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	8039492	<0.00020	<0.00020	0.00020	8040034
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	8039492	<0.00050	<0.00050	0.00050	8040034
Dissolved Uranium (U)	mg/L	0.00142	0.000974	8039492	0.00223	0.0000020	0.0000020	8040034
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	8039492	<0.00020	0.00074	0.00020	8040034
Dissolved Zinc (Zn)	mg/L	0.00227	0.00059	8039492	0.00426	<0.00010	0.00010	8040034
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	8039492	<0.00010	<0.00010	0.00010	8040034

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NC8381	NC8382		NC8383	NC8384		
Sampling Date		2015/09/09 14:50	2015/09/09 16:00		2015/09/09 17:08	2015/09/08 14:45		
COC Number		08411728	08411728		08411728	08411728		
	UNITS	KZ-15	KZ-16	QC Batch	KZ-17	KZ-19	RDL	QC Batch
Dissolved Calcium (Ca)	mg/L	46.0	39.7	8036747	50.2	<0.050	0.050	8036747
Dissolved Magnesium (Mg)	mg/L	7.44	6.04	8036747	8.76	<0.050	0.050	8036747
Dissolved Potassium (K)	mg/L	1.25	1.15	8036747	1.23	<0.050	0.050	8036747
Dissolved Sodium (Na)	mg/L	0.918	0.875	8036747	0.878	<0.050	0.050	8036747
Dissolved Sulphur (S)	mg/L	8.1	6.8	8036747	9.0	<3.0	3.0	8036747
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NC8385	NC8386	NC8411		NC8412		
Sampling Date		2015/09/09 12:30	2015/09/09 09:40	2015/09/08 14:00		2015/09/09 10:45		
COC Number		08411728	08411728	08411735		08411735		
	UNITS	KZ-21	KZ-22	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	222	192	196	8036746	192	0.50	8044908
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8042926	<0.0000020	0.0000020	8042926
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0105	0.00431	0.00583	8040034	0.00819	0.00050	8040034
Dissolved Antimony (Sb)	mg/L	0.000132	0.000077	0.000102	8040034	0.000079	0.000020	8040034
Dissolved Arsenic (As)	mg/L	0.00170	0.000976	0.000840	8040034	0.00113	0.000020	8040034
Dissolved Barium (Ba)	mg/L	0.0534	0.0584	0.0601	8040034	0.0567	0.000020	8040034
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8040034	<0.000010	0.000010	8040034
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8040034	<0.0000050	0.0000050	8040034
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8040034	<0.010	0.010	8040034
Dissolved Cadmium (Cd)	mg/L	0.0000110	0.0000140	0.0000110	8040034	0.0000130	0.0000050	8040034
Dissolved Chromium (Cr)	mg/L	0.00016	<0.00010	<0.00010	8040034	0.00017	0.00010	8040034
Dissolved Cobalt (Co)	mg/L	0.0000810	0.0000510	0.0000340	8040034	0.0000530	0.0000050	8040034
Dissolved Copper (Cu)	mg/L	0.000627	0.000540	0.000771	8040034	0.000632	0.000050	8040034
Dissolved Iron (Fe)	mg/L	0.164	0.0818	0.0538	8040034	0.0856	0.0010	8040034
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000060	8040034	<0.0000050	0.0000050	8040034
Dissolved Lithium (Li)	mg/L	0.00335	0.00288	0.00328	8040034	0.00280	0.00050	8040034
Dissolved Manganese (Mn)	mg/L	0.0423	0.0206	0.00985	8040034	0.0241	0.000050	8040034
Dissolved Molybdenum (Mo)	mg/L	0.00144	0.000991	0.000913	8040034	0.000988	0.000050	8040034
Dissolved Nickel (Ni)	mg/L	0.00296	0.00149	0.00141	8040034	0.00172	0.000020	8040034
Dissolved Phosphorus (P)	mg/L	0.0057	0.0030	0.0022	8040034	0.0043	0.0020	8040034
Dissolved Selenium (Se)	mg/L	0.000624	0.000620	0.000547	8040034	0.000631	0.000040	8040034
Dissolved Silicon (Si)	mg/L	4.68	3.52	3.80	8040034	3.55	0.050	8040034
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8040034	<0.0000050	0.0000050	8040034
Dissolved Strontium (Sr)	mg/L	0.177	0.163	0.167	8040034	0.177	0.000050	8040034
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8040034	<0.0000020	0.0000020	8040034
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8040034	<0.00020	0.00020	8040034
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8040034	<0.00050	0.00050	8040034
Dissolved Uranium (U)	mg/L	0.00272	0.00211	0.00202	8040034	0.00211	0.0000020	8040034
Dissolved Vanadium (V)	mg/L	0.00037	0.00032	0.00027	8040034	0.00039	0.00020	8040034
Dissolved Zinc (Zn)	mg/L	0.00208	0.00140	0.00081	8040034	0.00179	0.00010	8040034
Dissolved Zirconium (Zr)	mg/L	0.00011	<0.00010	<0.00010	8040034	<0.00010	0.00010	8040034
Dissolved Calcium (Ca)	mg/L	53.1	51.3	52.9	8036747	51.4	0.050	8044993

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NC8385	NC8386	NC8411		NC8412		
Sampling Date		2015/09/09 12:30	2015/09/09 09:40	2015/09/08 14:00		2015/09/09 10:45		
COC Number		08411728	08411728	08411735		08411735		
	UNITS	KZ-21	KZ-22	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	21.8	15.4	15.6	8036747	15.5	0.050	8044993
Dissolved Potassium (K)	mg/L	1.27	1.26	1.18	8036747	1.20	0.050	8044993
Dissolved Sodium (Na)	mg/L	1.27	1.16	1.22	8036747	1.16	0.050	8044993
Dissolved Sulphur (S)	mg/L	13.1	10.5	9.9	8036747	11.3	3.0	8044993
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NC8413		NC8414		
Sampling Date		2015/09/14 10:25		2015/09/11 17:45		
COC Number		08411735		08411735		
	UNITS	TRIP BLANK	QC Batch	KZ-15	RDL	QC Batch
Misc. Inorganics						
Dissolved Hardness (CaCO3)	mg/L	<0.50	8036746	148	0.50	8036746
Elements						
Dissolved Mercury (Hg)	mg/L	<0.0000020	8042926	<0.0000020	0.0000020	8042641
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	<0.00050	8040034	0.00354	0.00050	8039490
Dissolved Antimony (Sb)	mg/L	<0.000020	8040034	0.000032	0.000020	8039490
Dissolved Arsenic (As)	mg/L	<0.000020	8040034	0.000350	0.000020	8039490
Dissolved Barium (Ba)	mg/L	<0.000020	8040034	0.0626	0.000020	8039490
Dissolved Beryllium (Be)	mg/L	<0.000010	8040034	<0.000010	0.000010	8039490
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8040034	<0.0000050	0.0000050	8039490
Dissolved Boron (B)	mg/L	<0.010	8040034	<0.010	0.010	8039490
Dissolved Cadmium (Cd)	mg/L	<0.0000050	8040034	0.0000210	0.0000050	8039490
Dissolved Chromium (Cr)	mg/L	<0.00010	8040034	<0.00010	0.00010	8039490
Dissolved Cobalt (Co)	mg/L	<0.0000050	8040034	0.0000160	0.0000050	8039490
Dissolved Copper (Cu)	mg/L	<0.000050	8040034	0.000540 (1)	0.000050	8045272
Dissolved Iron (Fe)	mg/L	<0.0010	8040034	0.0110	0.0010	8039490
Dissolved Lead (Pb)	mg/L	<0.0000050	8040034	0.0000090	0.0000050	8039490
Dissolved Lithium (Li)	mg/L	<0.00050	8040034	0.00211	0.00050	8039490
Dissolved Manganese (Mn)	mg/L	<0.000050	8040034	0.0103	0.000050	8039490
Dissolved Molybdenum (Mo)	mg/L	<0.000050	8040034	0.000697	0.000050	8039490
Dissolved Nickel (Ni)	mg/L	<0.000020	8040034	0.000403	0.000020	8039490
Dissolved Phosphorus (P)	mg/L	<0.0020	8040034	<0.0020	0.0020	8039490
Dissolved Selenium (Se)	mg/L	<0.000040	8040034	0.000598	0.000040	8039490
Dissolved Silicon (Si)	mg/L	<0.050	8040034	2.89	0.050	8039490
Dissolved Silver (Ag)	mg/L	<0.0000050	8040034	<0.0000050	0.0000050	8039490
Dissolved Strontium (Sr)	mg/L	<0.000050	8040034	0.149	0.000050	8039490
Dissolved Thallium (Tl)	mg/L	<0.0000020	8040034	<0.0000020	0.0000020	8039490
Dissolved Tin (Sn)	mg/L	<0.00020	8040034	<0.00020	0.00020	8039490
Dissolved Titanium (Ti)	mg/L	<0.00050	8040034	<0.00050	0.00050	8039490
Dissolved Uranium (U)	mg/L	<0.0000020	8040034	0.00144	0.0000020	8039490
Dissolved Vanadium (V)	mg/L	<0.00020	8040034	<0.00020	0.00020	8039490
Dissolved Zinc (Zn)	mg/L	<0.00010	8040034	0.00199	0.00010	8039490
Dissolved Zirconium (Zr)	mg/L	<0.00010	8040034	<0.00010	0.00010	8039490

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NC8413		NC8414		
Sampling Date		2015/09/14 10:25		2015/09/11 17:45		
COC Number		08411735		08411735		
	UNITS	TRIP BLANK	QC Batch	KZ-15	RDL	QC Batch
Dissolved Calcium (Ca)	mg/L	<0.050	8036747	46.7	0.050	8036747
Dissolved Magnesium (Mg)	mg/L	<0.050	8036747	7.52	0.050	8036747
Dissolved Potassium (K)	mg/L	<0.050	8036747	1.32	0.050	8036747
Dissolved Sodium (Na)	mg/L	<0.050	8036747	0.954	0.050	8036747
Dissolved Sulphur (S)	mg/L	<3.0	8036747	8.3	3.0	8036747
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NC8377	NC8378	NC8379	NC8380	NC8381		
Sampling Date		2015/09/11 14:35	2015/09/11 08:20	2015/09/10 16:45	2015/09/11 11:25	2015/09/09 14:50		
COC Number		08411728	08411728	08411728	08411728	08411728		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	101	149	169	68.7	140	0.50	8037020
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8042635
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0112	0.0435	0.0346	0.0262	0.00465	0.00050	8039488
Total Antimony (Sb)	mg/L	0.000023	0.000102	0.000070	0.000023	0.000027	0.000020	8039488
Total Arsenic (As)	mg/L	0.000112	0.000685	0.000427	0.000206	0.000398	0.000020	8039488
Total Barium (Ba)	mg/L	0.0619	0.0761	0.0830	0.0935	0.0588	0.000020	8039488
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8039488
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8039488
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8039488
Total Cadmium (Cd)	mg/L	0.000311	0.000440	0.000105	0.0000310	0.0000300	0.0000050	8039488
Total Chromium (Cr)	mg/L	<0.00010	0.00011	0.00012	<0.00010	<0.00010	0.00010	8039488
Total Cobalt (Co)	mg/L	0.0000140	0.000116	0.000112	0.0000330	0.0000310	0.0000050	8039488
Total Copper (Cu)	mg/L	0.000726	0.00191	0.000879	0.000561	0.000440	0.000050	8039488
Total Iron (Fe)	mg/L	0.0160	0.610	0.466	0.0704	0.0633	0.0010	8039488
Total Lead (Pb)	mg/L	0.0000420	0.000521	0.000227	0.0000450	0.0000210	0.0000050	8039488
Total Lithium (Li)	mg/L	0.00088	0.00115	0.00174	0.00113	0.00164	0.00050	8039488
Total Manganese (Mn)	mg/L	0.000503	0.0572	0.0431	0.0158	0.0193	0.000050	8039488
Total Molybdenum (Mo)	mg/L	0.000611	0.000439	0.000540	0.000488	0.000683	0.000050	8039488
Total Nickel (Ni)	mg/L	0.000427	0.000624	0.00132	0.000423	0.000385	0.000020	8039488
Total Phosphorus (P)	mg/L	<0.0020	0.0046	0.0077	0.0023	<0.0020	0.0020	8039488
Total Selenium (Se)	mg/L	0.000667	0.000866	0.000967	0.000135	0.000657	0.000040	8039488
Total Silicon (Si)	mg/L	2.26	2.79	2.96	2.59	2.73	0.050	8039488
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8039488
Total Strontium (Sr)	mg/L	0.108	0.151	0.173	0.0665	0.136	0.000050	8039488
Total Thallium (Tl)	mg/L	0.0000040	0.0000040	0.0000020	<0.0000020	<0.0000020	0.0000020	8039488
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8039488
Total Titanium (Ti)	mg/L	0.00062	0.00215	0.00235	0.00114	<0.00050	0.00050	8039488
Total Uranium (U)	mg/L	0.00202	0.00110	0.00123	0.000540	0.00144	0.0000020	8039488
Total Vanadium (V)	mg/L	0.00033	0.00034	0.00026	0.00039	<0.00020	0.00020	8039488
Total Zinc (Zn)	mg/L	0.0472	0.0764	0.0202	0.00436	0.00281	0.00010	8039488
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8039488
Total Calcium (Ca)	mg/L	35.0	49.4	56.5	23.2	44.0	0.050	8037516

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NC8377	NC8378	NC8379	NC8380	NC8381		
Sampling Date		2015/09/11 14:35	2015/09/11 08:20	2015/09/10 16:45	2015/09/11 11:25	2015/09/09 14:50		
COC Number		08411728	08411728	08411728	08411728	08411728		
	UNITS	**KZ-2**	**KZ-7**	**KZ-9**	**KZ-13**	**KZ-15**	**RDL**	**QC Batch**
Total Magnesium (Mg)	mg/L	3.30	6.20	6.83	2.59	7.26	0.050	8037516
Total Potassium (K)	mg/L	1.74	1.62	1.60	1.39	1.16	0.050	8037516
Total Sodium (Na)	mg/L	0.738	0.893	1.00	0.929	0.889	0.050	8037516
Total Sulphur (S)	mg/L	12.9	11.8	10.8	4.2	8.5	3.0	8037516

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NC8382	NC8383	NC8384		NC8385		
Sampling Date		2015/09/09 16:00	2015/09/09 17:08	2015/09/08 14:45		2015/09/09 12:30		
COC Number		08411728	08411728	08411728		08411728		
	UNITS	KZ-16	KZ-17	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	135	185	<0.50	8037020	223	0.50	8037020
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8042635	<0.0000020	0.0000020	8045118
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00350	0.0118	0.00391	8039488	0.0124	0.00050	8039488
Total Antimony (Sb)	mg/L	<0.000020	0.000056	<0.000020	8039488	0.000147	0.000020	8039488
Total Arsenic (As)	mg/L	0.000297	0.000695	0.000049	8039488	0.00219	0.000020	8039488
Total Barium (Ba)	mg/L	0.0594	0.0761	0.000300	8039488	0.0552	0.000020	8039488
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8039488	<0.000010	0.000010	8039488
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8039488	<0.0000050	0.0000050	8039488
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	8039488	<0.010	0.010	8039488
Total Cadmium (Cd)	mg/L	0.0000160	0.0000480	<0.0000050	8039488	0.0000180	0.0000050	8039488
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8039488	0.00012	0.00010	8039488
Total Cobalt (Co)	mg/L	0.0000260	0.0000740	0.0000050	8039488	0.000106	0.0000050	8039488
Total Copper (Cu)	mg/L	0.000416	0.000659	<0.000050	8039488	0.000688	0.000050	8039488
Total Iron (Fe)	mg/L	0.0175	0.211	0.0205	8039488	0.338	0.0010	8039488
Total Lead (Pb)	mg/L	0.0000070	0.0000580	0.0000420	8039488	0.0000180	0.0000050	8039488
Total Lithium (Li)	mg/L	0.00128	0.00222	<0.00050	8039488	0.00338	0.00050	8039488
Total Manganese (Mn)	mg/L	0.00578	0.0601	0.000184	8039488	0.0572	0.000050	8039488
Total Molybdenum (Mo)	mg/L	0.000401	0.00119	<0.000050	8039488	0.00144	0.000050	8039488
Total Nickel (Ni)	mg/L	0.000270	0.000675	<0.000020	8039488	0.00294	0.000020	8039488
Total Phosphorus (P)	mg/L	<0.0020	0.0048	0.0041	8039488	0.0103	0.0020	8039488
Total Selenium (Se)	mg/L	0.000463	0.000903	<0.000040	8039488	0.000747	0.000040	8039488
Total Silicon (Si)	mg/L	2.53	3.04	<0.050	8039488	4.35	0.050	8039488
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8039488	<0.0000050	0.0000050	8039488
Total Strontium (Sr)	mg/L	0.139	0.179	0.000067	8039488	0.164	0.000050	8039488
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8039488	<0.0000020	0.0000020	8039488
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8039488	<0.00020	0.00020	8039488
Total Titanium (Ti)	mg/L	<0.00050	0.00085	<0.00050	8039488	0.00053	0.00050	8039488
Total Uranium (U)	mg/L	0.00100	0.00241	0.0000020	8039488	0.00262	0.0000020	8039488
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00032	8039488	0.00036	0.00020	8039488
Total Zinc (Zn)	mg/L	0.00052	0.00754	0.00018	8039488	0.00280	0.00010	8039488
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8039488	0.00014	0.00010	8039488
Total Calcium (Ca)	mg/L	43.1	56.2	<0.050	8037516	54.4	0.050	8037516

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NC8382	NC8383	NC8384		NC8385		
Sampling Date		2015/09/09 16:00	2015/09/09 17:08	2015/09/08 14:45		2015/09/09 12:30		
COC Number		08411728	08411728	08411728		08411728		
	UNITS	KZ-16	KZ-17	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Total Magnesium (Mg)	mg/L	6.60	10.8	<0.050	8037516	21.1	0.050	8037516
Total Potassium (K)	mg/L	1.21	1.47	<0.050	8037516	1.19	0.050	8037516
Total Sodium (Na)	mg/L	0.946	1.08	<0.050	8037516	1.23	0.050	8037516
Total Sulphur (S)	mg/L	6.2	9.9	<3.0	8037516	13.7	3.0	8037516

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NC8386		NC8411	NC8412	NC8413		
Sampling Date		2015/09/09 09:40		2015/09/08 14:00	2015/09/09 10:45	2015/09/14 10:25		
COC Number		08411728		08411735	08411735	08411735		
	UNITS	KZ-22	QC Batch	KZ-26	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	193	8037020	200	189	<0.50	0.50	8037020
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	8045118	<0.0000020	<0.0000020	<0.0000020	0.0000020	8045118
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00880	8039488	0.0201	0.00799	<0.00050	0.00050	8040540
Total Antimony (Sb)	mg/L	0.000082	8039488	0.000102	0.000085	<0.000020	0.000020	8040540
Total Arsenic (As)	mg/L	0.00128	8039488	0.00114	0.00124	<0.000020	0.000020	8040540
Total Barium (Ba)	mg/L	0.0592	8039488	0.0641	0.0590	<0.000020	0.000020	8040540
Total Beryllium (Be)	mg/L	<0.000010	8039488	<0.000010	<0.000010	<0.000010	0.000010	8040540
Total Bismuth (Bi)	mg/L	<0.0000050	8039488	<0.0000050	<0.0000050	<0.0000050	0.0000050	8040540
Total Boron (B)	mg/L	<0.010	8039488	<0.010	<0.010	<0.010	0.010	8040540
Total Cadmium (Cd)	mg/L	0.0000200	8039488	0.0000190	0.0000180	<0.0000050	0.0000050	8040540
Total Chromium (Cr)	mg/L	<0.00010	8039488	0.00010	<0.00010	<0.00010	0.00010	8040540
Total Cobalt (Co)	mg/L	0.0000680	8039488	0.0000800	0.0000660	<0.0000050	0.0000050	8040540
Total Copper (Cu)	mg/L	0.000607	8039488	0.000902	0.000653	<0.000050	0.000050	8040540
Total Iron (Fe)	mg/L	0.186	8039488	0.180	0.172	<0.0010	0.0010	8040540
Total Lead (Pb)	mg/L	0.0000250	8039488	0.0000580	0.0000180	<0.0000050	0.0000050	8040540
Total Lithium (Li)	mg/L	0.00281	8039488	0.00393	0.00363	<0.00050	0.00050	8040540
Total Manganese (Mn)	mg/L	0.0327	8039488	0.0245	0.0321	<0.000050	0.000050	8040540
Total Molybdenum (Mo)	mg/L	0.000996	8039488	0.000912	0.000992	<0.000050	0.000050	8040540
Total Nickel (Ni)	mg/L	0.00155	8039488	0.00165	0.00154	<0.000020	0.000020	8040540
Total Phosphorus (P)	mg/L	0.0054	8039488	0.0079	0.0046	<0.0020	0.0020	8040540
Total Selenium (Se)	mg/L	0.000679	8039488	0.000593	0.000677	<0.000040	0.000040	8040540
Total Silicon (Si)	mg/L	3.65	8039488	3.91	3.56	<0.050	0.050	8040540
Total Silver (Ag)	mg/L	<0.0000050	8039488	<0.0000050	<0.0000050	<0.0000050	0.0000050	8040540
Total Strontium (Sr)	mg/L	0.159	8039488	0.171	0.158	<0.000050	0.000050	8040540
Total Thallium (Tl)	mg/L	<0.0000020	8039488	<0.0000020	<0.0000020	<0.0000020	0.0000020	8040540
Total Tin (Sn)	mg/L	<0.00020	8039488	<0.00020	<0.00020	<0.00020	0.00020	8040540
Total Titanium (Ti)	mg/L	<0.00050	8039488	0.00077	<0.00050	<0.00050	0.00050	8040540
Total Uranium (U)	mg/L	0.00209	8039488	0.00204	0.00215	<0.0000020	0.0000020	8040540
Total Vanadium (V)	mg/L	0.00027	8039488	0.00028	<0.00020	<0.00020	0.00020	8040540
Total Zinc (Zn)	mg/L	0.00224	8039488	0.00177	0.00229	<0.00010	0.00010	8040540
Total Zirconium (Zr)	mg/L	<0.00010	8039488	0.00012	<0.00010	<0.00010	0.00010	8040540
Total Calcium (Ca)	mg/L	52.0	8037516	52.9	50.3	<0.050	0.050	8037516

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NC8386		NC8411	NC8412	NC8413		
Sampling Date		2015/09/09 09:40		2015/09/08 14:00	2015/09/09 10:45	2015/09/14 10:25		
COC Number		08411728		08411735	08411735	08411735		
	UNITS	KZ-22	QC Batch	KZ-26	KZ-28	TRIP BLANK	RDL	QC Batch
Total Magnesium (Mg)	mg/L	15.4	8037516	16.4	15.3	<0.050	0.050	8037516
Total Potassium (K)	mg/L	1.18	8037516	1.16	1.14	<0.050	0.050	8037516
Total Sodium (Na)	mg/L	1.13	8037516	1.28	1.14	<0.050	0.050	8037516
Total Sulphur (S)	mg/L	11.6	8037516	10.4	11.4	<3.0	3.0	8037516

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NC8414		
Sampling Date		2015/09/11 17:45		
COC Number		08411735		
	UNITS	KZ-15	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	143	0.50	8037020
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8045118
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.00335	0.00050	8040540
Total Antimony (Sb)	mg/L	0.000029	0.000020	8040540
Total Arsenic (As)	mg/L	0.000408	0.000020	8040540
Total Barium (Ba)	mg/L	0.0598	0.000020	8040540
Total Beryllium (Be)	mg/L	<0.000010	0.000010	8040540
Total Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8040540
Total Boron (B)	mg/L	<0.010	0.010	8040540
Total Cadmium (Cd)	mg/L	0.0000260	0.0000050	8040540
Total Chromium (Cr)	mg/L	<0.00010	0.00010	8040540
Total Cobalt (Co)	mg/L	0.0000260	0.0000050	8040540
Total Copper (Cu)	mg/L	0.000420	0.000050	8040540
Total Iron (Fe)	mg/L	0.0581	0.0010	8040540
Total Lead (Pb)	mg/L	0.0000140	0.0000050	8040540
Total Lithium (Li)	mg/L	0.00226	0.00050	8040540
Total Manganese (Mn)	mg/L	0.0153	0.000050	8040540
Total Molybdenum (Mo)	mg/L	0.000691	0.000050	8040540
Total Nickel (Ni)	mg/L	0.000401	0.000020	8040540
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8040540
Total Selenium (Se)	mg/L	0.000701	0.000040	8040540
Total Silicon (Si)	mg/L	2.65	0.050	8040540
Total Silver (Ag)	mg/L	<0.0000050	0.0000050	8040540
Total Strontium (Sr)	mg/L	0.142	0.000050	8040540
Total Thallium (Tl)	mg/L	<0.0000020	0.0000020	8040540
Total Tin (Sn)	mg/L	<0.00020	0.00020	8040540
Total Titanium (Ti)	mg/L	<0.00050	0.00050	8040540
Total Uranium (U)	mg/L	0.00148	0.0000020	8040540
Total Vanadium (V)	mg/L	<0.00020	0.00020	8040540
Total Zinc (Zn)	mg/L	0.00247	0.00010	8040540
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8040540
Total Calcium (Ca)	mg/L	44.7	0.050	8037516
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NC8414		
Sampling Date		2015/09/11 17:45		
COC Number		08411735		
	UNITS	**KZ-15**	**RDL**	**QC Batch**
Total Magnesium (Mg)	mg/L	7.66	0.050	8037516
Total Potassium (K)	mg/L	1.20	0.050	8037516
Total Sodium (Na)	mg/L	0.909	0.050	8037516
Total Sulphur (S)	mg/L	8.9	3.0	8037516
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NC8377
Sample ID: KZ-2
Matrix: Water

Collected: 2015/09/11
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Name Redacted
Alkalinity - Water	AT/ALK	8038493	2015/09/15	2015/09/15	
Chloride by Automated Colourimetry	KONE/COL	8040314	N/A	2015/09/16	
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	
Colour (True) by Kone Lab	KONE	8038979	N/A	2015/09/16	
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	
Conductance - water	AT/ALK	8038495	N/A	2015/09/15	
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/21	
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/18	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	
Mercury (Total-LowLevel) by CVAF	CV/AF	8042635	2015/09/18	2015/09/18	
Ion Balance	CALC	8036928	N/A	2015/09/18	
Sum of cations, anions	CALC	8037624	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/18	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8039492	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8039488	N/A	2015/09/18	
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	
pH Water	AT/ALK	8038496	N/A	2015/09/15	
Sulphate by Automated Colourimetry	KONE/COL	8040315	N/A	2015/09/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	

Maxxam ID: NC8377 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2015/09/11
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Name Redacted
Alkalinity - Water	AT/ALK	8038493	2015/09/15	2015/09/15	
Colour (True) by Kone Lab	KONE	8038979	N/A	2015/09/16	
Conductance - water	AT/ALK	8038495	N/A	2015/09/15	
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	
pH Water	AT/ALK	8038496	N/A	2015/09/15	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NC8378
Sample ID: KZ-7
Matrix: Water

Collected: 2015/09/11
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Name Redacted
Alkalinity - Water	AT/ALK	8038513	2015/09/15	2015/09/15	
Chloride by Automated Colourimetry	KONE/COL	8040317	N/A	2015/09/16	
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	
Colour (True) by Kone Lab	KONE	8040936	N/A	2015/09/16	
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	
Conductance - water	AT/ALK	8038515	N/A	2015/09/15	
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/21	
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/18	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	
Mercury (Total-LowLevel) by CVAF	CV/AF	8042635	2015/09/18	2015/09/18	
Ion Balance	CALC	8036928	N/A	2015/09/18	
Sum of cations, anions	CALC	8037624	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/18	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8039492	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8039488	N/A	2015/09/18	
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	
pH Water	AT/ALK	8038516	N/A	2015/09/15	
Sulphate by Automated Colourimetry	KONE/COL	8040318	N/A	2015/09/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	

Maxxam ID: NC8379
Sample ID: KZ-9
Matrix: Water

Collected: 2015/09/10
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Name Redacted
Alkalinity - Water	AT/ALK	8038513	2015/09/15	2015/09/15	
Chloride by Automated Colourimetry	KONE/COL	8040317	N/A	2015/09/16	
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	
Colour (True) by Kone Lab	KONE	8040936	N/A	2015/09/16	
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	
Conductance - water	AT/ALK	8038515	N/A	2015/09/15	
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NC8379
Sample ID: KZ-9
Matrix: Water

Collected: 2015/09/10
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/21	Name Redacted
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/18	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	
Mercury (Total-LowLevel) by CVAF	CV/AF	8042635	2015/09/18	2015/09/18	
Ion Balance	CALC	8036928	N/A	2015/09/18	
Sum of cations, anions	CALC	8037624	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/18	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8039492	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8039488	N/A	2015/09/18	
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	
pH Water	AT/ALK	8038516	N/A	2015/09/15	
Sulphate by Automated Colourimetry	KONE/COL	8040318	N/A	2015/09/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	

Maxxam ID: NC8380
Sample ID: KZ-13
Matrix: Water

Collected: 2015/09/11
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038318	N/A	2015/09/15	Name Redacted
Alkalinity - Water	AT/ALK	8038513	2015/09/15	2015/09/15	
Chloride by Automated Colourimetry	KONE/COL	8040314	N/A	2015/09/16	
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	
Colour (True) by Kone Lab	KONE	8040936	N/A	2015/09/16	
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	
Conductance - water	AT/ALK	8038515	N/A	2015/09/15	
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/21	
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/18	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	
Mercury (Total-LowLevel) by CVAF	CV/AF	8042635	2015/09/18	2015/09/18	
Ion Balance	CALC	8036928	N/A	2015/09/18	
Sum of cations, anions	CALC	8037624	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/18	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8039492	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/21	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NC8380
Sample ID: KZ-13
Matrix: Water

Collected: 2015/09/11
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8039488	N/A	2015/09/18	Name Redacted
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	
pH Water	AT/ALK	8038516	N/A	2015/09/15	
Sulphate by Automated Colourimetry	KONE/COL	8040315	N/A	2015/09/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	

Maxxam ID: NC8381
Sample ID: KZ-15
Matrix: Water

Collected: 2015/09/09
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038318	N/A	2015/09/15	Name Redacted
Alkalinity - Water	AT/ALK	8038513	2015/09/15	2015/09/15	
Chloride by Automated Colourimetry	KONE/COL	8040317	N/A	2015/09/16	
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	
Colour (True) by Kone Lab	KONE	8040936	N/A	2015/09/16	
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	
Conductance - water	AT/ALK	8038515	N/A	2015/09/15	
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/21	
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/18	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	
Mercury (Total-LowLevel) by CVAF	CV/AF	8042635	2015/09/18	2015/09/18	
Ion Balance	CALC	8036928	N/A	2015/09/18	
Sum of cations, anions	CALC	8037624	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/18	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8046091	N/A	2015/09/22	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8039488	N/A	2015/09/18	
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	
pH Water	AT/ALK	8038516	N/A	2015/09/15	
Sulphate by Automated Colourimetry	KONE/COL	8040318	N/A	2015/09/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NC8381 **Collected:** 2015/09/09
Sample ID: KZ-15 **Shipped:**
Matrix: Water **Received:** 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	Name Redacted
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	

Maxxam ID: NC8382 **Collected:** 2015/09/09
Sample ID: KZ-16 **Shipped:**
Matrix: Water **Received:** 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Name Redacted
Alkalinity - Water	AT/ALK	8038500	2015/09/15	2015/09/15	
Chloride by Automated Colourimetry	KONE/COL	8040314	N/A	2015/09/16	
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	
Colour (True) by Kone Lab	KONE	8038979	N/A	2015/09/16	
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	
Conductance - water	AT/ALK	8038504	N/A	2015/09/15	
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/21	
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/18	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	
Mercury (Total-LowLevel) by CVAF	CV/AF	8042635	2015/09/18	2015/09/18	
Ion Balance	CALC	8036928	N/A	2015/09/18	
Sum of cations, anions	CALC	8037624	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/18	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8046091	N/A	2015/09/22	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8039488	N/A	2015/09/18	
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	
pH Water	AT/ALK	8038505	N/A	2015/09/15	
Sulphate by Automated Colourimetry	KONE/COL	8040315	N/A	2015/09/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	

Maxxam ID: NC8383 **Collected:** 2015/09/09
Sample ID: KZ-17 **Shipped:**
Matrix: Water **Received:** 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NC8383
Sample ID: KZ-17
Matrix: Water

Collected: 2015/09/09
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8038500	2015/09/15	2015/09/15	Name Redacted
Chloride by Automated Colourimetry	KONE/COL	8040314	N/A	2015/09/16	
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	
Colour (True) by Kone Lab	KONE	8038979	N/A	2015/09/16	
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	
Conductance - water	AT/ALK	8038504	N/A	2015/09/15	
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/21	
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/21	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	
Mercury (Total-LowLevel) by CVAF	CV/AF	8042635	2015/09/18	2015/09/18	
Ion Balance	CALC	8036928	N/A	2015/09/21	
Sum of cations, anions	CALC	8037624	N/A	2015/09/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8040034	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8039488	N/A	2015/09/18	
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	
pH Water	AT/ALK	8038505	N/A	2015/09/15	
Sulphate by Automated Colourimetry	KONE/COL	8040315	N/A	2015/09/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	

Maxxam ID: NC8383 Dup
Sample ID: KZ-17
Matrix: Water

Collected: 2015/09/09
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8040034	N/A	2015/09/18	Name Redacted

Maxxam ID: NC8384
Sample ID: KZ-19
Matrix: Water

Collected: 2015/09/08
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038318	N/A	2015/09/15	Name Redacted
Alkalinity - Water	AT/ALK	8038513	2015/09/15	2015/09/15	
Chloride by Automated Colourimetry	KONE/COL	8040317	N/A	2015/09/16	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NC8384
Sample ID: KZ-19
Matrix: Water

Collected: 2015/09/08
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	
Colour (True) by Kone Lab	KONE	8040936	N/A	2015/09/16	
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	
Conductance - water	AT/ALK	8038515	N/A	2015/09/15	
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/21	
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/21	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	
Mercury (Total-LowLevel) by CVAF	CV/AF	8042635	2015/09/18	2015/09/18	
Ion Balance	CALC	8036928	N/A	2015/09/21	
Sum of cations, anions	CALC	8037624	N/A	2015/09/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8040034	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8039488	N/A	2015/09/18	
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	
pH Water	AT/ALK	8038516	N/A	2015/09/15	
Sulphate by Automated Colourimetry	KONE/COL	8040318	N/A	2015/09/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	
Total Suspended Solids-Low Level	BAL/BAL	8038158	2015/09/15	2015/09/16	

Maxxam ID: NC8385
Sample ID: KZ-21
Matrix: Water

Collected: 2015/09/09
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Name Redacted
Alkalinity - Water	AT/ALK	8038500	2015/09/15	2015/09/15	
Chloride by Automated Colourimetry	KONE/COL	8040314	N/A	2015/09/16	
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	
Colour (True) by Kone Lab	KONE	8038979	N/A	2015/09/16	
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	
Conductance - water	AT/ALK	8038504	N/A	2015/09/15	
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/21	
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/21	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NC8385 **Collected:** 2015/09/09
Sample ID: KZ-21 **Shipped:**
Matrix: Water **Received:** 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8045118	2015/09/21	2015/09/21	Name Redacted
Ion Balance	CALC	8036928	N/A	2015/09/21	
Sum of cations, anions	CALC	8037624	N/A	2015/09/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8040034	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8039488	N/A	2015/09/18	
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	
pH Water	AT/ALK	8038505	N/A	2015/09/15	
Sulphate by Automated Colourimetry	KONE/COL	8040315	N/A	2015/09/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	

Maxxam ID: NC8385 Dup **Collected:** 2015/09/09
Sample ID: KZ-21 **Shipped:**
Matrix: Water **Received:** 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	Name Redacted
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	

Maxxam ID: NC8386 **Collected:** 2015/09/09
Sample ID: KZ-22 **Shipped:**
Matrix: Water **Received:** 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038318	N/A	2015/09/15	Name Redacted
Alkalinity - Water	AT/ALK	8038513	2015/09/15	2015/09/15	
Chloride by Automated Colourimetry	KONE/COL	8040314	N/A	2015/09/16	
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	
Colour (True) by Kone Lab	KONE	8040936	N/A	2015/09/16	
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	
Conductance - water	AT/ALK	8038515	N/A	2015/09/15	
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/21	
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/21	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	
Mercury (Total-LowLevel) by CVAF	CV/AF	8045118	2015/09/21	2015/09/21	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NC8386
Sample ID: KZ-22
Matrix: Water

Collected: 2015/09/09
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance	CALC	8036928	N/A	2015/09/21	Name Redacted
Sum of cations, anions	CALC	8037624	N/A	2015/09/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8040034	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8039488	N/A	2015/09/18	
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	
pH Water	AT/ALK	8038516	N/A	2015/09/15	
Sulphate by Automated Colourimetry	KONE/COL	8040315	N/A	2015/09/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	

Maxxam ID: NC8411
Sample ID: KZ-26
Matrix: Water

Collected: 2015/09/08
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Name Redacted
Alkalinity - Water	AT/ALK	8038513	2015/09/15	2015/09/15	
Chloride by Automated Colourimetry	KONE/COL	8040314	N/A	2015/09/16	
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	
Colour (True) by Kone Lab	KONE	8040936	N/A	2015/09/16	
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	
Conductance - water	AT/ALK	8038515	N/A	2015/09/15	
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/18	
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/21	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	
Mercury (Total-LowLevel) by CVAF	CV/AF	8045118	2015/09/21	2015/09/21	
Ion Balance	CALC	8036928	N/A	2015/09/21	
Sum of cations, anions	CALC	8037624	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8040034	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/18	
Elements by ICPMS Low Level (total)	ICP/CRCM	8040540	N/A	2015/09/17	
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NC8411
Sample ID: KZ-26
Matrix: Water

Collected: 2015/09/08
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	Name Redacted
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	
pH Water	AT/ALK	8038516	N/A	2015/09/15	
Sulphate by Automated Colourimetry	KONE/COL	8040315	N/A	2015/09/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	
Total Suspended Solids-Low Level	BAL/BAL	8038158	2015/09/15	2015/09/16	

Maxxam ID: NC8412
Sample ID: KZ-28
Matrix: Water

Collected: 2015/09/09
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Name Redacted
Alkalinity - Water	AT/ALK	8038513	2015/09/15	2015/09/15	
Chloride by Automated Colourimetry	KONE/COL	8040314	N/A	2015/09/16	
Cyanide SAD (strong acid dissociable)	TECH/COL	8041430	N/A	2015/09/17	
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	
Colour (True) by Kone Lab	KONE	8040936	N/A	2015/09/16	
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	
Conductance - water	AT/ALK	8038515	N/A	2015/09/15	
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/18	
Hardness (calculated as CaCO3)	CALC	8044908	N/A	2015/09/22	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	
Mercury (Total-LowLevel) by CVAF	CV/AF	8045118	2015/09/21	2015/09/21	
Ion Balance	CALC	8036928	N/A	2015/09/21	
Sum of cations, anions	CALC	8037624	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8044993	N/A	2015/09/22	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8040034	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/18	
Elements by ICPMS Low Level (total)	ICP/CRCM	8040540	N/A	2015/09/17	
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	
pH Water	AT/ALK	8038516	N/A	2015/09/15	
Sulphate by Automated Colourimetry	KONE/COL	8040315	N/A	2015/09/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NC8413
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/09/14
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Name Redacted
Alkalinity - Water	AT/ALK	8038513	2015/09/15	2015/09/15	
Chloride by Automated Colourimetry	KONE/COL	8040314	N/A	2015/09/16	
Cyanide SAD (strong acid dissociable)	TECH/COL	8041475	N/A	2015/09/17	
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	
Colour (True) by Kone Lab	KONE	8040936	N/A	2015/09/16	
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	
Conductance - water	AT/ALK	8038515	N/A	2015/09/15	
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/18	
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/21	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042926	N/A	2015/09/18	
Mercury (Total-LowLevel) by CVAF	CV/AF	8045118	2015/09/21	2015/09/21	
Ion Balance	CALC	8036928	N/A	2015/09/21	
Sum of cations, anions	CALC	8037624	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8040034	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/18	
Elements by ICPMS Low Level (total)	ICP/CRCM	8040540	N/A	2015/09/17	
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	
pH Water	AT/ALK	8038516	N/A	2015/09/15	
Sulphate by Automated Colourimetry	KONE/COL	8040315	N/A	2015/09/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	

Maxxam ID: NC8413 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/09/14
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8045118	2015/09/21	2015/09/21	Name Redacted

Maxxam ID: NC8414
Sample ID: KZ-15
Matrix: Water

Collected: 2015/09/11
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8038217	N/A	2015/09/15	Name Redacted
Alkalinity - Water	AT/ALK	8038513	2015/09/15	2015/09/15	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NC8414
Sample ID: KZ-15
Matrix: Water

Collected: 2015/09/11
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8040314	N/A	2015/09/16	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8041475	N/A	2015/09/17	
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	
Colour (True) by Kone Lab	KONE	8040936	N/A	2015/09/16	
Carbon (DOC)	TECH	8042082	N/A	2015/09/18	
Conductance - water	AT/ALK	8038515	N/A	2015/09/15	
Fluoride	ISE/ISE	8041939	N/A	2015/09/17	
Hardness Total (calculated as CaCO3)	CALC	8037020	N/A	2015/09/18	
Hardness (calculated as CaCO3)	CALC	8036746	N/A	2015/09/18	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8042641	N/A	2015/09/18	
Mercury (Total-LowLevel) by CVAF	CV/AF	8045118	2015/09/21	2015/09/21	
Ion Balance	CALC	8036928	N/A	2015/09/18	
Sum of cations, anions	CALC	8037624	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8036747	N/A	2015/09/18	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8039490	N/A	2015/09/18	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8037516	N/A	2015/09/18	
Elements by ICPMS Low Level (total)	ICP/CRCM	8040540	N/A	2015/09/17	
Ammonia-N (Unpreserved)	KONE/COL	8039022	N/A	2015/09/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8039053	N/A	2015/09/15	
Nitrite (N) (low level)	TRAA/COL	8039054	N/A	2015/09/15	
Nitrogen - Nitrate (as N)	CALC	8037518	N/A	2015/09/16	
Filter and HNO3 Preserve for Metals	ICP	8037935	N/A	2015/09/15	
pH Water	AT/ALK	8038516	N/A	2015/09/15	
Sulphate by Automated Colourimetry	KONE/COL	8040315	N/A	2015/09/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8038989	2015/09/15	2015/09/15	
Total Phosphorus - unpreserved	KONE/COL	8038987	N/A	2015/09/15	
Total Suspended Solids-Low Level	BAL/BAL	8038171	2015/09/15	2015/09/16	

Maxxam ID: NC8414 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2015/09/11
Shipped:
Received: 2015/09/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8041475	N/A	2015/09/17	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8041503	N/A	2015/09/17	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	2.3°C
Package 2	5.0°C
Package 3	4.3°C

Sample NC8380, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample NC8381, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample NC8382, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample NC8414, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8038158	Total Suspended Solids	2015/09/16			103	80 - 120	<1.0	mg/L		
8038171	Total Suspended Solids	2015/09/16			102	80 - 120	<1.0	mg/L		
8038217	Acidity (pH 4.5)	2015/09/15					<0.50	mg/L	NC	20
8038217	Acidity (pH 8.3)	2015/09/15			97	80 - 120	<0.50	mg/L	NC	20
8038318	Acidity (pH 4.5)	2015/09/15					<0.50	mg/L		
8038318	Acidity (pH 8.3)	2015/09/15			97	80 - 120	<0.50	mg/L		
8038493	Alkalinity (PP as CaCO3)	2015/09/15					<0.50	mg/L	NC	20
8038493	Alkalinity (Total as CaCO3)	2015/09/15	98	80 - 120	95	80 - 120	<0.50	mg/L	0.49	20
8038493	Bicarbonate (HCO3)	2015/09/15					<0.50	mg/L	0.49	20
8038493	Carbonate (CO3)	2015/09/15					<0.50	mg/L	NC	20
8038493	Hydroxide (OH)	2015/09/15					<0.50	mg/L	NC	20
8038495	Conductivity	2015/09/15			99	80 - 120	<1.0	uS/cm	2.5	20
8038496	pH	2015/09/15			102	97 - 103			0.51	N/A
8038500	Alkalinity (PP as CaCO3)	2015/09/15					<0.50	mg/L	NC	20
8038500	Alkalinity (Total as CaCO3)	2015/09/15	NC	80 - 120	96	80 - 120	0.61, RDL=0.50	mg/L	0.84	20
8038500	Bicarbonate (HCO3)	2015/09/15					0.74, RDL=0.50	mg/L	0.84	20
8038500	Carbonate (CO3)	2015/09/15					<0.50	mg/L	NC	20
8038500	Hydroxide (OH)	2015/09/15					<0.50	mg/L	NC	20
8038504	Conductivity	2015/09/15			101	80 - 120	<1.0	uS/cm	0.36	20
8038505	pH	2015/09/15			102	97 - 103			0.37	N/A
8038513	Alkalinity (PP as CaCO3)	2015/09/15					<0.50	mg/L	NC	20
8038513	Alkalinity (Total as CaCO3)	2015/09/15			97	80 - 120	0.67, RDL=0.50	mg/L	NC	20
8038513	Bicarbonate (HCO3)	2015/09/15					0.82, RDL=0.50	mg/L	NC	20
8038513	Carbonate (CO3)	2015/09/15					<0.50	mg/L	NC	20
8038513	Hydroxide (OH)	2015/09/15					<0.50	mg/L	NC	20
8038515	Conductivity	2015/09/15			101	80 - 120	<1.0	uS/cm	NC	20
8038516	pH	2015/09/15			102	97 - 103			0.84	N/A
8038979	True Colour	2015/09/16			103	80 - 120	<5.0	Col. Unit	NC	20
8038987	Total Phosphorus (P)	2015/09/15	98	80 - 120	102	80 - 120	<0.0020	mg/L	NC	20
8038989	Dissolved Phosphorus (P)	2015/09/15	98	80 - 120	96	80 - 120	<0.0020	mg/L	NC	20
8039022	Total Ammonia (N)	2015/09/15	99	80 - 120	98	80 - 120	<0.0050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8039053	Nitrate plus Nitrite (N)	2015/09/15	98	80 - 120	103	80 - 120	<0.0020	mg/L	NC	25
8039054	Nitrite (N)	2015/09/15	97	80 - 120	104	80 - 120	<0.0020	mg/L	NC	25
8039488	Total Aluminum (Al)	2015/09/18	108	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
8039488	Total Antimony (Sb)	2015/09/18	106	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8039488	Total Arsenic (As)	2015/09/18	101	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8039488	Total Barium (Ba)	2015/09/18	108	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
8039488	Total Beryllium (Be)	2015/09/18	101	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8039488	Total Bismuth (Bi)	2015/09/18	99	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8039488	Total Boron (B)	2015/09/18					<0.010	mg/L	NC	20
8039488	Total Cadmium (Cd)	2015/09/18	100	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8039488	Total Chromium (Cr)	2015/09/18	106	80 - 120	107	80 - 120	<0.00010	mg/L	NC	20
8039488	Total Cobalt (Co)	2015/09/18	107	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8039488	Total Copper (Cu)	2015/09/18	107	80 - 120	106	80 - 120	<0.000050	mg/L	NC	20
8039488	Total Iron (Fe)	2015/09/18	108	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20
8039488	Total Lead (Pb)	2015/09/18	103	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8039488	Total Lithium (Li)	2015/09/18	99	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8039488	Total Manganese (Mn)	2015/09/18	105	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8039488	Total Molybdenum (Mo)	2015/09/18	100	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8039488	Total Nickel (Ni)	2015/09/18	104	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8039488	Total Phosphorus (P)	2015/09/18					<0.0020	mg/L		
8039488	Total Selenium (Se)	2015/09/18	95	80 - 120	98	80 - 120	<0.000040	mg/L	NC	20
8039488	Total Silicon (Si)	2015/09/18					<0.050	mg/L	NC	20
8039488	Total Silver (Ag)	2015/09/18	103	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8039488	Total Strontium (Sr)	2015/09/18	101	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8039488	Total Thallium (Tl)	2015/09/18	99	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8039488	Total Tin (Sn)	2015/09/18	105	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
8039488	Total Titanium (Ti)	2015/09/18	99	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8039488	Total Uranium (U)	2015/09/18	103	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8039488	Total Vanadium (V)	2015/09/18	104	80 - 120	106	80 - 120	0.00023, RDL=0.00020	mg/L	NC	20
8039488	Total Zinc (Zn)	2015/09/18	107	80 - 120	104	80 - 120	<0.00010	mg/L	9.0	20

Maxxam Job #: B579823
Report Date: 2015/09/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8039488	Total Zirconium (Zr)	2015/09/18					<0.00010	mg/L	NC	20
8039490	Dissolved Aluminum (Al)	2015/09/18	99	80 - 120	99	80 - 120	<0.00050	mg/L	1.7	20
8039490	Dissolved Antimony (Sb)	2015/09/18	95	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8039490	Dissolved Arsenic (As)	2015/09/18	98	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8039490	Dissolved Barium (Ba)	2015/09/18	101	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8039490	Dissolved Beryllium (Be)	2015/09/18	100	80 - 120	99	80 - 120	<0.000010	mg/L	NC	20
8039490	Dissolved Bismuth (Bi)	2015/09/18	102	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8039490	Dissolved Boron (B)	2015/09/18					<0.010	mg/L	NC	20
8039490	Dissolved Cadmium (Cd)	2015/09/18	97	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8039490	Dissolved Chromium (Cr)	2015/09/18	98	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
8039490	Dissolved Cobalt (Co)	2015/09/18	101	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8039490	Dissolved Iron (Fe)	2015/09/18	107	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20
8039490	Dissolved Lead (Pb)	2015/09/18	101	80 - 120	102	80 - 120	0.0000060, RDL=0.0000050	mg/L	NC	20
8039490	Dissolved Lithium (Li)	2015/09/18	101	80 - 120	106	80 - 120	0.00067, RDL=0.00050	mg/L	NC	20
8039490	Dissolved Manganese (Mn)	2015/09/18	99	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8039490	Dissolved Molybdenum (Mo)	2015/09/18	96	80 - 120	94	80 - 120	<0.000050	mg/L	NC	20
8039490	Dissolved Nickel (Ni)	2015/09/18	98	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8039490	Dissolved Phosphorus (P)	2015/09/18					<0.0020	mg/L		
8039490	Dissolved Selenium (Se)	2015/09/18	94	80 - 120	96	80 - 120	<0.000040	mg/L	NC	20
8039490	Dissolved Silicon (Si)	2015/09/18					<0.050	mg/L	NC	20
8039490	Dissolved Silver (Ag)	2015/09/18	93	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8039490	Dissolved Strontium (Sr)	2015/09/18	96	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8039490	Dissolved Thallium (Tl)	2015/09/18	100	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8039490	Dissolved Tin (Sn)	2015/09/18	93	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8039490	Dissolved Titanium (Ti)	2015/09/18	97	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8039490	Dissolved Uranium (U)	2015/09/18	101	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8039490	Dissolved Vanadium (V)	2015/09/18	99	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8039490	Dissolved Zinc (Zn)	2015/09/18	116	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
8039490	Dissolved Zirconium (Zr)	2015/09/18					<0.00010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8039492	Dissolved Aluminum (Al)	2015/09/18	100	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8039492	Dissolved Antimony (Sb)	2015/09/18	99	80 - 120	96	80 - 120	<0.000020	mg/L	NC	20
8039492	Dissolved Arsenic (As)	2015/09/18	99	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8039492	Dissolved Barium (Ba)	2015/09/18	104	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8039492	Dissolved Beryllium (Be)	2015/09/18	97	80 - 120	97	80 - 120	<0.000010	mg/L	NC	20
8039492	Dissolved Bismuth (Bi)	2015/09/18	102	80 - 120	101	80 - 120	0.0000050, RDL=0.0000050	mg/L	NC	20
8039492	Dissolved Boron (B)	2015/09/18					<0.010	mg/L	NC	20
8039492	Dissolved Cadmium (Cd)	2015/09/18	100	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8039492	Dissolved Chromium (Cr)	2015/09/18	99	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
8039492	Dissolved Cobalt (Co)	2015/09/18	103	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8039492	Dissolved Copper (Cu)	2015/09/18	103	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
8039492	Dissolved Iron (Fe)	2015/09/18	106	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20
8039492	Dissolved Lead (Pb)	2015/09/18	101	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8039492	Dissolved Lithium (Li)	2015/09/18	96	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8039492	Dissolved Manganese (Mn)	2015/09/18	101	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8039492	Dissolved Molybdenum (Mo)	2015/09/18	96	80 - 120	92	80 - 120	<0.000050	mg/L	NC	20
8039492	Dissolved Nickel (Ni)	2015/09/18	99	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8039492	Dissolved Phosphorus (P)	2015/09/18					<0.0020	mg/L		
8039492	Dissolved Selenium (Se)	2015/09/18	96	80 - 120	93	80 - 120	<0.000040	mg/L	NC	20
8039492	Dissolved Silicon (Si)	2015/09/18					<0.050	mg/L	NC	20
8039492	Dissolved Silver (Ag)	2015/09/18	99	80 - 120	95	80 - 120	<0.0000050	mg/L	NC	20
8039492	Dissolved Strontium (Sr)	2015/09/18	97	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8039492	Dissolved Thallium (Tl)	2015/09/18	100	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8039492	Dissolved Tin (Sn)	2015/09/18	99	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
8039492	Dissolved Titanium (Ti)	2015/09/18	100	80 - 120	92	80 - 120	<0.00050	mg/L	NC	20
8039492	Dissolved Uranium (U)	2015/09/18	100	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8039492	Dissolved Vanadium (V)	2015/09/18	104	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8039492	Dissolved Zinc (Zn)	2015/09/18	99	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
8039492	Dissolved Zirconium (Zr)	2015/09/18					<0.00010	mg/L	NC	20
8040034	Dissolved Aluminum (Al)	2015/09/18	107	80 - 120	105	80 - 120	<0.00050	mg/L	6.7	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8040034	Dissolved Antimony (Sb)	2015/09/18	107	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8040034	Dissolved Arsenic (As)	2015/09/18	107	80 - 120	102	80 - 120	<0.000020	mg/L	15	20
8040034	Dissolved Barium (Ba)	2015/09/18	NC	80 - 120	107	80 - 120	<0.000020	mg/L	0.55	20
8040034	Dissolved Beryllium (Be)	2015/09/18	104	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8040034	Dissolved Bismuth (Bi)	2015/09/18	107	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8040034	Dissolved Boron (B)	2015/09/18					<0.010	mg/L	NC	20
8040034	Dissolved Cadmium (Cd)	2015/09/18	101	80 - 120	103	80 - 120	<0.0000050	mg/L	10	20
8040034	Dissolved Chromium (Cr)	2015/09/18	106	80 - 120	108	80 - 120	<0.00010	mg/L	NC	20
8040034	Dissolved Cobalt (Co)	2015/09/18	102	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8040034	Dissolved Copper (Cu)	2015/09/18	100	80 - 120	106	80 - 120	<0.000050	mg/L	15	20
8040034	Dissolved Iron (Fe)	2015/09/18	97	80 - 120	110	80 - 120	<0.0010	mg/L	4.9	20
8040034	Dissolved Lead (Pb)	2015/09/18	109	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8040034	Dissolved Lithium (Li)	2015/09/18	102	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8040034	Dissolved Manganese (Mn)	2015/09/18	NC	80 - 120	104	80 - 120	<0.000050	mg/L	9.9	20
8040034	Dissolved Molybdenum (Mo)	2015/09/18	NC	80 - 120	98	80 - 120	<0.000050	mg/L	3.5	20
8040034	Dissolved Nickel (Ni)	2015/09/18	100	80 - 120	104	80 - 120	<0.000020	mg/L	12	20
8040034	Dissolved Phosphorus (P)	2015/09/18					<0.0020	mg/L	NC	20
8040034	Dissolved Selenium (Se)	2015/09/18	103	80 - 120	97	80 - 120	<0.000040	mg/L	8.9	20
8040034	Dissolved Silicon (Si)	2015/09/18					<0.050	mg/L	1.7	20
8040034	Dissolved Silver (Ag)	2015/09/18	102	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8040034	Dissolved Strontium (Sr)	2015/09/18	NC	80 - 120	100	80 - 120	<0.000050	mg/L	9.4	20
8040034	Dissolved Thallium (Tl)	2015/09/18	106	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8040034	Dissolved Tin (Sn)	2015/09/18	104	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
8040034	Dissolved Titanium (Ti)	2015/09/18	104	80 - 120	95	80 - 120	<0.00050	mg/L	NC	20
8040034	Dissolved Uranium (U)	2015/09/18	110	80 - 120	105	80 - 120	<0.0000020	mg/L	2.6	20
8040034	Dissolved Vanadium (V)	2015/09/18	105	80 - 120	109	80 - 120	<0.00020	mg/L	NC	20
8040034	Dissolved Zinc (Zn)	2015/09/18	98	80 - 120	101	80 - 120	<0.00010	mg/L	8.8	20
8040034	Dissolved Zirconium (Zr)	2015/09/18					<0.00010	mg/L	NC	20
8040314	Dissolved Chloride (Cl)	2015/09/16	104	80 - 120	101	80 - 120	<0.50	mg/L	NC	20
8040315	Dissolved Sulphate (SO4)	2015/09/16	101	80 - 120	96	80 - 120	<0.50	mg/L	NC	20
8040317	Dissolved Chloride (Cl)	2015/09/16	NC	80 - 120	103	80 - 120	<0.50	mg/L	1.9	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8040318	Dissolved Sulphate (SO4)	2015/09/16	NC	80 - 120	99	80 - 120	<0.50	mg/L	0.65	20
8040540	Total Aluminum (Al)	2015/09/17	NC	80 - 120	109	80 - 120	<0.00050	mg/L	8.4	20
8040540	Total Antimony (Sb)	2015/09/17	99	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8040540	Total Arsenic (As)	2015/09/17	97	80 - 120	102	80 - 120	<0.000020	mg/L	0.42	20
8040540	Total Barium (Ba)	2015/09/17	100	80 - 120	108	80 - 120	<0.000020	mg/L	0.69	20
8040540	Total Beryllium (Be)	2015/09/17	96	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8040540	Total Bismuth (Bi)	2015/09/17	96	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8040540	Total Boron (B)	2015/09/17					<0.010	mg/L	NC	20
8040540	Total Cadmium (Cd)	2015/09/17	90	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8040540	Total Chromium (Cr)	2015/09/17	98	80 - 120	106	80 - 120	<0.00010	mg/L	NC	20
8040540	Total Cobalt (Co)	2015/09/17	101	80 - 120	110	80 - 120	<0.0000050	mg/L	2.6	20
8040540	Total Copper (Cu)	2015/09/17	100	80 - 120	110	80 - 120	<0.000050	mg/L	0.43	20
8040540	Total Iron (Fe)	2015/09/17	NC	80 - 120	111	80 - 120	<0.0010	mg/L	5.8	20
8040540	Total Lead (Pb)	2015/09/17	98	80 - 120	109	80 - 120	<0.0000050	mg/L	4.3	20
8040540	Total Lithium (Li)	2015/09/17	93	80 - 120	107	80 - 120	<0.00050	mg/L	NC	20
8040540	Total Manganese (Mn)	2015/09/17	NC	80 - 120	106	80 - 120	<0.000050	mg/L	0.51	20
8040540	Total Molybdenum (Mo)	2015/09/17	94	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8040540	Total Nickel (Ni)	2015/09/17	96	80 - 120	105	80 - 120	<0.000020	mg/L	0.41	20
8040540	Total Phosphorus (P)	2015/09/17					<0.0020	mg/L		
8040540	Total Selenium (Se)	2015/09/17	92	80 - 120	97	80 - 120	<0.000040	mg/L	NC	20
8040540	Total Silicon (Si)	2015/09/17					<0.050	mg/L	2.6	20
8040540	Total Silver (Ag)	2015/09/17	100	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8040540	Total Strontium (Sr)	2015/09/17	NC	80 - 120	99	80 - 120	<0.000050	mg/L	2.0	20
8040540	Total Thallium (Tl)	2015/09/17	93	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
8040540	Total Tin (Sn)	2015/09/17	94	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8040540	Total Titanium (Ti)	2015/09/17	72 (1)	80 - 120	99	80 - 120	<0.00050	mg/L	8.5	20
8040540	Total Uranium (U)	2015/09/17	101	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
8040540	Total Vanadium (V)	2015/09/17	103	80 - 120	111	80 - 120	<0.00020	mg/L	NC	20
8040540	Total Zinc (Zn)	2015/09/17	94	80 - 120	105	80 - 120	<0.00010	mg/L	0.88	20
8040540	Total Zirconium (Zr)	2015/09/17					<0.00010	mg/L	NC	20
8040936	True Colour	2015/09/16			106	80 - 120	<5.0	Col. Unit	2.2	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8041430	Strong Acid Dissoc. Cyanide (CN)	2015/09/17	106	80 - 120	100	80 - 120	<0.00050	mg/L	3.6	20
8041475	Strong Acid Dissoc. Cyanide (CN)	2015/09/17	102	80 - 120	103	80 - 120	0.00068, RDL=0.00050	mg/L	NC	20
8041503	Weak Acid Dissoc. Cyanide (CN)	2015/09/17	106	80 - 120	105	80 - 120	0.00079, RDL=0.00050	mg/L	NC	20
8041939	Fluoride (F)	2015/09/17	108	80 - 120	96	80 - 120	0.011, RDL=0.010	mg/L	NC	20
8042082	Dissolved Organic Carbon (C)	2015/09/18	111	80 - 120	96	80 - 120	<0.50	mg/L	2.2	20
8042635	Total Mercury (Hg)	2015/09/18	105	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
8042641	Dissolved Mercury (Hg)	2015/09/18	103	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8042926	Dissolved Mercury (Hg)	2015/09/18	95	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8045118	Total Mercury (Hg)	2015/09/21	94	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8045272	Dissolved Copper (Cu)	2015/09/21			98	80 - 120	<0.000050	mg/L		
8046091	Dissolved Aluminum (Al)	2015/09/22			102	80 - 120	<0.00050	mg/L		
8046091	Dissolved Silicon (Si)	2015/09/22					<0.050	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B579823
Report Date: 2015/09/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Name Data Validation Coordinator

Signature Redacted

Name Redacted Inorganic department.

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08411728

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where a...)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:

Regulatory Criteria		Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil	[ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify)	[ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water	[ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2	NC8377	2015/09/11	14:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
2	KZ-7	NC 8378	2015/09/11	08:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
3	KZ-9	NC8379	2015/09/10	16:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
4	KZ-13	NC8380	2015/09/11	11:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
5	KZ-15	NC8381	2015/09/09	14:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
6	KZ-16	NC8382	2015/09/09	16:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
7	KZ-17	NC8383	2015/09/09	17:08	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
8	KZ-19	NC8384	2015/09/08	14:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
9	KZ-21	NC8385	2015/09/09	12:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
10	KZ-22	NC8386	2015/09/09	09:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
		4, 2, 1
		5, 4, 6
		5, 3, 5

COOLING MEDIA PRESENT Y / N

COMMENTS

B579823

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2015/09/12	15:00	Signature Redacted	2015/09/14	10:25	

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CU ... RECORD

08411735

BBY FCD-00077/05

Invoice Information		Report Information (if differs from invoice)		Project Information (where ap...	
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:	
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah
Phone:		Phone:	(867) 668-6463	Site #:	
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted

Turnaround Time (TAT) Required

[x] Regular TAT 5 days (Most analyses)

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Rush TAT (Surcharges will be applied)

[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days

Date Required:

Rush Confirmation #:

Regulatory Criteria

[ ] BC CSR Soil [ ] BC CSR Water
[ ] CCME (Specify) [ ] Other (Specify)
[ ] Drinking Water [ ] BC Water Quality

Special Instructions

[ ] Return Cooler
[ ] Ship Sample Bottles (Please Specify)
USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

LABORATORY USE ONLY

CUSTODY SEAL Y / N — Present / Intact

COOLER TEMPERATURES: 4, 2, 1 | 5, 4, 6 | 5, 3, 5

COOLING MEDIA PRESENT Y / N

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-26	NC 8411	2015/09/08	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
2	KZ-28	NC 8412	2015/09/09	10:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
3	Trip Blank	NC 8413	N/A	N/A	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
4	KZ-15	NC 8414	2015/09/11	17:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Cyanide preserved 2015/09/12 @ 14:45, DOC Filtered & pres. same time.
5																					
6																					
7																					
8																					
9																					
10																					

B579823

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2015/09/12	15:00	Signature Redacted	2015/09/14	10:25	

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08411728

BBY FCD-00077/05

Invoice Information	Report Information (if differs from invoice)	Project Information (where a...	Turnaround Time (TAT) Required
Company Name: BMC MINERALS LTD.	Company Name: ALEXCO ENVIRONMENTAL	Quotation #: 850743	x Regular TAT 5 days (Most analyses)
Contact Name:	Contact Name: KAI WOLOSHYN	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 580-1130 WEST PENDER ST	Address: UNIT 3 151 INDUSTRIAL RD	Project #: BMC-15-01	Rush TAT (Surcharges will be applied)
Vancouver, BC PC: V6E 4A4	Whitehorse, YK PC: V1A 2V3	Site Location: Kudz Ze Kayah	Same Day 2 Days
Phone:	Phone: (867) 668-6483	Site #:	1 Day 3 Days
Email:	Email: kwoloshyn@alexcoresource.com	Sampled By: Signature	Date Required:

Regulatory Criteria	Special Instructions	Analysis Requested	Rush Confirmation #:
BC CSR Soil / BC CSR Water	Return Cooler		
COVS (Specify) / Other (Specify)	Ship Sample Bottles (Please Specify)		
Drinking Water / BC Water Quality	USE SCENARIO # 12485		

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	AMMONIA-N (T, SO4, NO2, NO3)	AMMONIA	CYANIDE (WAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		2015/09/11	14:35	Water	X	X	X	X	X	X	X	X	X	X	X	X	X				12	
2	KZ-7		2015/09/11	08:20	Water	X	X	X	X	X	X	X	X	X	X	X	X	X				12	
3	KZ-9		2015/09/10	16:45	Water	X	X	X	X	X	X	X	X	X	X	X	X	X				12	
4	KZ-13		2015/09/11	11:25	Water	X	X	X	X	X	X	X	X	X	X	X	X	X				12	
5	KZ-15		2015/09/09	19:50	Water	X	X	X	X	X	X	X	X	X	X	X	X	X				12	
6	KZ-16		2015/09/09	16:00	Water	X	X	X	X	X	X	X	X	X	X	X	X	X				12	
7	KZ-17		2015/09/09	17:08	Water	X	X	X	X	X	X	X	X	X	X	X	X	X				12	
8	KZ-19		2015/09/08	14:45	Water	X	X	X	X	X	X	X	X	X	X	X	X	X				12	
9	KZ-21		2015/09/09	12:30	Water	X	X	X	X	X	X	X	X	X	X	X	X	X				12	
10	KZ-22		2015/09/09	07:40	Water	X	X	X	X	X	X	X	X	X	X	X	X	X				12	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
		4.2.1
		5.4.6
		5.5.5

COOLING MEDIA PRESENT: Y / N

COMMENTS

B579823

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2015/09/12	15:00	Signature Redacted	2015/09/14	10:25	

maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-6566

CHAIN OF CU[illegible] RECORD

08411735

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where ap[illegible])		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[X] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	330-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:

Regulatory Criteria		Special Instructions	Analysis Requested	Rush Confirmation #:
[ ] BC CSR Soil	[ ] BC CSR Water	[ ] Return Cooler		
[ ] COMs (Specify)	[ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)		
[ ] Drinking Water	[ ] BC Water Quality	USE SCENARIO # 12485		

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

LABORATORY USE ONLY

CUSTODY SEAL Y / N Present	Intact	COOLER TEMPERATURES
		4, 2, 1
		5, 4, 6
		5, 3, 8

COOLING MEDIA PRESENT Y / N

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-26		2015/09/08	14:00	Water	X	X	X	X	X	X	X	X	X	X	X	X	X	12		
2	KZ-28		2015/09/07	10:45	Water	X	X	X	X	X	X	X	X	X	X	X	X	X	12		
3	Trip Blank		N/A	N/A	Water	X	X	X	X	X	X	X	X	X	X	X	X	X	12		
4	KZ-15		2015/09/11	17:45	Water	X	X	X	X	X	X	X	X	X	X	X	X	X	12		Cyanide preserved 2015/09/12 w/ 14:45 DEC filtered & pH.
5																					same time.
6																					
7																					
8																					
9																					
10																					

B579823

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2015/09/12	15:00	Signature Redacted	2015/09/14	10:25	

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC #: 08411728

BBY FCD-00077/05

Page 1 2

Invoice Information	Report Information (if differs from invoice)	Project Information (where a...)	Turnaround Time (TAT) Required
Company Name: BMC MINERALS LTD.	Company Name: ALEXCO ENVIRONMENTAL	Quotation #: B50743	[X] Regular TAT 5 days (Most analyses)
Contact Name:	Contact Name: KAI WOLOSHYN	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 830-1130 WEST PENDER ST	Address: UNIT 3 151 INDUSTRIAL RD	Project #: BMC-15-01	Rush TAT (Surcharges will be applied)
Vancouver, BC PC: V6E 4A4	Whitehorse, YK PC: V1A 2Y3	Site Location: Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:	Phone: (867) 668-6483	Site #:	
Email:	Email: kwoloshyn@alexcoresource.com	Sampled By: Signature Redacted	Date Required:

Regulatory Criteria	Special Instructions	Analysis Requested	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water [ ] CCME (Specify) [ ] Other (Specify) [ ] Drinking Water [ ] BC Water Quality	[ ] Return Cooler [ ] Ship Sample Bottles (Please Specify) USE SCENARIO # 12885	TOTAL LOW LEVEL METALS INCL. MERCURY; DISSOLVED LOW LEVEL METALS INCL. MERCURY; LOW LEVEL TSS; ANIONS (CL, F, SO4, NO2, NO3); ALKALINITY; CYANIDE (SAD & WAD); CYANIDE ACIDITY; pH; ALKALINITY & ACIDITY; TRUE COLOR; DOC; TOTAL PHOSPHORUS - LOW LEVEL; DISSOLVED PHOSPHORUS - LOW LEVEL; # OF CONTAINERS SUBMITTED; HOLD - DO NOT ANALYZE	LABORATORY USE ONLY

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	# OF CONTAINERS SUBMITTED	CUSTODY SEAL Present	CUSTODY SEAL Intact	COOLER TEMPERATURES
1	KZ-2	NC8377	2015/09/11	14:35	Water	12			4, 2, 1
2	KZ-7	NC8378	2015/09/11	08:20	Water	12			5, 4, 6
3	KZ-9	NC8379	2015/09/10	16:45	Water	12			5, 3, 5
4	KZ-13	NC8380	2015/09/11	11:25	Water	12			
5	KZ-15	NC8381	2015/09/09	14:50	Water	12			
6	KZ-16	NC8382	2015/09/09	16:00	Water	12			
7	KZ-17	NC8383	2015/09/09	17:08	Water	12			
8	KZ-19	NC8384	2015/09/08	18:45	Water	12			
9	KZ-21	NC8385	2015/09/09	12:30	Water	12			
10	KZ-22	NC8386	2015/09/09	09:40	Water	12			

COOLING MEDIA PRESENT: Y / N

COMMENTS

13798 23

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2015/09/12	15:00	Signature Redacted	2015/09/14	10:25	

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CU ...RECORD

08411735

BBY FCD-00077/05

Page 2 2

Invoice Information	Report Information (if differs from invoice)	Project Information (where ap...)	Turnaround Time (TAT) Required
Company Name: BMC MINERALS LTD.	Company Name: ALEXCO ENVIRONMENTAL	Quotation #: B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:	Contact Name: KAI WOLOSHYN	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 550-1130 WEST PENDER ST	Address: UNIT 3 151 INDUSTRIAL RD	Project #: BMC-15-01	Rush TAT (Surcharges will be applied)
Vancouver, BC PC: V6E 4A4	Whitehorse, YK PC: V1A 2V3	Site Location: Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
E-Mail:	Phone: (867) 668-6463	Site #:	Date Required:
Email:	Email: kwoloshyn@alexcoresource.com	Sampled By: Signature Redacted	

Regulatory Criteria	Special Instructions	Analysis Requested	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler		LABORATORY USE ONLY
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)		CUSTODY SEAL Y / N; COOLER TEMPERATURES (Present / Intact)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485		4, 2, 1
SAMPLES MUST BE KEPT COOL (< 10 C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM			5, 4, 6
			5, 3, 5
			COOLING MEDIA PRESENT Y / N

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-26	NC 8411	2015/09/09	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
2	KZ-28	NC 8412	2015/09/09	10:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
3	Trip Blank	NC 8413	N/A	N/A	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
4	KZ-15	NC 8414	2015/09/11	17:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Cyanide preserved 2015/09/12 @ 9:15, DOC filtered & pres.
5																					same time.
6																					
7																					
8																					
9																					
10																					

B579823

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2015/09/12	15:00	Signature Redacted	2015/09/14	10:25	

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08411757

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/09/17
Report #: R2043350
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B580250
Received: 2015/09/15, 10:10

Sample Matrix: Water
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Chlorophyll A (water)(sin)	10	2015/09/16	2015/09/17	BBY6SOP-00002	SM 22 10200 H m

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B580250
Report Date: 2015/09/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		ND1071	ND1072	ND1073	ND1074	ND1075	ND1076	ND1077		
Sampling Date		2015/09/11 14:35	2015/09/11 08:20	2015/09/10 16:45	2015/09/11 11:25	2015/09/09 14:50	2015/09/10 16:00	2015/09/09 17:08		
COC Number		08411757	08411757	08411757	08411757	08411757	08411757	08411757		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Parameter										
Chlorophyll a	ug/L	0.59	1.14	0.81	1.11	0.67	<0.50	1.86	0.50	8038919
RDL = Reportable Detection Limit										

Maxxam ID		ND1078	ND1079	ND1080		
Sampling Date		2015/09/11 18:00	2015/09/09 12:30	2015/09/09 09:40		
COC Number		08411757	08411757	08411757		
	UNITS	KZ-26	KZ-21	KZ-22	RDL	QC Batch
Parameter						
Chlorophyll a	ug/L	1.17	1.33	1.76	0.50	8038919
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B580250
Report Date: 2015/09/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: ND1071 **Collected:** 2015/09/11
Sample ID: KZ-2 **Shipped:**
Matrix: Water **Received:** 2015/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chlorophyll A (water)(sin)	SPEC/COL	8038919	2015/09/16	2015/09/17	Name Redacted

Maxxam ID: ND1072 **Collected:** 2015/09/11
Sample ID: KZ-7 **Shipped:**
Matrix: Water **Received:** 2015/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chlorophyll A (water)(sin)	SPEC/COL	8038919	2015/09/16	2015/09/17	Name Redacted

Maxxam ID: ND1073 **Collected:** 2015/09/10
Sample ID: KZ-9 **Shipped:**
Matrix: Water **Received:** 2015/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chlorophyll A (water)(sin)	SPEC/COL	8038919	2015/09/16	2015/09/17	Name Redacted

Maxxam ID: ND1074 **Collected:** 2015/09/11
Sample ID: KZ-13 **Shipped:**
Matrix: Water **Received:** 2015/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chlorophyll A (water)(sin)	SPEC/COL	8038919	2015/09/16	2015/09/17	Name Redacted

Maxxam ID: ND1075 **Collected:** 2015/09/09
Sample ID: KZ-15 **Shipped:**
Matrix: Water **Received:** 2015/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chlorophyll A (water)(sin)	SPEC/COL	8038919	2015/09/16	2015/09/17	Name Redacted

Maxxam ID: ND1076 **Collected:** 2015/09/10
Sample ID: KZ-16 **Shipped:**
Matrix: Water **Received:** 2015/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chlorophyll A (water)(sin)	SPEC/COL	8038919	2015/09/16	2015/09/17	Name Redacted

Maxxam ID: ND1077 **Collected:** 2015/09/09
Sample ID: KZ-17 **Shipped:**
Matrix: Water **Received:** 2015/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chlorophyll A (water)(sin)	SPEC/COL	8038919	2015/09/16	2015/09/17	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B580250
Report Date: 2015/09/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: ND1078
Sample ID: KZ-26
Matrix: Water

Collected: 2015/09/11
Shipped:
Received: 2015/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chlorophyll A (water)(sin)	SPEC/COL	8038919	2015/09/16	2015/09/17	Name

Maxxam ID: ND1079
Sample ID: KZ-21
Matrix: Water

Collected: 2015/09/09
Shipped:
Received: 2015/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chlorophyll A (water)(sin)	SPEC/COL	8038919	2015/09/16	2015/09/17	Name Redacted

Maxxam ID: ND1080
Sample ID: KZ-22
Matrix: Water

Collected: 2015/09/09
Shipped:
Received: 2015/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chlorophyll A (water)(sin)	SPEC/COL	8038919	2015/09/16	2015/09/17	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B580250
Report Date: 2015/09/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.3°C

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B580250
Report Date: 2015/09/17

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Spiked Blank		Method Blank	
QC Batch	**Parameter**	**Date**	**% Recovery**	**QC Limits**	**Value**	**UNITS**
8038919	Chlorophyll a	2015/09/17	108	80 - 120	<0.50	ug/L

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B580250
Report Date: 2015/09/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Name Data Validation Coordinator

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CU[illegible]

08411757

BBY FCD-00077/05

Page ____ of ____

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required	
Company Name:	BMC Minerals	Company Name:	Alexco Environmental	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)	
Contact Name:		Contact Name:	Kai Woloshyn	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS	
Address:	530-1130 WEST PENDER ST	Address:	Unit 3 151 Industrial Road	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)	
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: Y1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days	
Phone:		Phone:	867-668-6463	Site #:		[ ] 1 Day [ ] 3 Days	
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:	

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality		

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	Chlorophyll-a analysis	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	LABORATORY USE ONLY: CUSTODY SEAL Y (N) Present / Intact; COOLER TEMPERATURES	COMMENTS
1	KZ-2	ND1071	11/09/2015	14:35	Chlorophyll-a	x	1		NA / 4.3 / 6	Frozen, two samples in each bag
2	KZ-7	ND1072	11/09/2015	8:20	Chlorophyll-a	x	1			Frozen, two samples in each bag
3	KZ-9	ND1073	10/09/2015	16:45	Chlorophyll-a	x	1			Frozen, two samples in each bag
4	KZ-13	ND1074	11/09/2015	11:25	Chlorophyll-a	x	1			Frozen, two samples in each bag
5	KZ-15	ND1075	09/09/2015	14:50	Chlorophyll-a	x	1			Frozen, two samples in each bag
6	KZ-16	ND1076	10/09/2015	16:00	Chlorophyll-a	x	1			Frozen, two samples in each bag
7	KZ-17	ND1077	09/09/2015	17:08	Chlorophyll-a	x	1			Frozen, two samples in each bag
	KZ-26	ND1078	11/09/2015	18:00	Chlorophyll-a	x	1			Frozen, two samples in each bag
9	KZ-21	ND1079	09/09/2015	12:30	Chlorophyll-a	x	1			Frozen, two samples in each bag
10	KZ-22	ND1080	09/09/2015	9:40	Chlorophyll-a	x	1			Frozen, two samples in each bag

B580250

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	14/09/2015		Signature Redacted	2015/09/15	10:10	B580250

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08412767, 08412768

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/10/26
Report #: R2065002
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B591947
Received: 2015/10/17, 08:40

Sample Matrix: Water
Samples Received: 18

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	18	N/A	2015/10/20	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	10	2015/10/20	2015/10/20	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	8	2015/10/20	2015/10/21	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	17	N/A	2015/10/19	BBY6SOP-00011	SM 22 4500-Cl- G m
Chloride by Automated Colourimetry	1	N/A	2015/10/20	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	13	N/A	2015/10/21	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	13	N/A	2015/10/21	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	18	N/A	2015/10/17	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	12	N/A	2015/10/19	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2015/10/19	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	10	N/A	2015/10/20	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	8	N/A	2015/10/21	BBY6SOP-00026	SM 22 2510 B m
Fluoride	18	N/A	2015/10/19	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	10	N/A	2015/10/20	BBY7SOP-00002	EPA 6020a R1 m
Hardness Total (calculated as CaCO3)	3	N/A	2015/10/21	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	18	N/A	2015/10/21	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	13	N/A	2015/10/22	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	13	2015/10/22	2015/10/22	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	18	N/A	2015/10/21	BBY WI-00033	SM 22 1030E
Sum of cations, anions	10	N/A	2015/10/20	Calc	
Sum of cations, anions	8	N/A	2015/10/21	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	18	N/A	2015/10/21	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	4	N/A	2015/10/20	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	14	N/A	2015/10/21	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Digested LL (total)	3	2015/10/19	2015/10/20	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	10	N/A	2015/10/20	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	3	N/A	2015/10/21	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	10	N/A	2015/10/19	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	13	N/A	2015/10/19	BBY6SOP-00009	SM 22 4500-NH3- G m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08412767, 08412768

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/10/26
Report #: R2065002
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B591947
Received: 2015/10/17, 08:40

Sample Matrix: Water
Samples Received: 18

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrate+Nitrite (N) (low level)	18	N/A	2015/10/17	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	18	N/A	2015/10/17	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	18	N/A	2015/10/17	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	17	N/A	2015/10/19	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	10	N/A	2015/10/20	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (2)	8	N/A	2015/10/21	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	17	N/A	2015/10/19	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	1	N/A	2015/10/20	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - FF/FP	12	2015/10/19	2015/10/20	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2015/10/19	2015/10/20	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	13	N/A	2015/10/20	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	8	2015/10/20	2015/10/21	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	5	2015/10/21	2015/10/21	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NK2704		NK2705		NK2706		
Sampling Date		2015/10/15 12:50		2015/10/14 10:20		2015/10/15 10:15		
COC Number		08412767		08412767		08412767		
	UNITS	KZ-2	QC Batch	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	8081225	<0.50	8081302	<0.50	0.50	8081225
Acidity (pH 8.3)	mg/L	<0.50	8081225	<0.50	8081302	<0.50	0.50	8081225
Calculated Parameters								
Anion Sum	meq/L	2.1	8078300	3.5	8078300	3.5	N/A	8078300
Cation Sum	meq/L	2.1	8078300	3.6	8078300	3.6	N/A	8078300
Filter and HNO3 Preservation	N/A	LAB	8079293	LAB	8079293	LAB	N/A	8079293
Ion Balance	N/A	1.0	8078299	1.0	8078299	1.0	0.010	8078299
Nitrate (N)	mg/L	0.125	8077902	0.101	8077902	0.139	0.0020	8077902
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8082911	0.00054	8082911	<0.00050	0.00050	8082911
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8082961	0.00058	8082961	0.00053	0.00050	8082961
Fluoride (F)	mg/L	0.035	8081096	0.100	8081096	0.064	0.010	8081096
Dissolved Organic Carbon (C)	mg/L	1.15	8079601	2.41	8079598	1.59	0.50	8079601
Alkalinity (Total as CaCO3)	mg/L	56.6	8080916	141	8080938	139	0.50	8080938
Alkalinity (PP as CaCO3)	mg/L	<0.50	8080916	<0.50	8080938	<0.50	0.50	8080938
Bicarbonate (HCO3)	mg/L	69.1	8080916	172	8080938	170	0.50	8080938
Carbonate (CO3)	mg/L	<0.50	8080916	<0.50	8080938	<0.50	0.50	8080938
Hydroxide (OH)	mg/L	<0.50	8080916	<0.50	8080938	<0.50	0.50	8080938
Anions								
Dissolved Sulphate (SO4)	mg/L	43.7	8079926	32.4	8079926	32.2	0.50	8079926
Dissolved Chloride (Cl)	mg/L	<0.50	8079924	0.54	8079924	0.56	0.50	8079924
MISCELLANEOUS								
True Colour	Col. Unit	<5.0	8078359	10.6	8078359	8.6	5.0	8078359
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020	8079870	<0.0020	8079870	0.0026	0.0020	8079870
Total Ammonia (N)	mg/L	0.0054 (1)	8078363	0.0091 (1)	8078363	0.0185 (1)	0.0050	8078363
Nitrate plus Nitrite (N)	mg/L	0.125	8078342	0.101	8078342	0.139	0.0020	8078342
Nitrite (N)	mg/L	<0.0020	8078343	<0.0020	8078343	<0.0020	0.0020	8078343
Total Phosphorus (P)	mg/L	0.0022 (1)	8079874	0.0064 (1)	8079874	0.0038 (1)	0.0020	8079874
Physical Properties								
Conductivity	uS/cm	220	8080922	339	8080935	337	1.0	8080935
pH	pH	7.87	8080924	8.15	8080929	8.05	N/A	8080929

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NK2704		NK2705		NK2706		
Sampling Date		2015/10/15 12:50		2015/10/14 10:20		2015/10/15 10:15		
COC Number		08412767		08412767		08412767		
	UNITS	KZ-2	QC Batch	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8082414	<1.0	8080854	1.5	1.0	8082414
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NK2707	NK2708		NK2709		NK2710		
Sampling Date		2015/10/14 12:30	2015/10/14 14:20		2015/10/14 15:20		2015/10/14 15:00		
COC Number		08412767	08412767		08412767		08412767		
	UNITS	KZ-13	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Misc. Inorganics									
Acidity (pH 4.5)	mg/L	<0.50	<0.50	8081302	<0.50	8081225	<0.50	0.50	8081302
Acidity (pH 8.3)	mg/L	<0.50	<0.50	8081302	<0.50	8081225	<0.50	0.50	8081302
Calculated Parameters									
Anion Sum	meq/L	1.6	3.6	8078300	3.3	8078300	3.9	N/A	8078300
Cation Sum	meq/L	1.6	3.6	8078300	3.4	8078300	3.9	N/A	8078300
Filter and HNO3 Preservation	N/A	LAB	LAB	8079293	LAB	8079293	LAB	N/A	8079293
Ion Balance	N/A	0.99	1.0	8078299	1.0	8078299	1.0	0.010	8078299
Nitrate (N)	mg/L	0.0581	0.135	8077902	0.151	8077902	0.0963	0.0020	8077902
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	8082911	0.00056	8082911	<0.00050	0.00050	8082911
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	8082961	<0.00050	8082961	<0.00050	0.00050	8082961
Fluoride (F)	mg/L	0.039	0.069	8081096	0.055	8081096	0.089	0.010	8081096
Dissolved Organic Carbon (C)	mg/L	3.16	1.06	8079598	1.38	8079598	1.34	0.50	8079601
Alkalinity (Total as CaCO3)	mg/L	63.3	146	8080938	137	8080916	161	0.50	8080938
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	8080938	<0.50	8080916	<0.50	0.50	8080938
Bicarbonate (HCO3)	mg/L	77.3	178	8080938	167	8080916	197	0.50	8080938
Carbonate (CO3)	mg/L	<0.50	<0.50	8080938	<0.50	8080916	<0.50	0.50	8080938
Hydroxide (OH)	mg/L	<0.50	<0.50	8080938	<0.50	8080916	<0.50	0.50	8080938
Anions									
Dissolved Sulphate (SO4)	mg/L	13.6	29.3	8079926	26.8	8079926	31.7	0.50	8079926
Dissolved Chloride (Cl)	mg/L	0.53	0.55	8079924	<0.50	8079924	0.60	0.50	8079924
MISCELLANEOUS									
True Colour	Col. Unit	15.5	<5.0	8078359	<5.0	8078359	6.5	5.0	8078359
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0038	8079870	<0.0020	8079870	0.0026	0.0020	8079870
Total Ammonia (N)	mg/L	0.0134 (1)	0.0101 (1)	8078363	0.0111 (1)	8078363	0.0210 (1)	0.0050	8078363
Nitrate plus Nitrite (N)	mg/L	0.0581	0.135	8078342	0.151	8078342	0.0963	0.0020	8078342
Nitrite (N)	mg/L	<0.0020	<0.0020	8078343	<0.0020	8078343	<0.0020	0.0020	8078343
Total Phosphorus (P)	mg/L	0.0026 (1)	0.0076 (1)	8079874	<0.0020 (1)	8079874	0.0047 (1)	0.0020	8079874
Physical Properties									
Conductivity	uS/cm	156	335	8080935	319	8080922	364	1.0	8080935
pH	pH	7.89	8.21	8080929	8.09	8080924	8.25	N/A	8080929

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NK2707	NK2708		NK2709		NK2710		
Sampling Date		2015/10/14 12:30	2015/10/14 14:20		2015/10/14 15:20		2015/10/14 15:00		
COC Number		08412767	08412767		08412767		08412767		
	UNITS	KZ-13	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	1.0	<1.0	8080854	<1.0	8080854	<1.0	1.0	8080854
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NK2711	NK2712		NK2713		NK2724		
Sampling Date		2015/10/15 13:00	2015/10/15 15:20		2015/10/14 16:45		2015/10/15 16:45		
COC Number		08412767	08412767		08412767		08412768		
	UNITS	KZ-19	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Misc. Inorganics									
Acidity (pH 4.5)	mg/L	<0.50	<0.50	8081225	<0.50	8081225	<0.50	0.50	8081225
Acidity (pH 8.3)	mg/L	<0.50	<0.50	8081225	<0.50	8081225	<0.50	0.50	8081225
Calculated Parameters									
Anion Sum	meq/L	0.022	5.0	8078300	4.4	8078300	4.7	N/A	8078300
Cation Sum	meq/L	0.0012	5.2	8078300	4.5	8078300	4.6	N/A	8078300
Filter and HNO3 Preservation	N/A	LAB	LAB	8079293	LAB	8079293	LAB	N/A	8079293
Ion Balance	N/A	0.054	1.0	8078299	1.0	8078299	0.98	0.010	8078299
Nitrate (N)	mg/L	0.0023	0.0253	8077902	0.0772	8077902	0.0565	0.0020	8077902
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	8082911	<0.00050	8082911	<0.00050	0.00050	8082940
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	8082961	<0.00050	8082961	<0.00050	0.00050	8082961
Fluoride (F)	mg/L	<0.010	0.150	8081096	0.110	8081096	0.110	0.010	8081096
Dissolved Organic Carbon (C)	mg/L	<0.50	4.74	8079598	2.88	8079598	4.12	0.50	8079598
Alkalinity (Total as CaCO3)	mg/L	1.11	207	8080916	182	8080916	195	0.50	8080916
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	8080916	1.66	8080916	1.43	0.50	8080916
Bicarbonate (HCO3)	mg/L	1.35	253	8080916	218	8080916	234	0.50	8080916
Carbonate (CO3)	mg/L	<0.50	<0.50	8080916	1.99	8080916	1.72	0.50	8080916
Hydroxide (OH)	mg/L	<0.50	<0.50	8080916	<0.50	8080916	<0.50	0.50	8080916
Anions									
Dissolved Sulphate (SO4)	mg/L	<0.50	41.9	8079926	35.6	8079926	36.9	0.50	8079926
Dissolved Chloride (Cl)	mg/L	<0.50	0.70	8079924	0.67	8079924	0.73	0.50	8079924
MISCELLANEOUS									
True Colour	Col. Unit	<5.0	23.4	8078359	13.7	8078359	12.6	5.0	8078359
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0049	8079870	0.0030	8079870	<0.0020	0.0020	8079870
Total Ammonia (N)	mg/L	0.0057 (1)	0.0191 (1)	8078363	0.0095 (1)	8078363	0.0114 (1)	0.0050	8078363
Nitrate plus Nitrite (N)	mg/L	0.0023	0.0253	8078342	0.0772	8078342	0.0565	0.0020	8078342
Nitrite (N)	mg/L	<0.0020	<0.0020	8078343	<0.0020	8078343	<0.0020	0.0020	8078343
Total Phosphorus (P)	mg/L	<0.0020 (1)	0.0133 (1)	8079874	0.0049 (1)	8079874	0.0041 (1)	0.0020	8079874
Physical Properties									
Conductivity	uS/cm	1.3	462	8080922	409	8080922	434	1.0	8080922
pH	pH	6.10	8.29	8080924	8.32	8080924	8.33	N/A	8080924

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NK2711	NK2712		NK2713		NK2724		
Sampling Date		2015/10/15 13:00	2015/10/15 15:20		2015/10/14 16:45		2015/10/15 16:45		
COC Number		08412767	08412767		08412767		08412768		
	UNITS	KZ-19	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	<1.0	3.3	8082414	1.0	8080854	1.6	1.0	8082414
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NK2725		NK2726		NK2727	NK2728		
Sampling Date		2015/10/14 13:00		2015/10/14		2015/10/15 09:40	2015/10/15 09:50		
COC Number		08412768		08412768		08412768	08412768		
	UNITS	KZ-28	QC Batch	TRIP BLANK	QC Batch	KZ-9 WEST SEEP	KZ-9 EAST SEEP	RDL	QC Batch
Misc. Inorganics									
Acidity (pH 4.5)	mg/L	<0.50	8081225	<0.50	8081308	<0.50	<0.50	0.50	8081225
Acidity (pH 8.3)	mg/L	<0.50	8081225	<0.50	8081308	<0.50	237	0.50	8081225
Calculated Parameters									
Anion Sum	meq/L	1.6	8078300	0.0000	8078300	5.0	19	N/A	8078300
Cation Sum	meq/L	1.5	8078300	0.0017	8078300	5.1	20	N/A	8078300
Filter and HNO3 Preservation	N/A	LAB	8079293			LAB	LAB	N/A	8079293
Ion Balance	N/A	0.98	8078299	NC	8078299	1.0	1.1	0.010	8078299
Nitrate (N)	mg/L	0.0607	8077902	<0.0020	8077902	0.590	0.0074	0.0020	8077902
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8082940	<0.00050	8082940			0.00050	
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8082961	0.00051	8082961			0.00050	
Fluoride (F)	mg/L	0.039	8081096	<0.010	8081096	0.056	0.910	0.010	8081096
Dissolved Organic Carbon (C)	mg/L	3.30	8079598	<0.50 (1)	8078364			0.50	
Alkalinity (Total as CaCO3)	mg/L	62.9	8080916	<0.50	8080916	201	924	0.50	8080916
Alkalinity (PP as CaCO3)	mg/L	<0.50	8080916	<0.50	8080916	<0.50	<0.50	0.50	8080916
Bicarbonate (HCO3)	mg/L	76.8	8080916	<0.50	8080916	245	1130	0.50	8080916
Carbonate (CO3)	mg/L	<0.50	8080916	<0.50	8080916	<0.50	<0.50	0.50	8080916
Hydroxide (OH)	mg/L	<0.50	8080916	<0.50	8080916	<0.50	<0.50	0.50	8080916
Anions									
Dissolved Sulphate (SO4)	mg/L	13.9	8079926	<0.50	8079926	45.8	11.8	0.50	8079926
Dissolved Chloride (Cl)	mg/L	0.60	8079924	<0.50	8079924	0.67	2.3	0.50	8079924
MISCELLANEOUS									
True Colour	Col. Unit	15.7	8078359	<5.0	8078359	<5.0	29.4	5.0	8078359
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0021	8079870	<0.0020	8079873			0.0020	
Total Ammonia (N)	mg/L	0.0121 (1)	8078363	<0.0050 (1)	8078363			0.0050	
Nitrate plus Nitrite (N)	mg/L	0.0607	8078342	<0.0020	8078342	0.590	0.0074	0.0020	8078342
Nitrite (N)	mg/L	<0.0020	8078343	<0.0020	8078343	<0.0020	<0.0020	0.0020	8078343
Total Phosphorus (P)	mg/L	<0.0020 (1)	8079874	<0.0020 (1)	8079874			0.0020	
Physical Properties									
Conductivity	uS/cm	155	8080922	1.5	8080922	465	1600	1.0	8080922
pH	pH	7.89	8080924	5.78	8080924	8.27	6.63	N/A	8080924

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NK2725		NK2726		NK2727	NK2728		
Sampling Date		2015/10/14 13:00		2015/10/14		2015/10/15 09:40	2015/10/15 09:50		
COC Number		08412768		08412768		08412768	08412768		
	UNITS	KZ-28	QC Batch	TRIP BLANK	QC Batch	KZ-9 WEST SEEP	KZ-9 EAST SEEP	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	1.3	8080854	<1.0	8080854			1.0	
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NK2729	NK2730			NK2731		
Sampling Date		2015/10/15 13:50	2015/10/16 09:05			2015/10/16 08:35		
COC Number		08412768	08412768			08412768		
	UNITS	SEEP 4	SEEP 3	RDL	QC Batch	SEEP 5	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	<0.50	0.50	8081225	<0.50	0.50	8081225
Acidity (pH 8.3)	mg/L	<0.50	<0.50	0.50	8081225	54.5	0.50	8081225
Calculated Parameters								
Anion Sum	meq/L	3.2	3.5	N/A	8078300	4.2	N/A	8078300
Cation Sum	meq/L	3.4	3.6	N/A	8078300	4.1	N/A	8078300
Filter and HNO3 Preservation	N/A	LAB	LAB	N/A	8079293	LAB	N/A	8079293
Ion Balance	N/A	1.1	1.0	0.010	8078299	0.96	0.010	8078299
Nitrate (N)	mg/L	0.269	0.566	0.0020	8077902	<0.020	0.020	8077902
Misc. Inorganics								
Fluoride (F)	mg/L	0.033	0.036	0.010	8081096	0.089	0.010	8081066
Alkalinity (Total as CaCO3)	mg/L	120	142	0.50	8080916	198	0.50	8080916
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	0.50	8080916	<0.50	0.50	8080916
Bicarbonate (HCO3)	mg/L	146	173	0.50	8080916	242	0.50	8080916
Carbonate (CO3)	mg/L	<0.50	<0.50	0.50	8080916	<0.50	0.50	8080916
Hydroxide (OH)	mg/L	<0.50	<0.50	0.50	8080916	<0.50	0.50	8080916
Anions								
Dissolved Sulphate (SO4)	mg/L	39.3	31.1	0.50	8079926	11.5	0.50	8082224
Dissolved Chloride (Cl)	mg/L	<0.50	0.70	0.50	8079924	0.98	0.50	8082220
MISCELLANEOUS								
True Colour	Col. Unit	<5.0	5.5	5.0	8078359	86.6	5.0	8078359
Nutrients								
Nitrate plus Nitrite (N)	mg/L	0.269	0.566	0.0020	8078342	<0.020 (1)	0.020	8078342
Nitrite (N)	mg/L	<0.0020	<0.0020	0.0020	8078343	<0.020 (1)	0.020	8078343
Physical Properties								
Conductivity	uS/cm	322	342	1.0	8080922	400	1.0	8080922
pH	pH	8.06	8.05	N/A	8080924	6.75	N/A	8080924

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) RDL raised due to sample matrix interference.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NK2704	NK2705	NK2706	NK2707	NK2708		
Sampling Date		2015/10/15 12:50	2015/10/14 10:20	2015/10/15 10:15	2015/10/14 12:30	2015/10/14 14:20		
COC Number		08412767	08412767	08412767	08412767	08412767		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	100	174	176	73.4	175	0.50	8078122
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8083974
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00276	0.00307	0.00121	0.00592	0.00128	0.00050	8080489
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000037	0.000044	0.000021	0.000030	0.000020	8080489
Dissolved Arsenic (As)	mg/L	0.000076	0.000148	0.000185	0.000162	0.000367	0.000020	8080489
Dissolved Barium (Ba)	mg/L	0.0594	0.0555	0.0819	0.0947	0.0632	0.000020	8080489
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8080489
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8080489
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8080489
Dissolved Cadmium (Cd)	mg/L	0.000185	0.0000940	0.0000710	0.0000150	0.0000220	0.0000050	8080489
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8080489
Dissolved Cobalt (Co)	mg/L	0.0000070	0.0000150	0.0000510	0.0000150	0.0000200	0.0000050	8080489
Dissolved Copper (Cu)	mg/L	0.000478	0.000421	0.000308	0.000436	0.000255	0.000050	8080489
Dissolved Iron (Fe)	mg/L	<0.0010	0.0299	0.0735	0.0186	0.0092	0.0010	8080489
Dissolved Lead (Pb)	mg/L	0.0000060	0.0000110	0.0000060	<0.0000050	<0.0000050	0.0000050	8080489
Dissolved Lithium (Li)	mg/L	0.00081	0.00142	0.00216	0.00113	0.00162	0.00050	8080489
Dissolved Manganese (Mn)	mg/L	0.000052	0.0104	0.0471	0.00972	0.0129	0.000050	8080489
Dissolved Molybdenum (Mo)	mg/L	0.000605	0.000721	0.000641	0.000566	0.000836	0.000050	8080489
Dissolved Nickel (Ni)	mg/L	0.000273	0.000313	0.000309	0.000341	0.000378	0.000020	8080489
Dissolved Phosphorus (P)	mg/L	0.0031	<0.0020	<0.0020	0.0024	0.0041	0.0020	8080489
Dissolved Selenium (Se)	mg/L	0.000945	0.00124	0.00126	0.000176	0.000984	0.000040	8080489
Dissolved Silicon (Si)	mg/L	2.18	3.00	3.12	2.87	2.91	0.050	8080489
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8080489
Dissolved Strontium (Sr)	mg/L	0.109	0.193	0.184	0.0718	0.167	0.000050	8080489
Dissolved Thallium (Tl)	mg/L	0.0000030	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8080489
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8080489
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8080489
Dissolved Uranium (U)	mg/L	0.00243	0.00168	0.00138	0.000649	0.00229	0.0000020	8080489
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8080489
Dissolved Zinc (Zn)	mg/L	0.0232	0.0194	0.0139	0.00203	0.00193	0.00010	8080489
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8080489
Dissolved Calcium (Ca)	mg/L	33.9	59.6	59.5	25.0	54.1	0.050	8078123

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NK2704	NK2705	NK2706	NK2707	NK2708		
Sampling Date		2015/10/15 12:50	2015/10/14 10:20	2015/10/15 10:15	2015/10/14 12:30	2015/10/14 14:20		
COC Number		08412767	08412767	08412767	08412767	08412767		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	3.73	6.05	6.76	2.68	9.66	0.050	8078123
Dissolved Potassium (K)	mg/L	1.76	1.49	1.50	1.59	1.15	0.050	8078123
Dissolved Sodium (Na)	mg/L	0.715	1.20	1.05	0.942	0.995	0.050	8078123
Dissolved Sulphur (S)	mg/L	14.6	10.7	11.2	4.6	9.2	3.0	8078123

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NK2709	NK2710	NK2711	NK2712		
Sampling Date		2015/10/14 15:20	2015/10/14 15:00	2015/10/15 13:00	2015/10/15 15:20		
COC Number		08412767	08412767	08412767	08412767		
	UNITS	KZ-16	KZ-17	KZ-19	KZ-21	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	167	193	<0.50	253	0.50	8078122
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8083974
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00104	0.00141	<0.00050	0.00179	0.00050	8080489
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000047	<0.000020	0.000084	0.000020	8080489
Dissolved Arsenic (As)	mg/L	0.000262	0.000564	0.000028	0.00141	0.000020	8080489
Dissolved Barium (Ba)	mg/L	0.0605	0.0709	0.000041	0.0608	0.000020	8080489
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8080489
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8080489
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8080489
Dissolved Cadmium (Cd)	mg/L	0.0000130	0.0000340	<0.0000050	0.0000070	0.0000050	8080489
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8080489
Dissolved Cobalt (Co)	mg/L	0.0000200	0.0000310	<0.0000050	0.0000800	0.0000050	8080489
Dissolved Copper (Cu)	mg/L	0.000217	0.000240	<0.000050	0.000265	0.000050	8080489
Dissolved Iron (Fe)	mg/L	0.0026	0.0219	<0.0010	0.0784	0.0010	8080489
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8080489
Dissolved Lithium (Li)	mg/L	0.00183	0.00223	<0.00050	0.00447	0.00050	8080489
Dissolved Manganese (Mn)	mg/L	0.00451	0.0362	<0.000050	0.0658	0.000050	8080489
Dissolved Molybdenum (Mo)	mg/L	0.000487	0.00146	<0.000050	0.00167	0.000050	8080489
Dissolved Nickel (Ni)	mg/L	0.000294	0.000563	<0.000020	0.00185	0.000020	8080489
Dissolved Phosphorus (P)	mg/L	0.0030	0.0031	0.0025	0.0047	0.0020	8080489
Dissolved Selenium (Se)	mg/L	0.000861	0.00137	<0.000040	0.000716	0.000040	8080489
Dissolved Silicon (Si)	mg/L	2.76	3.20	<0.050	4.44	0.050	8080489
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8080489
Dissolved Strontium (Sr)	mg/L	0.167	0.177	<0.000050	0.194	0.000050	8080489
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8080489
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8080489
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8080489
Dissolved Uranium (U)	mg/L	0.00178	0.00307	<0.0000020	0.00330	0.0000020	8080489
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	0.00069	<0.00020	0.00020	8080489
Dissolved Zinc (Zn)	mg/L	0.00036	0.00450	<0.00010	0.00050	0.00010	8080489
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8080489
Dissolved Calcium (Ca)	mg/L	52.3	58.4	<0.050	62.8	0.050	8078123

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NK2709	NK2710	NK2711	NK2712		
Sampling Date		2015/10/14 15:20	2015/10/14 15:00	2015/10/15 13:00	2015/10/15 15:20		
COC Number		08412767	08412767	08412767	08412767		
	UNITS	KZ-16	KZ-17	KZ-19	KZ-21	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	8.75	11.4	<0.050	23.2	0.050	8078123
Dissolved Potassium (K)	mg/L	1.13	1.23	<0.050	1.65	0.050	8078123
Dissolved Sodium (Na)	mg/L	1.00	1.01	<0.050	1.49	0.050	8078123
Dissolved Sulphur (S)	mg/L	8.9	9.8	<3.0	14.2	3.0	8078123
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NK2713	NK2724	NK2725	NK2726	NK2727		
Sampling Date		2015/10/14 16:45	2015/10/15 16:45	2015/10/14 13:00	2015/10/14	2015/10/15 09:40		
COC Number		08412767	08412768	08412768	08412768	08412768		
	UNITS	KZ-22	KZ-26	KZ-28	TRIP BLANK	KZ-9 WEST SEEP	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	218	226	73.0	<0.50	250	0.50	8078122
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020		0.0000020	8083974
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00127	0.00109	0.00586	<0.00050	0.00059	0.00050	8081353
Dissolved Antimony (Sb)	mg/L	0.000050	0.000070	0.000026	<0.000020	0.000025	0.000020	8081353
Dissolved Arsenic (As)	mg/L	0.000927	0.000725	0.000171	<0.000020	0.000122	0.000020	8081353
Dissolved Barium (Ba)	mg/L	0.0628	0.0653	0.0953	<0.000020	0.226	0.000020	8081353
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8081353
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8081353
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8081353
Dissolved Cadmium (Cd)	mg/L	0.0000110	0.0000110	0.0000150	<0.0000050	0.0000160	0.0000050	8081353
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00046	0.00010	8081353
Dissolved Cobalt (Co)	mg/L	0.0000440	0.0000220	0.0000170	<0.0000050	0.0000080	0.0000050	8081353
Dissolved Copper (Cu)	mg/L	0.000278	0.000423	0.000417	<0.000050	0.000103	0.000050	8081353
Dissolved Iron (Fe)	mg/L	0.0382	0.0241	0.0190	<0.0010	<0.0010	0.0010	8081353
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000060	<0.0000050	<0.0000050	0.0000070	0.0000050	8081353
Dissolved Lithium (Li)	mg/L	0.00355	0.00435	0.00101	<0.00050	0.00181	0.00050	8081353
Dissolved Manganese (Mn)	mg/L	0.0270	0.00552	0.00997	<0.000050	0.00140	0.000050	8081353
Dissolved Molybdenum (Mo)	mg/L	0.00113	0.00105	0.000587	<0.000050	0.000881	0.000050	8081353
Dissolved Nickel (Ni)	mg/L	0.000985	0.000909	0.000332	<0.000020	0.000123	0.000020	8081353
Dissolved Phosphorus (P)	mg/L	0.0033	0.0034	0.0043	<0.0020	0.0025	0.0020	8081353
Dissolved Selenium (Se)	mg/L	0.000906	0.000806	0.000163	<0.000040	0.00197	0.000040	8081353
Dissolved Silicon (Si)	mg/L	3.53	3.77	2.92	<0.050	3.46	0.050	8081353
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8081353
Dissolved Strontium (Sr)	mg/L	0.184	0.188	0.0708	<0.000050	0.253	0.000050	8081353
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8081353
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8081353
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8081353
Dissolved Uranium (U)	mg/L	0.00286	0.00267	0.000656	<0.0000020	0.00210	0.0000020	8081353
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8081353
Dissolved Zinc (Zn)	mg/L	0.00068	0.00035	0.00198	<0.00010	0.00056	0.00010	8081353
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8081353
Dissolved Calcium (Ca)	mg/L	59.7	59.3	24.7	<0.050	84.2	0.050	8078123

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NK2713	NK2724	NK2725	NK2726	NK2727		
Sampling Date		2015/10/14 16:45	2015/10/15 16:45	2015/10/14 13:00	2015/10/14	2015/10/15 09:40		
COC Number		08412767	08412768	08412768	08412768	08412768		
	UNITS	KZ-22	KZ-26	KZ-28	TRIP BLANK	KZ-9 WEST SEEP	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	16.8	18.8	2.72	<0.050	9.74	0.050	8078123
Dissolved Potassium (K)	mg/L	1.36	1.35	1.60	<0.050	1.17	0.050	8078123
Dissolved Sodium (Na)	mg/L	1.30	1.47	0.953	<0.050	1.76	0.050	8078123
Dissolved Sulphur (S)	mg/L	12.0	12.3	4.5	<3.0	14.9	3.0	8078123

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NK2728	NK2729	NK2730	NK2731		
Sampling Date		2015/10/15 09:50	2015/10/15 13:50	2015/10/16 09:05	2015/10/16 08:35		
COC Number		08412768	08412768	08412768	08412768		
	UNITS	KZ-9 EAST SEEP	SEEP 4	SEEP 3	SEEP 5	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	970	167	176	196	0.50	8078122
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.0917	0.00146	0.00370	0.00099	0.00050	8081353
Dissolved Antimony (Sb)	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	8081353
Dissolved Arsenic (As)	mg/L	0.00180	0.000087	0.000085	0.000239	0.000020	8081353
Dissolved Barium (Ba)	mg/L	0.148	0.123	0.123	0.111	0.000020	8081353
Dissolved Beryllium (Be)	mg/L	0.000337	<0.000010	<0.000010	<0.000010	0.000010	8081353
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8081353
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8081353
Dissolved Cadmium (Cd)	mg/L	0.0000690	0.0000180	0.0000140	0.0000350	0.0000050	8081353
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00017	<0.00010	0.00010	8081353
Dissolved Cobalt (Co)	mg/L	0.00283	0.0000060	0.0000080	0.000275	0.0000050	8081353
Dissolved Copper (Cu)	mg/L	<0.000050	0.000178	0.000098	0.000157	0.000050	8081353
Dissolved Iron (Fe)	mg/L	9.02	<0.0010	<0.0010	0.0273	0.0010	8081353
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8081353
Dissolved Lithium (Li)	mg/L	0.0803	0.00051	<0.00050	0.00851	0.00050	8081353
Dissolved Manganese (Mn)	mg/L	2.09	0.000164	0.000061	0.579	0.000050	8081353
Dissolved Molybdenum (Mo)	mg/L	0.000452	0.000523	0.000592	<0.000050	0.000050	8081353
Dissolved Nickel (Ni)	mg/L	0.00832	0.000187	0.000105	0.000926	0.000020	8081353
Dissolved Phosphorus (P)	mg/L	0.0052	<0.0020	0.0027	0.0033	0.0020	8081353
Dissolved Selenium (Se)	mg/L	<0.000040	0.000820	0.000799	0.000101	0.000040	8081353
Dissolved Silicon (Si)	mg/L	16.8	2.73	2.31	7.47	0.050	8081353
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8081353
Dissolved Strontium (Sr)	mg/L	1.08	0.225	0.211	0.222	0.000050	8081353
Dissolved Thallium (Tl)	mg/L	0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8081353
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8081353
Dissolved Titanium (Ti)	mg/L	0.00143	<0.00050	<0.00050	<0.00050	0.00050	8081353
Dissolved Uranium (U)	mg/L	0.00178	0.00137	0.00118	0.000114	0.0000020	8081353
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8081353
Dissolved Zinc (Zn)	mg/L	0.0321	0.00015	0.00029	0.0121	0.00010	8081353
Dissolved Zirconium (Zr)	mg/L	0.00043	<0.00010	<0.00010	<0.00010	0.00010	8081353
Dissolved Calcium (Ca)	mg/L	333	61.9	65.9	64.7	0.050	8078123
Dissolved Magnesium (Mg)	mg/L	33.5	3.02	2.70	8.28	0.050	8078123

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NK2728	NK2729	NK2730	NK2731		
Sampling Date		2015/10/15 09:50	2015/10/15 13:50	2015/10/16 09:05	2015/10/16 08:35		
COC Number		08412768	08412768	08412768	08412768		
	UNITS	KZ-9 EAST SEEP	SEEP 4	SEEP 3	SEEP 5	RDL	QC Batch
Dissolved Potassium (K)	mg/L	5.32	2.01	1.42	1.19	0.050	8078123
Dissolved Sodium (Na)	mg/L	8.74	0.741	0.882	2.16	0.050	8078123
Dissolved Sulphur (S)	mg/L	6.9	12.9	9.9	3.6	3.0	8078123
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NK2704	NK2705	NK2706	NK2707	NK2708		
Sampling Date		2015/10/15 12:50	2015/10/14 10:20	2015/10/15 10:15	2015/10/14 12:30	2015/10/14 14:20		
COC Number		08412767	08412767	08412767	08412767	08412767		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	101	177	181	76.0	178	0.50	8078088
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8084187
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0176	0.0114	0.0227	0.0273	0.0283	0.00050	8079606
Total Antimony (Sb)	mg/L	0.000022	0.000043	0.000052	0.000030	0.000025	0.000020	8079606
Total Arsenic (As)	mg/L	0.000102	0.000301	0.000357	0.000185	0.000561	0.000020	8079606
Total Barium (Ba)	mg/L	0.0590	0.0574	0.0814	0.0951	0.0649	0.000020	8079606
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8079606
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8079606
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8079606
Total Cadmium (Cd)	mg/L	0.000199	0.000176	0.0000920	0.0000260	0.0000380	0.0000050	8079606
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00040	<0.00010	<0.00010	0.00010	8079606
Total Cobalt (Co)	mg/L	0.0000260	0.0000420	0.000110	0.0000350	0.0000560	0.0000050	8079606
Total Copper (Cu)	mg/L	0.000609	0.000693	0.000514	0.000483	0.000417	0.000050	8079606
Total Iron (Fe)	mg/L	0.0354	0.238	0.548	0.0779	0.141	0.0010	8079606
Total Lead (Pb)	mg/L	0.000148	0.000176	0.000165	0.0000470	0.0000800	0.0000050	8079606
Total Lithium (Li)	mg/L	0.00093	0.00139	0.00200	0.00107	0.00160	0.00050	8079606
Total Manganese (Mn)	mg/L	0.00139	0.0298	0.0609	0.0233	0.0335	0.000050	8079606
Total Molybdenum (Mo)	mg/L	0.000604	0.000716	0.000661	0.000611	0.000851	0.000050	8079606
Total Nickel (Ni)	mg/L	0.000327	0.000376	0.000656	0.000395	0.000474	0.000020	8079606
Total Phosphorus (P)	mg/L	0.0030	0.0035	0.0052	0.0049	0.0184	0.0020	8079606
Total Selenium (Se)	mg/L	0.00110	0.00139	0.00144	0.000198	0.00117	0.000040	8079606
Total Silicon (Si)	mg/L	2.31	3.02	3.32	3.00	2.99	0.050	8079606
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8079606
Total Strontium (Sr)	mg/L	0.114	0.190	0.187	0.0730	0.172	0.000050	8079606
Total Thallium (Tl)	mg/L	0.0000020	0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8079606
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8079606
Total Titanium (Ti)	mg/L	0.00123	<0.00050	0.00122	0.00072	<0.00050	0.00050	8079606
Total Uranium (U)	mg/L	0.00258	0.00167	0.00144	0.000676	0.00234	0.0000020	8079606
Total Vanadium (V)	mg/L	0.00020	<0.00020	<0.00020	0.00031	<0.00020	0.00020	8079606
Total Zinc (Zn)	mg/L	0.0265	0.0316	0.0186	0.00316	0.00417	0.00010	8079606
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8079606
Total Calcium (Ca)	mg/L	34.4	60.9	60.9	25.8	54.9	0.050	8078124
Total Magnesium (Mg)	mg/L	3.76	6.02	6.98	2.81	10.0	0.050	8078124

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NK2704	NK2705	NK2706	NK2707	NK2708		
Sampling Date		2015/10/15 12:50	2015/10/14 10:20	2015/10/15 10:15	2015/10/14 12:30	2015/10/14 14:20		
COC Number		08412767	08412767	08412767	08412767	08412767		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Total Potassium (K)	mg/L	1.75	1.49	1.52	1.62	1.19	0.050	8078124
Total Sodium (Na)	mg/L	0.732	1.17	1.08	0.976	1.03	0.050	8078124
Total Sulphur (S)	mg/L	15.6	11.6	11.9	4.9	10.0	3.0	8078124
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NK2709	NK2710	NK2711	NK2713	NK2726		
Sampling Date		2015/10/14 15:20	2015/10/14 15:00	2015/10/15 13:00	2015/10/14 16:45	2015/10/14		
COC Number		08412767	08412767	08412767	08412767	08412768		
	UNITS	KZ-16	KZ-17	KZ-19	KZ-22	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	170	193	<0.50	220	<0.50	0.50	8078088
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8084187
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0214	0.0272	0.0174	0.0102	<0.00050	0.00050	8079606
Total Antimony (Sb)	mg/L	<0.000020	0.000044	<0.000020	0.000052	<0.000020	0.000020	8079606
Total Arsenic (As)	mg/L	0.000301	0.000982	0.000023	0.00137	<0.000020	0.000020	8079606
Total Barium (Ba)	mg/L	0.0618	0.0704	0.000087	0.0625	<0.000020	0.000020	8079606
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8079606
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8079606
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8079606
Total Cadmium (Cd)	mg/L	0.0000130	0.0000700	<0.0000050	0.0000160	<0.0000050	0.0000050	8079606
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8079606
Total Cobalt (Co)	mg/L	0.0000270	0.0000810	<0.0000050	0.0000630	<0.0000050	0.0000050	8079606
Total Copper (Cu)	mg/L	0.000296	0.000446	<0.000050	0.000422	<0.000050	0.000050	8079606
Total Iron (Fe)	mg/L	0.0187	0.305	<0.0010	0.226	<0.0010	0.0010	8079606
Total Lead (Pb)	mg/L	0.0000190	0.0000920	0.0000110	0.0000170	<0.0000050	0.0000050	8079606
Total Lithium (Li)	mg/L	0.00151	0.00203	<0.00050	0.00351	<0.00050	0.00050	8079606
Total Manganese (Mn)	mg/L	0.00652	0.0816	<0.000050	0.0400	<0.000050	0.000050	8079606
Total Molybdenum (Mo)	mg/L	0.000484	0.00141	<0.000050	0.00118	<0.000050	0.000050	8079606
Total Nickel (Ni)	mg/L	0.000331	0.000726	<0.000020	0.00111	<0.000020	0.000020	8079606
Total Phosphorus (P)	mg/L	0.0029	0.0088	<0.0020	0.0058	<0.0020	0.0020	8079606
Total Selenium (Se)	mg/L	0.000963	0.00151	<0.000040	0.00100	<0.000040	0.000040	8079606
Total Silicon (Si)	mg/L	2.88	3.29	<0.050	3.90	<0.050	0.050	8079606
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8079606
Total Strontium (Sr)	mg/L	0.162	0.188	0.000239	0.191	<0.000050	0.000050	8079606
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8079606
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8079606
Total Titanium (Ti)	mg/L	<0.00050	0.00052	0.00174	<0.00050	<0.00050	0.00050	8079606
Total Uranium (U)	mg/L	0.00181	0.00330	0.0000020	0.00294	<0.0000020	0.0000020	8079606
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00054	<0.00020	<0.00020	0.00020	8079606
Total Zinc (Zn)	mg/L	0.00059	0.00989	0.00017	0.00164	<0.00010	0.00010	8079606
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8079606
Total Calcium (Ca)	mg/L	53.4	57.4	0.057	59.7	<0.050	0.050	8078124
Total Magnesium (Mg)	mg/L	8.97	12.1	<0.050	17.3	<0.050	0.050	8078124

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NK2709	NK2710	NK2711	NK2713	NK2726		
Sampling Date		2015/10/14 15:20	2015/10/14 15:00	2015/10/15 13:00	2015/10/14 16:45	2015/10/14		
COC Number		08412767	08412767	08412767	08412767	08412768		
	UNITS	**KZ-16**	**KZ-17**	**KZ-19**	**KZ-22**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	1.14	1.28	<0.050	1.38	<0.050	0.050	8078124
Total Sodium (Na)	mg/L	1.05	1.07	<0.050	1.31	<0.050	0.050	8078124
Total Sulphur (S)	mg/L	9.6	11.1	<3.0	13.0	<3.0	3.0	8078124
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		NK2712	NK2724	NK2725		
Sampling Date		2015/10/15 15:20	2015/10/15 16:45	2015/10/14 13:00		
COC Number		08412767	08412768	08412768		
	UNITS	KZ-21	KZ-26	KZ-28	RDL	QC Batch
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	240	223	73.5	0.50	8078088
Elements						
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8084187
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.0149	0.0107	0.0252	0.0030	8080110
Total Antimony (Sb)	mg/L	0.000079	0.000076	<0.000050	0.000050	8080110
Total Arsenic (As)	mg/L	0.00280	0.000932	0.000291	0.000020	8080110
Total Barium (Ba)	mg/L	0.0603	0.0638	0.0957	0.00010	8080110
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8080110
Total Bismuth (Bi)	mg/L	<0.000020	<0.000020	<0.000020	0.000020	8080110
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	0.050	8080110
Total Cadmium (Cd)	mg/L	0.0000130	0.0000110	0.0000220	0.0000050	8080110
Total Chromium (Cr)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8080110
Total Cobalt (Co)	mg/L	0.000116	0.000026	0.000027	0.000010	8080110
Total Copper (Cu)	mg/L	0.00077	0.00059	0.00067	0.00020	8080110
Total Iron (Fe)	mg/L	0.581	0.102	0.0599	0.0050	8080110
Total Lead (Pb)	mg/L	<0.000050	<0.000050	<0.000050	0.000050	8080110
Total Lithium (Li)	mg/L	0.00444	0.00422	0.00097	0.00050	8080110
Total Manganese (Mn)	mg/L	0.0906	0.00764	0.0177	0.00010	8080110
Total Molybdenum (Mo)	mg/L	0.00156	0.00109	0.000617	0.000050	8080110
Total Nickel (Ni)	mg/L	0.00204	0.00094	0.00043	0.00010	8080110
Total Phosphorus (P)	mg/L	0.018	<0.010	<0.010	0.010	8080110
Total Selenium (Se)	mg/L	0.000683	0.000689	0.000170	0.000040	8080110
Total Silicon (Si)	mg/L	4.33	3.71	2.89	0.10	8080110
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8080110
Total Strontium (Sr)	mg/L	0.183	0.187	0.0714	0.000050	8080110
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8080110
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8080110
Total Titanium (Ti)	mg/L	<0.0050	<0.0050	<0.0050	0.0050	8080110
Total Uranium (U)	mg/L	0.00323	0.00267	0.000678	0.0000050	8080110
Total Vanadium (V)	mg/L	0.00095	0.00070	0.00108	0.00050	8080110
Total Zinc (Zn)	mg/L	0.0019	0.0011	0.0033	0.0010	8080110
Total Zirconium (Zr)	mg/L	0.00015	<0.00010	<0.00010	0.00010	8080110
Total Calcium (Ca)	mg/L	58.7	58.9	24.9	0.25	8078124
Total Magnesium (Mg)	mg/L	22.7	18.5	2.76	0.25	8078124
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		NK2712	NK2724	NK2725		
Sampling Date		2015/10/15 15:20	2015/10/15 16:45	2015/10/14 13:00		
COC Number		08412767	08412768	08412768		
	UNITS	KZ-21	KZ-26	KZ-28	RDL	QC Batch
Total Potassium (K)	mg/L	1.55	1.32	1.56	0.25	8078124
Total Sodium (Na)	mg/L	1.51	1.50	0.95	0.25	8078124
Total Sulphur (S)	mg/L	<15	<15	<15	15	8078124
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2704
Sample ID: KZ-2
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Name Redacted
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079601	N/A	2015/10/19	
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/20	
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	
Ion Balance	CALC	8078299	N/A	2015/10/21	
Sum of cations, anions	CALC	8078300	N/A	2015/10/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8080489	N/A	2015/10/21	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8079606	N/A	2015/10/19	
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	
pH Water	AT/ALK	8080924	N/A	2015/10/20	
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	
Total Suspended Solids-Low Level	BAL/BAL	8082414	2015/10/21	2015/10/21	

Maxxam ID: NK2704 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	

Maxxam ID: NK2705
Sample ID: KZ-7
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081302	N/A	2015/10/20	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2705
Sample ID: KZ-7
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst	
Alkalinity - Water	AT/ALK	8080938	2015/10/20	2015/10/21	Name Redacted	
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19		
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21		
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21		
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17		
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079598	N/A	2015/10/19		
Conductance - water	AT/ALK	8080935	N/A	2015/10/21		
Fluoride	ISE/ISE	8081096	N/A	2015/10/19		
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/20		
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21		
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22		
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22		
Ion Balance	CALC	8078299	N/A	2015/10/21		
Sum of cations, anions	CALC	8078300	N/A	2015/10/20		
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21		
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8080489	N/A	2015/10/21		
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/20		
Elements by ICPMS Low Level (total)	ICP/CRCM	8079606	N/A	2015/10/19		
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19		
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17		
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17		
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17		
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19		
pH Water	AT/ALK	8080929	N/A	2015/10/21		
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19		
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20		
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20		
Total Suspended Solids-Low Level	BAL/BAL	8080854	2015/10/20	2015/10/21		

Maxxam ID: NK2705 Dup
Sample ID: KZ-7
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst	
Alkalinity - Water	AT/ALK	8080938	2015/10/20	2015/10/21	Name Redacted	
Conductance - water	AT/ALK	8080935	N/A	2015/10/21		
pH Water	AT/ALK	8080929	N/A	2015/10/21		

Maxxam ID: NK2706
Sample ID: KZ-9
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst	
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Name Redacted	
Alkalinity - Water	AT/ALK	8080938	2015/10/20	2015/10/21		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2706
Sample ID: KZ-9
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079601	N/A	2015/10/19	
Conductance - water	AT/ALK	8080935	N/A	2015/10/21	
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/20	
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	
Ion Balance	CALC	8078299	N/A	2015/10/21	
Sum of cations, anions	CALC	8078300	N/A	2015/10/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8080489	N/A	2015/10/21	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8079606	N/A	2015/10/19	
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	
pH Water	AT/ALK	8080929	N/A	2015/10/21	
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	
Total Suspended Solids-Low Level	BAL/BAL	8082414	2015/10/21	2015/10/21	

Maxxam ID: NK2706 Dup
Sample ID: KZ-9
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079601	N/A	2015/10/19	Name Redacted

Maxxam ID: NK2707
Sample ID: KZ-13
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081302	N/A	2015/10/20	Name Redacted
Alkalinity - Water	AT/ALK	8080938	2015/10/20	2015/10/21	
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2707
Sample ID: KZ-13
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	Name Redacted
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079598	N/A	2015/10/19	
Conductance - water	AT/ALK	8080935	N/A	2015/10/21	
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/20	
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	
Ion Balance	CALC	8078299	N/A	2015/10/21	
Sum of cations, anions	CALC	8078300	N/A	2015/10/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8080489	N/A	2015/10/21	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8079606	N/A	2015/10/19	
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	
pH Water	AT/ALK	8080929	N/A	2015/10/21	
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	
Total Suspended Solids-Low Level	BAL/BAL	8080854	2015/10/20	2015/10/21	

Maxxam ID: NK2708
Sample ID: KZ-15
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081302	N/A	2015/10/20	Name Redacted
Alkalinity - Water	AT/ALK	8080938	2015/10/20	2015/10/21	
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079598	N/A	2015/10/19	
Conductance - water	AT/ALK	8080935	N/A	2015/10/21	
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/20	
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	
Ion Balance	CALC	8078299	N/A	2015/10/21	
Sum of cations, anions	CALC	8078300	N/A	2015/10/20	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2708
Sample ID: KZ-15
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	Name Redacted
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8080489	N/A	2015/10/21	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8079606	N/A	2015/10/19	
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	
pH Water	AT/ALK	8080929	N/A	2015/10/21	
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	
Total Suspended Solids-Low Level	BAL/BAL	8080854	2015/10/20	2015/10/21	

Maxxam ID: NK2708 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079598	N/A	2015/10/19	Name Redacted
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/20	2015/10/20	

Maxxam ID: NK2709
Sample ID: KZ-16
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Name Redacted
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079598	N/A	2015/10/19	
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/20	
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	
Ion Balance	CALC	8078299	N/A	2015/10/21	
Sum of cations, anions	CALC	8078300	N/A	2015/10/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8080489	N/A	2015/10/21	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2709
Sample ID: KZ-16
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/20	Name Redacted
Elements by ICPMS Low Level (total)	ICP/CRCM	8079606	N/A	2015/10/19	
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	
pH Water	AT/ALK	8080924	N/A	2015/10/20	
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	
Total Suspended Solids-Low Level	BAL/BAL	8080854	2015/10/20	2015/10/21	

Maxxam ID: NK2710
Sample ID: KZ-17
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081302	N/A	2015/10/20	Name Redacted
Alkalinity - Water	AT/ALK	8080938	2015/10/20	2015/10/21	
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079601	N/A	2015/10/19	
Conductance - water	AT/ALK	8080935	N/A	2015/10/21	
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/20	
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	
Ion Balance	CALC	8078299	N/A	2015/10/21	
Sum of cations, anions	CALC	8078300	N/A	2015/10/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8080489	N/A	2015/10/21	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8079606	N/A	2015/10/19	
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	
pH Water	AT/ALK	8080929	N/A	2015/10/21	
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2710
Sample ID: KZ-17
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	Name Redacted
Total Suspended Solids-Low Level	BAL/BAL	8080854	2015/10/20	2015/10/21	

Maxxam ID: NK2711
Sample ID: KZ-19
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Name Redacted
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079598	N/A	2015/10/19	
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/20	
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	
Ion Balance	CALC	8078299	N/A	2015/10/21	
Sum of cations, anions	CALC	8078300	N/A	2015/10/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8080489	N/A	2015/10/21	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8079606	N/A	2015/10/19	
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	
pH Water	AT/ALK	8080924	N/A	2015/10/20	
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	
Total Suspended Solids-Low Level	BAL/BAL	8082414	2015/10/21	2015/10/21	

Maxxam ID: NK2712
Sample ID: KZ-21
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Name Redacted
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2712
Sample ID: KZ-21
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079598	N/A	2015/10/19	
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/21	
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	
Ion Balance	CALC	8078299	N/A	2015/10/21	
Sum of cations, anions	CALC	8078300	N/A	2015/10/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8080489	N/A	2015/10/21	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8080110	2015/10/19	2015/10/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/21	
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	
pH Water	AT/ALK	8080924	N/A	2015/10/20	
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	
Total Suspended Solids-Low Level	BAL/BAL	8082414	2015/10/21	2015/10/21	

Maxxam ID: NK2712 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	Name Redacted

Maxxam ID: NK2713
Sample ID: KZ-22
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Name Redacted
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8082911	N/A	2015/10/21	
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2713
Sample ID: KZ-22
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	Name Redacted
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079598	N/A	2015/10/19	
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/20	
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	
Ion Balance	CALC	8078299	N/A	2015/10/21	
Sum of cations, anions	CALC	8078300	N/A	2015/10/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8081353	N/A	2015/10/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8079606	N/A	2015/10/19	
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	
pH Water	AT/ALK	8080924	N/A	2015/10/20	
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	
Total Suspended Solids-Low Level	BAL/BAL	8080854	2015/10/20	2015/10/21	

Maxxam ID: NK2724
Sample ID: KZ-26
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Name Redacted
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8082940	N/A	2015/10/21	
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079598	N/A	2015/10/19	
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/21	
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	
Ion Balance	CALC	8078299	N/A	2015/10/21	
Sum of cations, anions	CALC	8078300	N/A	2015/10/21	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2724
Sample ID: KZ-26
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	Name Redacted
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8081353	N/A	2015/10/20	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8080110	2015/10/19	2015/10/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/21	
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	
pH Water	AT/ALK	8080924	N/A	2015/10/20	
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	
Total Suspended Solids-Low Level	BAL/BAL	8082414	2015/10/21	2015/10/21	

Maxxam ID: NK2725
Sample ID: KZ-28
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Name Redacted
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8082940	N/A	2015/10/21	
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8079598	N/A	2015/10/19	
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/21	
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	
Ion Balance	CALC	8078299	N/A	2015/10/21	
Sum of cations, anions	CALC	8078300	N/A	2015/10/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8081353	N/A	2015/10/20	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8080110	2015/10/19	2015/10/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/21	
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	
pH Water	AT/ALK	8080924	N/A	2015/10/20	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2725
Sample ID: KZ-28
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	Name Redacted
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8079870	2015/10/19	2015/10/20	
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	
Total Suspended Solids-Low Level	BAL/BAL	8080854	2015/10/20	2015/10/21	

Maxxam ID: NK2725 Dup
Sample ID: KZ-28
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8081353	N/A	2015/10/20	Name Redacted

Maxxam ID: NK2726
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081308	N/A	2015/10/20	Name Redacted
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/21	
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8082940	N/A	2015/10/21	
Cyanide WAD (weak acid dissociable)	TECH/COL	8082961	N/A	2015/10/21	
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8078364	N/A	2015/10/19	
Conductance - water	AT/ALK	8080922	N/A	2015/10/21	
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	
Hardness Total (calculated as CaCO3)	CALC	8078088	N/A	2015/10/20	
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8083974	N/A	2015/10/22	
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	
Ion Balance	CALC	8078299	N/A	2015/10/21	
Sum of cations, anions	CALC	8078300	N/A	2015/10/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8081353	N/A	2015/10/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8078124	N/A	2015/10/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8079606	N/A	2015/10/19	
Ammonia-N (Unpreserved)	KONE/COL	8078363	N/A	2015/10/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	
pH Water	AT/ALK	8080924	N/A	2015/10/21	
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8079873	2015/10/19	2015/10/20	
Total Phosphorus - unpreserved	KONE/COL	8079874	N/A	2015/10/20	
Total Suspended Solids-Low Level	BAL/BAL	8080854	2015/10/20	2015/10/21	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2726 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/10/14
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8084187	2015/10/22	2015/10/22	
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	

Maxxam ID: NK2727
Sample ID: KZ-9 WEST SEEP
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Name Redacted
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	
Ion Balance	CALC	8078299	N/A	2015/10/21	
Sum of cations, anions	CALC	8078300	N/A	2015/10/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8081353	N/A	2015/10/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	
pH Water	AT/ALK	8080924	N/A	2015/10/20	
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	

Maxxam ID: NK2728
Sample ID: KZ-9 EAST SEEP
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Name Redacted
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/21	
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	
Conductance - water	AT/ALK	8080922	N/A	2015/10/21	
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	
Ion Balance	CALC	8078299	N/A	2015/10/21	
Sum of cations, anions	CALC	8078300	N/A	2015/10/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8081353	N/A	2015/10/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2728
Sample ID: KZ-9 EAST SEEP
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	Name Redacted
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	
pH Water	AT/ALK	8080924	N/A	2015/10/21	
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	

Maxxam ID: NK2729
Sample ID: SEEP 4
Matrix: Water

Collected: 2015/10/15
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Name Redacted
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/21	
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	
Conductance - water	AT/ALK	8080922	N/A	2015/10/21	
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	
Ion Balance	CALC	8078299	N/A	2015/10/21	
Sum of cations, anions	CALC	8078300	N/A	2015/10/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8081353	N/A	2015/10/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	
pH Water	AT/ALK	8080924	N/A	2015/10/21	
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	

Maxxam ID: NK2730
Sample ID: SEEP 3
Matrix: Water

Collected: 2015/10/16
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Name Redacted
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	
Chloride by Automated Colourimetry	KONE/COL	8079924	N/A	2015/10/19	
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	
Ion Balance	CALC	8078299	N/A	2015/10/21	
Sum of cations, anions	CALC	8078300	N/A	2015/10/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8081353	N/A	2015/10/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NK2730
Sample ID: SEEP 3
Matrix: Water

Collected: 2015/10/16
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	Name Redacted
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	
pH Water	AT/ALK	8080924	N/A	2015/10/20	
Sulphate by Automated Colourimetry	KONE/COL	8079926	N/A	2015/10/19	

Maxxam ID: NK2730 Dup
Sample ID: SEEP 3
Matrix: Water

Collected: 2015/10/16
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8081096	N/A	2015/10/19	Name Redacted

Maxxam ID: NK2731
Sample ID: SEEP 5
Matrix: Water

Collected: 2015/10/16
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Name Redacted
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	
Chloride by Automated Colourimetry	KONE/COL	8082220	N/A	2015/10/20	
Colour (True) by Kone Lab	KONE	8078359	N/A	2015/10/17	
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	
Fluoride	ISE/ISE	8081066	N/A	2015/10/19	
Hardness (calculated as CaCO3)	CALC	8078122	N/A	2015/10/21	
Ion Balance	CALC	8078299	N/A	2015/10/21	
Sum of cations, anions	CALC	8078300	N/A	2015/10/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8078123	N/A	2015/10/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8081353	N/A	2015/10/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8078342	N/A	2015/10/17	
Nitrite (N) (low level)	TRAA/COL	8078343	N/A	2015/10/17	
Nitrogen - Nitrate (as N)	CALC	8077902	N/A	2015/10/17	
Filter and HNO3 Preserve for Metals	ICP	8079293	N/A	2015/10/19	
pH Water	AT/ALK	8080924	N/A	2015/10/20	
Sulphate by Automated Colourimetry	KONE/COL	8082224	N/A	2015/10/20	

Maxxam ID: NK2731 Dup
Sample ID: SEEP 5
Matrix: Water

Collected: 2015/10/16
Shipped:
Received: 2015/10/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8081225	N/A	2015/10/20	Name Redacted
Alkalinity - Water	AT/ALK	8080916	2015/10/20	2015/10/20	
Conductance - water	AT/ALK	8080922	N/A	2015/10/20	
pH Water	AT/ALK	8080924	N/A	2015/10/20	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	2.7°C
Package 2	3.3°C
Package 3	3.3°C
Package 4	4.0°C

Sample NK2712-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample NK2724-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample NK2725-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample NK2726-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8078342	Nitrate plus Nitrite (N)	2015/10/17	NC	80 - 120	97	80 - 120	<0.0020	mg/L	1.8	25
8078343	Nitrite (N)	2015/10/17	98	80 - 120	92	80 - 120	<0.0020	mg/L	NC	25
8078359	True Colour	2015/10/17			106	80 - 120	<5.0	Col. Unit	NC	20
8078363	Total Ammonia (N)	2015/10/19	107	80 - 120	104	80 - 120	<0.0050	mg/L	NC	20
8078364	Dissolved Organic Carbon (C)	2015/10/19	100	80 - 120	104	80 - 120	<0.50	mg/L	NC	20
8079598	Dissolved Organic Carbon (C)	2015/10/19	100	80 - 120	104	80 - 120	<0.50	mg/L	NC	20
8079601	Dissolved Organic Carbon (C)	2015/10/19	110	80 - 120	110	80 - 120	<0.50	mg/L	NC	20
8079606	Total Aluminum (Al)	2015/10/19	84	80 - 120	101	80 - 120	<0.00050	mg/L	4.8	20
8079606	Total Antimony (Sb)	2015/10/19	98	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
8079606	Total Arsenic (As)	2015/10/19	96	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8079606	Total Barium (Ba)	2015/10/19	101	80 - 120	109	80 - 120	<0.000020	mg/L	0.90	20
8079606	Total Beryllium (Be)	2015/10/19	96	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8079606	Total Bismuth (Bi)	2015/10/19	98	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8079606	Total Boron (B)	2015/10/19					<0.010	mg/L	NC	20
8079606	Total Cadmium (Cd)	2015/10/19	98	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8079606	Total Chromium (Cr)	2015/10/19	97	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8079606	Total Cobalt (Co)	2015/10/19	101	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8079606	Total Copper (Cu)	2015/10/19	99	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8079606	Total Iron (Fe)	2015/10/19	103	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20
8079606	Total Lead (Pb)	2015/10/19	102	80 - 120	108	80 - 120	<0.0000050	mg/L	0	20
8079606	Total Lithium (Li)	2015/10/19	96	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8079606	Total Manganese (Mn)	2015/10/19	98	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8079606	Total Molybdenum (Mo)	2015/10/19	92	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8079606	Total Nickel (Ni)	2015/10/19	98	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8079606	Total Phosphorus (P)	2015/10/19					<0.0020	mg/L		
8079606	Total Selenium (Se)	2015/10/19	94	80 - 120	99	80 - 120	<0.000040	mg/L	NC	20
8079606	Total Silicon (Si)	2015/10/19					<0.050	mg/L	NC	20
8079606	Total Silver (Ag)	2015/10/19	100	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8079606	Total Strontium (Sr)	2015/10/19	94	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8079606	Total Thallium (Tl)	2015/10/19	100	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8079606	Total Tin (Sn)	2015/10/19	96	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8079606	Total Titanium (Ti)	2015/10/19	96	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8079606	Total Uranium (U)	2015/10/19	99	80 - 120	106	80 - 120	<0.0000020	mg/L	NC	20
8079606	Total Vanadium (V)	2015/10/19	101	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20
8079606	Total Zinc (Zn)	2015/10/19	102	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20
8079606	Total Zirconium (Zr)	2015/10/19					<0.00010	mg/L	NC	20
8079870	Dissolved Phosphorus (P)	2015/10/20	94	80 - 120	101	80 - 120	<0.0020	mg/L	NC	20
8079873	Dissolved Phosphorus (P)	2015/10/20	91	80 - 120	97	80 - 120	<0.0020	mg/L		
8079874	Total Phosphorus (P)	2015/10/20	95	80 - 120	100	80 - 120	<0.0020	mg/L	NC	20
8079924	Dissolved Chloride (Cl)	2015/10/19	106	80 - 120	95	80 - 120	<0.50	mg/L	NC	20
8079926	Dissolved Sulphate (SO4)	2015/10/19	102	80 - 120	99	80 - 120	0.56, RDL=0.50	mg/L	NC	20
8080110	Total Aluminum (Al)	2015/10/20	NC	80 - 120	103	80 - 120	0.0034, RDL=0.0030	mg/L		
8080110	Total Antimony (Sb)	2015/10/20	98	80 - 120	102	80 - 120	<0.000050	mg/L		
8080110	Total Arsenic (As)	2015/10/20	110	80 - 120	99	80 - 120	<0.000020	mg/L		
8080110	Total Barium (Ba)	2015/10/20	NC	80 - 120	104	80 - 120	<0.00010	mg/L		
8080110	Total Beryllium (Be)	2015/10/20	110	80 - 120	108	80 - 120	<0.000010	mg/L		
8080110	Total Bismuth (Bi)	2015/10/20	99	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8080110	Total Boron (B)	2015/10/20					<0.050	mg/L		
8080110	Total Cadmium (Cd)	2015/10/20	97	80 - 120	97	80 - 120	<0.0000050	mg/L		
8080110	Total Chromium (Cr)	2015/10/20	NC	80 - 120	101	80 - 120	<0.00050	mg/L		
8080110	Total Cobalt (Co)	2015/10/20	103	80 - 120	105	80 - 120	<0.000010	mg/L		
8080110	Total Copper (Cu)	2015/10/20	97	80 - 120	107	80 - 120	<0.00020	mg/L		
8080110	Total Iron (Fe)	2015/10/20	NC	80 - 120	104	80 - 120	<0.0050	mg/L		
8080110	Total Lead (Pb)	2015/10/20	103	80 - 120	103	80 - 120	<0.000050	mg/L		
8080110	Total Lithium (Li)	2015/10/20	NC	80 - 120	98	80 - 120	<0.00050	mg/L		
8080110	Total Manganese (Mn)	2015/10/20	NC	80 - 120	99	80 - 120	<0.00010	mg/L		
8080110	Total Molybdenum (Mo)	2015/10/20	NC	80 - 120	97	80 - 120	<0.000050	mg/L		
8080110	Total Nickel (Ni)	2015/10/20	NC	80 - 120	103	80 - 120	<0.00010	mg/L		
8080110	Total Phosphorus (P)	2015/10/20					<0.010	mg/L		
8080110	Total Selenium (Se)	2015/10/20	NC	80 - 120	95	80 - 120	<0.000040	mg/L		
8080110	Total Silicon (Si)	2015/10/20					<0.10	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8080110	Total Silver (Ag)	2015/10/20	98	80 - 120	101	80 - 120	<0.0000050	mg/L		
8080110	Total Strontium (Sr)	2015/10/20	NC	80 - 120	93	80 - 120	<0.000050	mg/L		
8080110	Total Thallium (Tl)	2015/10/20	97	80 - 120	98	80 - 120	<0.0000020	mg/L		
8080110	Total Tin (Sn)	2015/10/20	91	80 - 120	98	80 - 120	<0.00020	mg/L		
8080110	Total Titanium (Ti)	2015/10/20	112	80 - 120	95	80 - 120	<0.0050	mg/L		
8080110	Total Uranium (U)	2015/10/20	NC	80 - 120	102	80 - 120	<0.0000050	mg/L		
8080110	Total Vanadium (V)	2015/10/20	NC	80 - 120	111	80 - 120	0.00084, RDL=0.00050	mg/L		
8080110	Total Zinc (Zn)	2015/10/20	97	80 - 120	103	80 - 120	<0.0010	mg/L		
8080110	Total Zirconium (Zr)	2015/10/20					<0.00010	mg/L		
8080489	Dissolved Aluminum (Al)	2015/10/21	109	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8080489	Dissolved Antimony (Sb)	2015/10/21	106	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8080489	Dissolved Arsenic (As)	2015/10/21	101	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8080489	Dissolved Barium (Ba)	2015/10/21	107	80 - 120	103	80 - 120	<0.000020	mg/L	2.1	20
8080489	Dissolved Beryllium (Be)	2015/10/21	102	80 - 120	99	80 - 120	<0.000010	mg/L	NC	20
8080489	Dissolved Bismuth (Bi)	2015/10/21	101	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8080489	Dissolved Boron (B)	2015/10/21					<0.010	mg/L	NC	20
8080489	Dissolved Cadmium (Cd)	2015/10/21	99	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8080489	Dissolved Chromium (Cr)	2015/10/21	103	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
8080489	Dissolved Cobalt (Co)	2015/10/21	105	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8080489	Dissolved Copper (Cu)	2015/10/21	104	80 - 120	101	80 - 120	<0.000050	mg/L	2.9	20
8080489	Dissolved Iron (Fe)	2015/10/21	107	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20
8080489	Dissolved Lead (Pb)	2015/10/21	105	80 - 120	99	80 - 120	<0.0000050	mg/L	2.3	20
8080489	Dissolved Lithium (Li)	2015/10/21	96	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8080489	Dissolved Manganese (Mn)	2015/10/21	102	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
8080489	Dissolved Molybdenum (Mo)	2015/10/21	98	80 - 120	95	80 - 120	<0.000050	mg/L	NC	20
8080489	Dissolved Nickel (Ni)	2015/10/21	102	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8080489	Dissolved Phosphorus (P)	2015/10/21					<0.0020	mg/L		
8080489	Dissolved Selenium (Se)	2015/10/21	97	80 - 120	94	80 - 120	<0.000040	mg/L	NC	20
8080489	Dissolved Silicon (Si)	2015/10/21					<0.050	mg/L	NC	20
8080489	Dissolved Silver (Ag)	2015/10/21	105	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8080489	Dissolved Strontium (Sr)	2015/10/21	98	80 - 120	94	80 - 120	<0.000050	mg/L	1.6	20
8080489	Dissolved Thallium (Tl)	2015/10/21	103	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8080489	Dissolved Tin (Sn)	2015/10/21	100	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
8080489	Dissolved Titanium (Ti)	2015/10/21	102	80 - 120	93	80 - 120	<0.00050	mg/L	NC	20
8080489	Dissolved Uranium (U)	2015/10/21	103	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8080489	Dissolved Vanadium (V)	2015/10/21	103	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8080489	Dissolved Zinc (Zn)	2015/10/21	104	80 - 120	99	80 - 120	<0.00010	mg/L	11	20
8080489	Dissolved Zirconium (Zr)	2015/10/21					<0.00010	mg/L	NC	20
8080854	Total Suspended Solids	2015/10/21			98	80 - 120	<1.0	mg/L		
8080916	Alkalinity (PP as CaCO3)	2015/10/20					<0.50	mg/L	NC	20
8080916	Alkalinity (Total as CaCO3)	2015/10/20	NC	80 - 120	96	80 - 120	<0.50	mg/L	0.75	20
8080916	Bicarbonate (HCO3)	2015/10/20					<0.50	mg/L	0.75	20
8080916	Carbonate (CO3)	2015/10/20					<0.50	mg/L	NC	20
8080916	Hydroxide (OH)	2015/10/20					<0.50	mg/L	NC	20
8080922	Conductivity	2015/10/20			101	80 - 120	<1.0	uS/cm	0.25	20
8080924	pH	2015/10/20			101	97 - 103			0.30	N/A
8080929	pH	2015/10/21			101	97 - 103			0.25	N/A
8080935	Conductivity	2015/10/21			101	80 - 120	<1.0	uS/cm	0	20
8080938	Alkalinity (PP as CaCO3)	2015/10/21					<0.50	mg/L	NC	20
8080938	Alkalinity (Total as CaCO3)	2015/10/21	NC	80 - 120	97	80 - 120	<0.50	mg/L	1.3	20
8080938	Bicarbonate (HCO3)	2015/10/21					<0.50	mg/L	1.3	20
8080938	Carbonate (CO3)	2015/10/21					<0.50	mg/L	NC	20
8080938	Hydroxide (OH)	2015/10/21					<0.50	mg/L	NC	20
8081066	Fluoride (F)	2015/10/19	95	80 - 120	98	80 - 120	0.010, RDL=0.010	mg/L	NC	20
8081096	Fluoride (F)	2015/10/19	100	80 - 120	96	80 - 120	<0.010	mg/L	NC	20
8081225	Acidity (pH 4.5)	2015/10/20					<0.50	mg/L	NC	20
8081225	Acidity (pH 8.3)	2015/10/20			103	80 - 120	<0.50	mg/L	17	20
8081302	Acidity (pH 4.5)	2015/10/20					<0.50	mg/L	NC	20
8081302	Acidity (pH 8.3)	2015/10/20			102	80 - 120	<0.50	mg/L	1.9	20
8081308	Acidity (pH 4.5)	2015/10/20					<0.50	mg/L	3.4	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8081308	Acidity (pH 8.3)	2015/10/20			102	80 - 120	<0.50	mg/L	1.6	20
8081353	Dissolved Aluminum (Al)	2015/10/20	100	80 - 120	96	80 - 120	<0.00050	mg/L	0.66	20
8081353	Dissolved Antimony (Sb)	2015/10/20	103	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8081353	Dissolved Arsenic (As)	2015/10/20	101	80 - 120	97	80 - 120	<0.000020	mg/L	0.59	20
8081353	Dissolved Barium (Ba)	2015/10/20	NC	80 - 120	103	80 - 120	<0.000020	mg/L	2.1	20
8081353	Dissolved Beryllium (Be)	2015/10/20	106	80 - 120	95	80 - 120	<0.000010	mg/L	NC	20
8081353	Dissolved Bismuth (Bi)	2015/10/20	98	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8081353	Dissolved Boron (B)	2015/10/20					<0.010	mg/L	NC	20
8081353	Dissolved Cadmium (Cd)	2015/10/20	98	80 - 120	95	80 - 120	<0.0000050	mg/L	NC	20
8081353	Dissolved Chromium (Cr)	2015/10/20	97	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
8081353	Dissolved Cobalt (Co)	2015/10/20	101	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8081353	Dissolved Copper (Cu)	2015/10/20	100	80 - 120	102	80 - 120	<0.000050	mg/L	1.4	20
8081353	Dissolved Iron (Fe)	2015/10/20	105	80 - 120	106	80 - 120	<0.0010	mg/L	1.3	20
8081353	Dissolved Lead (Pb)	2015/10/20	100	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8081353	Dissolved Lithium (Li)	2015/10/20	103	80 - 120	87	80 - 120	<0.00050	mg/L	NC	20
8081353	Dissolved Manganese (Mn)	2015/10/20	NC	80 - 120	98	80 - 120	<0.000050	mg/L	0.81	20
8081353	Dissolved Molybdenum (Mo)	2015/10/20	NC	80 - 120	90	80 - 120	<0.000050	mg/L	1.0	20
8081353	Dissolved Nickel (Ni)	2015/10/20	98	80 - 120	99	80 - 120	<0.000020	mg/L	5.6	20
8081353	Dissolved Phosphorus (P)	2015/10/20					<0.0020	mg/L	NC	20
8081353	Dissolved Selenium (Se)	2015/10/20	96	80 - 120	95	80 - 120	<0.000040	mg/L	NC	20
8081353	Dissolved Silicon (Si)	2015/10/20					<0.050	mg/L	0.059	20
8081353	Dissolved Silver (Ag)	2015/10/20	101	80 - 120	95	80 - 120	<0.0000050	mg/L	NC	20
8081353	Dissolved Strontium (Sr)	2015/10/20	NC	80 - 120	94	80 - 120	<0.000050	mg/L	2.2	20
8081353	Dissolved Thallium (Tl)	2015/10/20	93	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8081353	Dissolved Tin (Sn)	2015/10/20	96	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8081353	Dissolved Titanium (Ti)	2015/10/20	93	80 - 120	94	80 - 120	<0.00050	mg/L	NC	20
8081353	Dissolved Uranium (U)	2015/10/20	101	80 - 120	101	80 - 120	<0.0000020	mg/L	1.2	20
8081353	Dissolved Vanadium (V)	2015/10/20	103	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
8081353	Dissolved Zinc (Zn)	2015/10/20	100	80 - 120	99	80 - 120	<0.00010	mg/L	2.2	20
8081353	Dissolved Zirconium (Zr)	2015/10/20					<0.00010	mg/L	NC	20
8082220	Dissolved Chloride (Cl)	2015/10/20			100	80 - 120	0.63, RDL=0.50	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8082224	Dissolved Sulphate (SO4)	2015/10/20	120	80 - 120	94	80 - 120	0.60, RDL=0.50	mg/L	30 (1)	20
8082414	Total Suspended Solids	2015/10/21			98	80 - 120	<1.0	mg/L		
8082911	Strong Acid Dissoc. Cyanide (CN)	2015/10/21	97	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8082940	Strong Acid Dissoc. Cyanide (CN)	2015/10/21	101	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8082961	Weak Acid Dissoc. Cyanide (CN)	2015/10/21	98	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8083974	Dissolved Mercury (Hg)	2015/10/22	96	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8084187	Total Mercury (Hg)	2015/10/22	103	80 - 120	94	80 - 120	<0.0000020	mg/L	NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B591947
Report Date: 2015/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Name Data Validation Coordinator

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

B591947

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5 Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC # 08412767

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria		Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil	[ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify)	[ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water	[ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-2	NK2704	2015/10/15	12:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
2	KZ-7	NK2705	2015/10/14	10:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
3	KZ-9	NK2706	2015/10/15	10:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
4	KZ-13	NK2707	2015/10/14	12:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
5	KZ-15	NK2708	2015/10/14	14:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
6	KZ-16	NK2709	2015/10/14	15:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
7	KZ-17	NK2710	2015/10/14	15:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
8	KZ-19	NK2711	2015/10/15	13:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
9	KZ-21	NK2712	2015/10/15	15:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
10	KZ-22	NK2713	2015/10/14	16:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		

LABORATORY USE ONLY

CUSTODY SEAL Y / N N/A Present	CUSTODY SEAL Y / N N/A Intact	COOLER TEMPERATURES
N/A	N/A	3, 2, 3
N/A	N/A	3, 3, 4
N/A	N/A	4, 3, 3 / 3, 5, 4

COOLING MEDIA PRESENT Y / N

B591947

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2015/10/16	14:00	Signature Redacted	2015/10/17	08:40	B591947

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC # 08412768

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-26	NK2724	2015/10/15	16:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
2	KZ-28	NK2725	2015/10/14	13:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
3	Trip Blank	NK2726	—	—	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
4	KZ-9 west seep	NK2727	2015/10/15	9:40	"		x		x			x	x	x	x							4		General package, Anions, Dmetals (excl. Hg)
5	KZ-9 east seep	NK2728	2015/10/15	9:50	"		x		x			x	x	x	x							4		"
6	seep 4	NK2729	2015/10/15	13:50	"		x		x			x	x	x	x							4		"
7	seep 3	NK2730	2015/10/16	9:05	"		x		x			x	x	x	x							4		"
8	seep 5	NK2731	2015/10/16	8:35	"		x		x			x	x	x	x							4		"
9																								
10																								

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
N/A	N/A	3, 2, 3
N/A	N/A	3, 3, 4
N/A	N/A	4, 3, 3 / 3, 5, 4

COOLING MEDIA PRESENT (Y) / N

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2015/10/16	14:00	Signature Redacted	2015/10/17	08:40	B591947

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08413453

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/11/18
Report #: R2081233
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B5A0442
Received: 2015/11/10, 09:20

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	1	N/A	2015/11/13	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	1	2015/11/10	2015/11/10	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	1	N/A	2015/11/12	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	1	N/A	2015/11/16	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	1	N/A	2015/11/16	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	1	N/A	2015/11/12	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	1	N/A	2015/11/13	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	1	N/A	2015/11/10	BBY6SOP-00026	SM 22 2510 B m
Fluoride	1	N/A	2015/11/12	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	1	N/A	2015/11/13	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	1	N/A	2015/11/12	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	1	N/A	2015/11/13	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	1	2015/11/13	2015/11/13	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2015/11/12	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	1	N/A	2015/11/12	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2015/11/13	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	1	N/A	2015/11/12	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	1	N/A	2015/11/10	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	1	N/A	2015/11/10	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	1	N/A	2015/11/10	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	1	N/A	2015/11/12	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	1	N/A	2015/11/10	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	1	N/A	2015/11/10	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	1	N/A	2015/11/12	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - FF/FP	1	2015/11/12	2015/11/12	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	1	N/A	2015/11/12	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	1	2015/11/12	2015/11/13	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08413453

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/11/18
Report #: R2081233
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B5A0442
Received: 2015/11/10, 09:20

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NP5779		
Sampling Date		2015/11/06 15:00		
COC Number		08413453		
	UNITS	KZ-13	RDL	QC Batch
Misc. Inorganics				
Acidity (pH 4.5)	mg/L	<0.50	0.50	8112180
Acidity (pH 8.3)	mg/L	0.56	0.50	8112180
Calculated Parameters				
Filter and HNO3 Preservation	N/A	LAB	N/A	8108330
Nitrate (N)	mg/L	0.0793	0.0020	8108185
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00057	0.00050	8114366
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8114401
Fluoride (F)	mg/L	0.044	0.010	8111038
Dissolved Organic Carbon (C)	mg/L	3.71	0.50	8112477
Alkalinity (Total as CaCO3)	mg/L	66.3	0.50	8109230
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8109230
Bicarbonate (HCO3)	mg/L	80.9	0.50	8109230
Carbonate (CO3)	mg/L	<0.50	0.50	8109230
Hydroxide (OH)	mg/L	<0.50	0.50	8109230
Anions				
Dissolved Sulphate (SO4)	mg/L	16.0	0.50	8110898
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8110892
MISCELLANEOUS				
True Colour	Col. Unit	13.6	5.0	8111481
Nutrients				
Dissolved Phosphorus (P)	mg/L	0.0044	0.0020	8111493
Total Ammonia (N)	mg/L	<0.0050 (1)	0.0050	8108999
Nitrate plus Nitrite (N)	mg/L	0.0793 (1)	0.0020	8109063
Nitrite (N)	mg/L	<0.0020 (1)	0.0020	8109073
Total Phosphorus (P)	mg/L	0.0029 (1)	0.0020	8111489
Physical Properties				
Conductivity	uS/cm	166	1.0	8109234
pH	pH	8.07	N/A	8109233
Physical Properties				
Total Suspended Solids	mg/L	1.3	1.0	8110940

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NP5779		
Sampling Date		2015/11/06 15:00		
COC Number		08413453		
	UNITS	KZ-13	RDL	QC Batch
Misc. Inorganics				
Dissolved Hardness (CaCO3)	mg/L	78.4	0.50	8108384
Elements				
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000020	8112092
Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	mg/L	0.0220	0.00050	8110655
Dissolved Antimony (Sb)	mg/L	0.000030	0.000020	8110655
Dissolved Arsenic (As)	mg/L	0.000172	0.000020	8110655
Dissolved Barium (Ba)	mg/L	0.103	0.000020	8110655
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000010	8110655
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8110655
Dissolved Boron (B)	mg/L	<0.010	0.010	8110655
Dissolved Cadmium (Cd)	mg/L	0.0000220	0.0000050	8110655
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00010	8110655
Dissolved Cobalt (Co)	mg/L	0.0000240	0.0000050	8110655
Dissolved Copper (Cu)	mg/L	0.000571	0.000050	8110655
Dissolved Iron (Fe)	mg/L	0.0291	0.0010	8110655
Dissolved Lead (Pb)	mg/L	0.0000460	0.0000050	8110655
Dissolved Lithium (Li)	mg/L	0.00080	0.00050	8110655
Dissolved Manganese (Mn)	mg/L	0.0226	0.000050	8110655
Dissolved Molybdenum (Mo)	mg/L	0.000714	0.000050	8110655
Dissolved Nickel (Ni)	mg/L	0.000358	0.000020	8110655
Dissolved Phosphorus (P)	mg/L	0.0124	0.0020	8110655
Dissolved Selenium (Se)	mg/L	0.000248	0.000040	8110655
Dissolved Silicon (Si)	mg/L	3.05	0.050	8110655
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	8110655
Dissolved Strontium (Sr)	mg/L	0.0757	0.000050	8110655
Dissolved Thallium (Tl)	mg/L	0.0000020	0.0000020	8110655
Dissolved Tin (Sn)	mg/L	<0.00020	0.00020	8110655
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00050	8110655
Dissolved Uranium (U)	mg/L	0.000781	0.0000020	8110655
Dissolved Vanadium (V)	mg/L	<0.00020	0.00020	8110655
Dissolved Zinc (Zn)	mg/L	0.00261	0.00010	8110655
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00010	8110655
Dissolved Calcium (Ca)	mg/L	26.5	0.050	8108485
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NP5779		
Sampling Date		2015/11/06 15:00		
COC Number		08413453		
	UNITS	**KZ-13**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	2.97	0.050	8108485
Dissolved Potassium (K)	mg/L	1.65	0.050	8108485
Dissolved Sodium (Na)	mg/L	1.20	0.050	8108485
Dissolved Sulphur (S)	mg/L	4.9	3.0	8108485
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NP5779		
Sampling Date		2015/11/06 15:00		
COC Number		08413453		
	UNITS	KZ-13	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	83.4	0.50	8108183
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8112135
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.0347	0.00050	8110793
Total Antimony (Sb)	mg/L	0.000036	0.000020	8110793
Total Arsenic (As)	mg/L	0.000218	0.000020	8110793
Total Barium (Ba)	mg/L	0.108	0.000020	8110793
Total Beryllium (Be)	mg/L	<0.000010	0.000010	8110793
Total Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8110793
Total Boron (B)	mg/L	<0.010	0.010	8110793
Total Cadmium (Cd)	mg/L	0.0000410	0.0000050	8110793
Total Chromium (Cr)	mg/L	0.00012	0.00010	8110793
Total Cobalt (Co)	mg/L	0.0000490	0.0000050	8110793
Total Copper (Cu)	mg/L	0.000521	0.000050	8110793
Total Iron (Fe)	mg/L	0.103	0.0010	8110793
Total Lead (Pb)	mg/L	0.0000850	0.0000050	8110793
Total Lithium (Li)	mg/L	0.00104	0.00050	8110793
Total Manganese (Mn)	mg/L	0.0376	0.000050	8110793
Total Molybdenum (Mo)	mg/L	0.000676	0.000050	8110793
Total Nickel (Ni)	mg/L	0.000430	0.000020	8110793
Total Phosphorus (P)	mg/L	0.0116	0.0020	8110793
Total Selenium (Se)	mg/L	0.000251	0.000040	8110793
Total Silicon (Si)	mg/L	3.50	0.050	8110793
Total Silver (Ag)	mg/L	<0.0000050	0.0000050	8110793
Total Strontium (Sr)	mg/L	0.0852	0.000050	8110793
Total Thallium (Tl)	mg/L	<0.0000020	0.0000020	8110793
Total Tin (Sn)	mg/L	<0.00020	0.00020	8110793
Total Titanium (Ti)	mg/L	0.00169	0.00050	8110793
Total Uranium (U)	mg/L	0.000804	0.0000020	8110793
Total Vanadium (V)	mg/L	<0.00020	0.00020	8110793
Total Zinc (Zn)	mg/L	0.00421	0.00010	8110793
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8110793
Total Calcium (Ca)	mg/L	28.3	0.050	8108486
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NP5779		
Sampling Date		2015/11/06 15:00		
COC Number		08413453		
	UNITS	**KZ-13**	**RDL**	**QC Batch**
Total Magnesium (Mg)	mg/L	3.10	0.050	8108486
Total Potassium (K)	mg/L	1.81	0.050	8108486
Total Sodium (Na)	mg/L	1.11	0.050	8108486
Total Sulphur (S)	mg/L	4.7	3.0	8108486
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

TEST SUMMARY

Maxxam ID: NP5779
Sample ID: KZ-13
Matrix: Water

Collected: 2015/11/06
Shipped:
Received: 2015/11/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8112180	N/A	2015/11/13	Name Redacted
Alkalinity - Water	AT/ALK	8109230	2015/11/10	2015/11/10	
Chloride by Automated Colourimetry	KONE/COL	8110892	N/A	2015/11/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8114366	N/A	2015/11/16	
Cyanide WAD (weak acid dissociable)	TECH/COL	8114401	N/A	2015/11/16	
Colour (True) by Kone Lab	KONE	8111481	N/A	2015/11/12	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8112477	N/A	2015/11/13	
Conductance - water	AT/ALK	8109234	N/A	2015/11/10	
Fluoride	ISE/ISE	8111038	N/A	2015/11/12	
Hardness Total (calculated as CaCO3)	CALC	8108183	N/A	2015/11/13	
Hardness (calculated as CaCO3)	CALC	8108384	N/A	2015/11/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8112092	N/A	2015/11/13	
Mercury (Total-LowLevel) by CVAF	CV/AF	8112135	2015/11/13	2015/11/13	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8108485	N/A	2015/11/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8110655	N/A	2015/11/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8108486	N/A	2015/11/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8110793	N/A	2015/11/12	
Ammonia-N (Unpreserved)	KONE/COL	8108999	N/A	2015/11/10	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8109063	N/A	2015/11/10	
Nitrite (N) (low level)	TRAA/COL	8109073	N/A	2015/11/10	
Nitrogen - Nitrate (as N)	CALC	8108185	N/A	2015/11/12	
Filter and HNO3 Preserve for Metals	ICP	8108330	N/A	2015/11/10	
pH Water	AT/ALK	8109233	N/A	2015/11/10	
Sulphate by Automated Colourimetry	KONE/COL	8110898	N/A	2015/11/12	
Phosphorus-P (LL Tot, dissolved) - FF/FP	KONE/COL	8111493	2015/11/12	2015/11/12	
Total Phosphorus - unpreserved	KONE/COL	8111489	N/A	2015/11/12	
Total Suspended Solids-Low Level	BAL/BAL	8110940	2015/11/12	2015/11/13	

Maxxam ID: NP5779 Dup
Sample ID: KZ-13
Matrix: Water

Collected: 2015/11/06
Shipped:
Received: 2015/11/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8109230	2015/11/10	2015/11/10	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8114366	N/A	2015/11/16	
Cyanide WAD (weak acid dissociable)	TECH/COL	8114401	N/A	2015/11/16	
Colour (True) by Kone Lab	KONE	8111481	N/A	2015/11/12	
Conductance - water	AT/ALK	8109234	N/A	2015/11/10	
pH Water	AT/ALK	8109233	N/A	2015/11/10	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.0°C

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8108999	Total Ammonia (N)	2015/11/10	110	80 - 120	105	80 - 120	<0.0050	mg/L	NC	20
8109063	Nitrate plus Nitrite (N)	2015/11/10	NC	80 - 120	97	80 - 120	<0.0020	mg/L	0.62	25
8109073	Nitrite (N)	2015/11/10	103	80 - 120	101	80 - 120	<0.0020	mg/L	NC	25
8109230	Alkalinity (PP as CaCO3)	2015/11/10					<0.50	mg/L	NC	20
8109230	Alkalinity (Total as CaCO3)	2015/11/10	NC	80 - 120	94	80 - 120	0.82, RDL=0.50	mg/L	0.15	20
8109230	Bicarbonate (HCO3)	2015/11/10					1.00, RDL=0.50	mg/L	0.15	20
8109230	Carbonate (CO3)	2015/11/10					<0.50	mg/L	NC	20
8109230	Hydroxide (OH)	2015/11/10					<0.50	mg/L	NC	20
8109233	pH	2015/11/10			102	97 - 103			0.50	N/A
8109234	Conductivity	2015/11/10			102	80 - 120	1.1, RDL=1.0	uS/cm	0.18	20
8110655	Dissolved Aluminum (Al)	2015/11/12	97	80 - 120	105	80 - 120	<0.00050	mg/L	0.90	20
8110655	Dissolved Antimony (Sb)	2015/11/12	97	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8110655	Dissolved Arsenic (As)	2015/11/12	93	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8110655	Dissolved Barium (Ba)	2015/11/12	104	80 - 120	108	80 - 120	<0.000020	mg/L	NC	20
8110655	Dissolved Beryllium (Be)	2015/11/12	92	80 - 120	101	80 - 120	<0.000010	mg/L	NC	20
8110655	Dissolved Bismuth (Bi)	2015/11/12	96	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8110655	Dissolved Boron (B)	2015/11/12					<0.010	mg/L	NC	20
8110655	Dissolved Cadmium (Cd)	2015/11/12	85	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8110655	Dissolved Chromium (Cr)	2015/11/12	95	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20
8110655	Dissolved Cobalt (Co)	2015/11/12	95	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8110655	Dissolved Copper (Cu)	2015/11/12	96	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8110655	Dissolved Iron (Fe)	2015/11/12	96	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
8110655	Dissolved Lead (Pb)	2015/11/12	101	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8110655	Dissolved Lithium (Li)	2015/11/12	94	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8110655	Dissolved Manganese (Mn)	2015/11/12	96	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8110655	Dissolved Molybdenum (Mo)	2015/11/12	93	80 - 120	96	80 - 120	<0.000050	mg/L	NC	20
8110655	Dissolved Nickel (Ni)	2015/11/12	94	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8110655	Dissolved Phosphorus (P)	2015/11/12					<0.0020	mg/L	NC	20
8110655	Dissolved Selenium (Se)	2015/11/12	90	80 - 120	98	80 - 120	<0.000040	mg/L	NC	20
8110655	Dissolved Silicon (Si)	2015/11/12					<0.050	mg/L	NC	20
8110655	Dissolved Silver (Ag)	2015/11/12	93	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8110655	Dissolved Strontium (Sr)	2015/11/12	95	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8110655	Dissolved Thallium (Tl)	2015/11/12	96	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8110655	Dissolved Tin (Sn)	2015/11/12	98	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
8110655	Dissolved Titanium (Ti)	2015/11/12	98	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8110655	Dissolved Uranium (U)	2015/11/12	102	80 - 120	108	80 - 120	<0.0000020	mg/L	NC	20
8110655	Dissolved Vanadium (V)	2015/11/12	92	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8110655	Dissolved Zinc (Zn)	2015/11/12	97	80 - 120	109	80 - 120	<0.00010	mg/L	NC	20
8110655	Dissolved Zirconium (Zr)	2015/11/12					<0.00010	mg/L	NC	20
8110793	Total Aluminum (Al)	2015/11/12	NC	80 - 120	102	80 - 120	<0.00050	mg/L	19	20
8110793	Total Antimony (Sb)	2015/11/12	97	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8110793	Total Arsenic (As)	2015/11/12	97	80 - 120	101	80 - 120	<0.000020	mg/L	6.4	20
8110793	Total Barium (Ba)	2015/11/12	NC	80 - 120	110	80 - 120	<0.000020	mg/L	1.9	20
8110793	Total Beryllium (Be)	2015/11/12	93	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8110793	Total Bismuth (Bi)	2015/11/12	90	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8110793	Total Boron (B)	2015/11/12					<0.010	mg/L	NC	20
8110793	Total Cadmium (Cd)	2015/11/12	91	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8110793	Total Chromium (Cr)	2015/11/12	93	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20
8110793	Total Cobalt (Co)	2015/11/12	92	80 - 120	105	80 - 120	<0.0000050	mg/L	7.2	20
8110793	Total Copper (Cu)	2015/11/12	89	80 - 120	103	80 - 120	<0.000050	mg/L	3.9	20
8110793	Total Iron (Fe)	2015/11/12	NC	80 - 120	111	80 - 120	<0.0010	mg/L	2.8	20
8110793	Total Lead (Pb)	2015/11/12	97	80 - 120	108	80 - 120	<0.0000050	mg/L	1.1	20
8110793	Total Lithium (Li)	2015/11/12	NC	80 - 120	94	80 - 120	<0.00050	mg/L	8.6	20
8110793	Total Manganese (Mn)	2015/11/12	NC	80 - 120	104	80 - 120	<0.000050	mg/L	0.23	20
8110793	Total Molybdenum (Mo)	2015/11/12	NC	80 - 120	98	80 - 120	<0.000050	mg/L	0.92	20
8110793	Total Nickel (Ni)	2015/11/12	90	80 - 120	103	80 - 120	<0.000020	mg/L	2.9	20
8110793	Total Phosphorus (P)	2015/11/12					<0.0020	mg/L		
8110793	Total Selenium (Se)	2015/11/12	96	80 - 120	98	80 - 120	<0.000040	mg/L	NC	20
8110793	Total Silicon (Si)	2015/11/12					<0.050	mg/L	18	20
8110793	Total Silver (Ag)	2015/11/12	92	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8110793	Total Strontium (Sr)	2015/11/12	NC	80 - 120	105	80 - 120	<0.000050	mg/L	2.3	20
8110793	Total Thallium (Tl)	2015/11/12	91	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8110793	Total Tin (Sn)	2015/11/12	96	80 - 120	107	80 - 120	<0.00020	mg/L	NC	20
8110793	Total Titanium (Ti)	2015/11/12	90	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
8110793	Total Uranium (U)	2015/11/12	101	80 - 120	109	80 - 120	<0.0000020	mg/L	1.5	20
8110793	Total Vanadium (V)	2015/11/12	93	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8110793	Total Zinc (Zn)	2015/11/12	117	80 - 120	107	80 - 120	0.00016, RDL=0.00010	mg/L	6.7	20
8110793	Total Zirconium (Zr)	2015/11/12					<0.00010	mg/L	NC	20
8110892	Dissolved Chloride (Cl)	2015/11/12	94	80 - 120	103	80 - 120	<0.50	mg/L	NC	20
8110898	Dissolved Sulphate (SO4)	2015/11/12			98	80 - 120	<0.50	mg/L		
8110940	Total Suspended Solids	2015/11/13			109	80 - 120	<1.0	mg/L		
8111038	Fluoride (F)	2015/11/12	NC	80 - 120	100	80 - 120	0.014, RDL=0.010	mg/L	0	20
8111481	True Colour	2015/11/12			108	80 - 120	<5.0	Col. Unit	NC	20
8111489	Total Phosphorus (P)	2015/11/12	91	80 - 120	92	80 - 120	<0.0020	mg/L	NC	20
8111493	Dissolved Phosphorus (P)	2015/11/12	91	80 - 120	102	80 - 120	<0.0020	mg/L	1.4	20
8112092	Dissolved Mercury (Hg)	2015/11/13	97	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8112135	Total Mercury (Hg)	2015/11/13	99	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	20
8112180	Acidity (pH 4.5)	2015/11/13					<0.50	mg/L	NC	20
8112180	Acidity (pH 8.3)	2015/11/13			101	80 - 120	<0.50	mg/L	NC	20
8112477	Dissolved Organic Carbon (C)	2015/11/13	NC	80 - 120	102	80 - 120	<0.50	mg/L	3.5	20
8114366	Strong Acid Dissoc. Cyanide (CN)	2015/11/16	98	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8114401	Weak Acid Dissoc. Cyanide (CN)	2015/11/16	100	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A0442
Report Date: 2015/11/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: ER

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Name Data Validation Coordinator

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

08413453

BBY FCD-00077/05

Page 2 2

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: BMC MINERALS LTD.	Company Name: ALEXCO ENVIRONMENTAL	Quotation #: B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:	Contact Name: KAI WOLOSHYN	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 530-1130 WEST PENDER ST	Address: UNIT 3 151 INDUSTRIAL RD	Project #: BMC-15-01	Rush TAT (Surcharges will be applied)
Vancouver, BC PC: V6E 4A4	Whitehorse, YK PC: V1A 2V3	Site Location: Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:	Phone: (867) 668-6463	Site #:	Date Required:
Email:	Email: kwoloshyn@alexcoresource.com	Sampled By: Signature	

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-13	WP5779	6-Nov	3pm	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
2																								
3																								
4																								
5																								
6																								
7																								
8																								
9																								
10																								

LABORATORY USE ONLY		
CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		1 1
COOLING MEDIA PRESENT Y / N		

B5A0442_COC

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	NOV 9	1pm	Signature Redacted	2015/11/10	09:20	B5A0442

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08413843, 08413844

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/11/30
Report #: R2087284
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B5A4311
Received: 2015/11/23, 09:32

Sample Matrix: Water
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	12	N/A	2015/11/24	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	12	2015/11/25	2015/11/25	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	10	N/A	2015/11/24	BBY6SOP-00011	SM 22 4500-Cl- G m
Chloride by Automated Colourimetry	2	N/A	2015/11/25	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	12	N/A	2015/11/25	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	12	N/A	2015/11/25	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	12	N/A	2015/11/24	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	11	N/A	2015/11/25	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2015/11/25	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	12	N/A	2015/11/25	BBY6SOP-00026	SM 22 2510 B m
Fluoride	12	N/A	2015/11/24	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	12	N/A	2015/11/25	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	12	N/A	2015/11/25	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	12	N/A	2015/11/24	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	12	2015/11/24	2015/11/24	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	12	N/A	2015/11/26	BBY WI-00033	SM 22 1030E
Sum of cations, anions	12	N/A	2015/11/25	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	12	N/A	2015/11/25	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	12	N/A	2015/11/24	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	12	N/A	2015/11/25	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	8	N/A	2015/11/24	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	4	N/A	2015/11/25	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	12	N/A	2015/11/25	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	12	N/A	2015/11/24	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	12	N/A	2015/11/24	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	12	N/A	2015/11/24	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	11	N/A	2015/11/23	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	12	N/A	2015/11/25	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	12	N/A	2015/11/24	BBY6SOP-00017	SM 22 4500-SO42- E m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08413843, 08413844

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/11/30
Report #: R2087284
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B5A4311
Received: 2015/11/23, 09:32

Sample Matrix: Water
Samples Received: 12

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Phosphorus-P (LL Tot, dissolved) - UF/UP	11	2015/11/25	2015/11/25	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2015/11/28	2015/11/28	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	11	N/A	2015/11/25	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	1	N/A	2015/11/28	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	12	2015/11/24	2015/11/25	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NR8577		NR8578		NR8579		
Sampling Date		2015/11/20 13:17		2015/11/20 11:15		2015/11/20 09:04		
COC Number		08413843		08413843		08413843		
	UNITS	KZ-2	QC Batch	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	8123319	<0.50	8123319	<0.50	0.50	8123319
Acidity (pH 8.3)	mg/L	<0.50	8123319	<0.50	8123319	<0.50	0.50	8123319
Calculated Parameters								
Anion Sum	meq/L	2.4	8122395	3.4	8122395	3.8	N/A	8122395
Cation Sum	meq/L	2.4	8122395	3.9	8122395	3.9	N/A	8122395
Filter and HNO3 Preservation	N/A	LAB	8121710	LAB	8121710	LAB	N/A	8121710
Ion Balance	N/A	0.97	8121740	1.1	8121740	1.0	0.010	8121740
Nitrate (N)	mg/L	0.134	8122397	0.0952	8122397	0.171	0.0020	8122397
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8125043	<0.00050	8125043	<0.00050	0.00050	8125043
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8125057	<0.00050	8125057	<0.00050	0.00050	8125057
Fluoride (F)	mg/L	0.058	8123943	0.071	8123943	0.079	0.010	8123943
Dissolved Organic Carbon (C)	mg/L	0.54	8124783	0.99	8124783	1.88	0.50	8124783
Alkalinity (Total as CaCO3)	mg/L	63.1	8124292	128	8124292	153	0.50	8124292
Alkalinity (PP as CaCO3)	mg/L	<0.50	8124292	<0.50	8124292	<0.50	0.50	8124292
Bicarbonate (HCO3)	mg/L	76.9	8124292	156	8124292	187	0.50	8124292
Carbonate (CO3)	mg/L	<0.50	8124292	<0.50	8124292	<0.50	0.50	8124292
Hydroxide (OH)	mg/L	<0.50	8124292	<0.50	8124292	<0.50	0.50	8124292
Anions								
Dissolved Sulphate (SO4)	mg/L	48.2	8123424	38.0	8123424	34.2	0.50	8123432
Dissolved Chloride (Cl)	mg/L	5.4	8124897	<0.50	8124897	0.52	0.50	8123428
MISCELLANEOUS								
True Colour	Col. Unit	<5.0 (1)	8124958	8.5 (1)	8124958	6.9 (1)	5.0	8124958
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	8125098	0.0024 (1)	8128660	<0.0020 (1)	0.0020	8125098
Total Ammonia (N)	mg/L	<0.0050 (1)	8125099	0.0131 (1)	8125099	0.0194 (1)	0.0050	8125099
Nitrate plus Nitrite (N)	mg/L	0.136 (1)	8123764	0.0972 (1)	8123764	0.171 (1)	0.0020	8123764
Nitrite (N)	mg/L	0.0021 (1)	8123768	0.0020 (1)	8123768	<0.0020 (1)	0.0020	8123768
Total Phosphorus (P)	mg/L	<0.0020 (1)	8125101	0.0030 (1)	8128662	0.0030 (1)	0.0020	8125101
Physical Properties								
Conductivity	uS/cm	239	8124293	329	8124293	362	1.0	8124293
pH	pH	7.73	8124296	8.16	8124296	8.15	N/A	8124296

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NR8577		NR8578		NR8579		
Sampling Date		2015/11/20 13:17		2015/11/20 11:15		2015/11/20 09:04		
COC Number		08413843		08413843		08413843		
	UNITS	KZ-2	QC Batch	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8122942	1.1	8122942	1.1	1.0	8122942
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NR8580	NR8581	NR8582	NR8583		
Sampling Date		2015/11/19 11:30	2015/11/19 12:44	2015/11/19 14:15	2015/11/20 15:00		
COC Number		08413843	08413843	08413843	08413843		
	UNITS	KZ-15	KZ-16	KZ-17	KZ-19	RDL	QC Batch
Misc. Inorganics							
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	<0.50	0.50	8123319
Acidity (pH 8.3)	mg/L	<0.50	1.37	<0.50	<0.50	0.50	8123319
Calculated Parameters							
Anion Sum	meq/L	4.3	4.3	4.3	0.020	N/A	8122395
Cation Sum	meq/L	4.3	4.5	4.3	0.0020	N/A	8122395
Filter and HNO3 Preservation	N/A	LAB	LAB	LAB	LAB	N/A	8121710
Ion Balance	N/A	1.0	1.0	1.0	0.10	0.010	8121740
Nitrate (N)	mg/L	0.188	0.223	0.156	<0.0020	0.0020	8122397
Misc. Inorganics							
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8125043
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8125057
Fluoride (F)	mg/L	0.093	0.071	0.110	0.012	0.010	8123943
Dissolved Organic Carbon (C)	mg/L	1.22	<0.50	1.58	0.82	0.50	8124783
Alkalinity (Total as CaCO3)	mg/L	181	178	177	0.97	0.50	8124292
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	<0.50	0.50	8124292
Bicarbonate (HCO3)	mg/L	221	217	216	1.18	0.50	8124292
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	<0.50	0.50	8124292
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	<0.50	0.50	8124292
Anions							
Dissolved Sulphate (SO4)	mg/L	33.1	32.8	34.7	<0.50	0.50	8123432
Dissolved Chloride (Cl)	mg/L	<0.50	1.1	0.66	<0.50	0.50	8123428
MISCELLANEOUS							
True Colour	Col. Unit	5.8 (1)	5.0 (1)	5.1 (1)	<5.0 (2)	5.0	8124958
Nutrients							
Dissolved Phosphorus (P)	mg/L	0.0027 (1)	<0.0020 (1)	0.0028 (1)	<0.0020 (2)	0.0020	8125098
Total Ammonia (N)	mg/L	0.0089 (1)	<0.0050 (1)	<0.0050 (1)	0.0063 (2)	0.0050	8125099
Nitrate plus Nitrite (N)	mg/L	0.188 (1)	0.223 (1)	0.156 (1)	<0.0020 (2)	0.0020	8123764
Nitrite (N)	mg/L	<0.0020 (1)	<0.0020 (1)	<0.0020 (1)	<0.0020 (2)	0.0020	8123768
Total Phosphorus (P)	mg/L	<0.0020 (1)	<0.0020 (1)	0.0030 (1)	<0.0020 (2)	0.0020	8125108
Physical Properties							
Conductivity	uS/cm	406	403	399	2.5	1.0	8124293
pH	pH	8.42	8.10	8.26	5.82	N/A	8124296

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.
(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NR8580	NR8581	NR8582	NR8583		
Sampling Date		2015/11/19 11:30	2015/11/19 12:44	2015/11/19 14:15	2015/11/20 15:00		
COC Number		08413843	08413843	08413843	08413843		
	UNITS	KZ-15	KZ-16	KZ-17	KZ-19	RDL	QC Batch
Physical Properties							
Total Suspended Solids	mg/L	<1.0	<1.0	<1.0	<1.0	1.0	8122942
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NR8584		NR8585	NR8643		NR8644		
Sampling Date		2015/11/19 09:37		2015/11/18 15:22	2015/11/18 12:45		2015/11/18 13:15		
COC Number		08413843		08413843	08413844		08413844		
	UNITS	KZ-21	QC Batch	KZ-22	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Misc. Inorganics									
Acidity (pH 4.5)	mg/L	<0.50	8123319	<0.50	<0.50	8123319	<0.50	0.50	8123319
Acidity (pH 8.3)	mg/L	<0.50	8123319	<0.50	<0.50	8123319	<0.50	0.50	8123319
Calculated Parameters									
Anion Sum	meq/L	5.8	8122395	5.3	5.1	8122395	5.1	N/A	8122395
Cation Sum	meq/L	6.1	8122395	5.4	5.5	8122395	5.3	N/A	8122395
Filter and HNO3 Preservation	N/A	LAB	8121710	LAB	LAB	8121710	LAB	N/A	8121710
Ion Balance	N/A	1.0	8121740	1.0	1.1	8121740	1.0	0.010	8121740
Nitrate (N)	mg/L	0.0855	8122397	0.103	0.101	8122397	0.101	0.0020	8122397
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8125043	<0.00050	<0.00050	8125043	<0.00050	0.00050	8125043
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8125057	<0.00050	<0.00050	8125057	<0.00050	0.00050	8125057
Fluoride (F)	mg/L	0.190	8123943	0.140	0.120	8123943	0.120	0.010	8123943
Dissolved Organic Carbon (C)	mg/L	2.90	8124783	2.20	2.30	8124783	2.28	0.50	8124783
Alkalinity (Total as CaCO3)	mg/L	243	8124292	223	213	8124292	213	0.50	8124292
Alkalinity (PP as CaCO3)	mg/L	5.52	8124292	4.53	2.78	8124292	3.19	0.50	8124292
Bicarbonate (HCO3)	mg/L	283	8124292	261	254	8124292	253	0.50	8124292
Carbonate (CO3)	mg/L	6.62	8124292	5.44	3.34	8124292	3.83	0.50	8124292
Hydroxide (OH)	mg/L	<0.50	8124292	<0.50	<0.50	8124292	<0.50	0.50	8124292
Anions									
Dissolved Sulphate (SO4)	mg/L	42.8	8123432	40.4	40.9	8123432	40.7	0.50	8123432
Dissolved Chloride (Cl)	mg/L	0.67	8123428	0.63	<0.50	8123428	0.64	0.50	8123428
MISCELLANEOUS									
True Colour	Col. Unit	14.2 (1)	8124958	9.7 (1)	8.7 (1)	8124958	8.0 (1)	5.0	8124958
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0043 (1)	8125098	0.0035 (1)	<0.0020 (1)	8125098	<0.0020 (1)	0.0020	8125098
Total Ammonia (N)	mg/L	0.0585 (1)	8125099	0.0338 (1)	<0.0050 (1)	8125099	<0.0050 (1)	0.0050	8125099
Nitrate plus Nitrite (N)	mg/L	0.0881 (1)	8123764	0.103 (1)	0.101 (1)	8123764	0.101 (1)	0.0020	8123764
Nitrite (N)	mg/L	0.0026 (1)	8123768	<0.0020 (1)	<0.0020 (1)	8123768	<0.0020 (1)	0.0020	8123768
Total Phosphorus (P)	mg/L	0.0064 (1)	8125101	0.0026 (1)	0.0023 (1)	8125108	0.0024 (1)	0.0020	8125101
Physical Properties									
Conductivity	uS/cm	534	8124293	492	470	8124293	474	1.0	8124293
pH	pH	8.43	8124296	8.41	8.32	8124296	8.36	N/A	8124296

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NR8584		NR8585	NR8643		NR8644		
Sampling Date		2015/11/19 09:37		2015/11/18 15:22	2015/11/18 12:45		2015/11/18 13:15		
COC Number		08413843		08413843	08413844		08413844		
	UNITS	**KZ-21**	**QC Batch**	**KZ-22**	**KZ-26**	**QC Batch**	**KZ-28**	**RDL**	**QC Batch**
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8122942	<1.0	<1.0	8122942	<1.0	1.0	8122942
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NR8645		
Sampling Date		2015/11/23 09:32		
COC Number		08413844		
	UNITS	TRIP BLANK	RDL	QC Batch
Misc. Inorganics				
Acidity (pH 4.5)	mg/L	<0.50	0.50	8123319
Acidity (pH 8.3)	mg/L	<0.50	0.50	8123319
Calculated Parameters				
Anion Sum	meq/L	0.020	N/A	8122395
Cation Sum	meq/L	0.0014	N/A	8122395
Ion Balance	N/A	0.069	0.010	8121740
Nitrate (N)	mg/L	<0.0020	0.0020	8122397
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8125043
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8125057
Fluoride (F)	mg/L	0.012	0.010	8123943
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8124784
Alkalinity (Total as CaCO3)	mg/L	0.98	0.50	8124292
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8124292
Bicarbonate (HCO3)	mg/L	1.20	0.50	8124292
Carbonate (CO3)	mg/L	<0.50	0.50	8124292
Hydroxide (OH)	mg/L	<0.50	0.50	8124292
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8123432
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8123428
MISCELLANEOUS				
True Colour	Col. Unit	<5.0	5.0	8124958
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8125098
Total Ammonia (N)	mg/L	<0.0050	0.0050	8125099
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	8123764
Nitrite (N)	mg/L	<0.0020	0.0020	8123768
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8125101
Physical Properties				
Conductivity	uS/cm	<1.0	1.0	8124293
pH	pH	5.89	N/A	8124296
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8122942

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NR8577		NR8578		NR8579		
Sampling Date		2015/11/20 13:17		2015/11/20 11:15		2015/11/20 09:04		
COC Number		08413843		08413843		08413843		
	UNITS	KZ-2	QC Batch	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	114	8121658	188	8121658	192	0.50	8121658
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8123122	<0.0000020	8123122	<0.0000020	0.0000020	8123122
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00662	8123054	0.00691	8127531	0.00286	0.00050	8123054
Dissolved Antimony (Sb)	mg/L	0.000021	8123054	0.000052	8123054	0.000039	0.000020	8123054
Dissolved Arsenic (As)	mg/L	0.000078	8123054	0.000170	8123054	0.000158	0.000020	8123054
Dissolved Barium (Ba)	mg/L	0.0671	8123054	0.0911	8123054	0.0949	0.000020	8123054
Dissolved Beryllium (Be)	mg/L	<0.000010	8123054	<0.000010	8123054	<0.000010	0.000010	8123054
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8123054	<0.0000050	8123054	<0.0000050	0.0000050	8123054
Dissolved Boron (B)	mg/L	<0.010	8123054	<0.010	8123054	<0.010	0.010	8123054
Dissolved Cadmium (Cd)	mg/L	0.000198	8123054	0.0000710	8123054	0.0000610	0.0000050	8123054
Dissolved Chromium (Cr)	mg/L	<0.00010	8123054	<0.00010	8123054	<0.00010	0.00010	8123054
Dissolved Cobalt (Co)	mg/L	0.0000080	8123054	0.000100	8123054	0.000105	0.0000050	8123054
Dissolved Copper (Cu)	mg/L	0.000568	8123054	0.000303	8123054	0.000241	0.000050	8123054
Dissolved Iron (Fe)	mg/L	0.0012	8123054	0.0587	8123054	0.0672	0.0010	8123054
Dissolved Lead (Pb)	mg/L	0.0000150	8123054	0.0000080	8123054	<0.0000050	0.0000050	8123054
Dissolved Lithium (Li)	mg/L	0.00123	8123054	0.00263	8123054	0.00330	0.00050	8123054
Dissolved Manganese (Mn)	mg/L	<0.000050	8123054	0.130	8123054	0.0839	0.000050	8123054
Dissolved Molybdenum (Mo)	mg/L	0.000652	8123054	0.000617	8123054	0.000620	0.000050	8123054
Dissolved Nickel (Ni)	mg/L	0.000333 (1)	8123054	0.000492	8123054	0.000364	0.000020	8123054
Dissolved Phosphorus (P)	mg/L	0.0032	8123054	0.0026	8123054	<0.0020	0.0020	8123054
Dissolved Selenium (Se)	mg/L	0.00143	8123054	0.00111	8123054	0.00119	0.000040	8123054
Dissolved Silicon (Si)	mg/L	2.33	8123054	3.49	8123054	3.63	0.050	8123054
Dissolved Silver (Ag)	mg/L	<0.0000050	8123054	<0.0000050	8123054	<0.0000050	0.0000050	8123054
Dissolved Strontium (Sr)	mg/L	0.128	8123054	0.196	8123054	0.217	0.000050	8123054
Dissolved Thallium (Tl)	mg/L	0.0000020	8123054	0.0000020	8123054	<0.0000020	0.0000020	8123054
Dissolved Tin (Sn)	mg/L	<0.00020	8123054	<0.00020	8123054	<0.00020	0.00020	8123054
Dissolved Titanium (Ti)	mg/L	<0.00050	8123054	<0.00050	8123054	<0.00050	0.00050	8123054
Dissolved Uranium (U)	mg/L	0.00315	8123054	0.00136	8123054	0.00152	0.0000020	8123054
Dissolved Vanadium (V)	mg/L	<0.00020	8123054	<0.00020	8123054	<0.00020	0.00020	8123054
Dissolved Zinc (Zn)	mg/L	0.0270	8123054	0.0478	8123054	0.0182	0.00010	8123054
Dissolved Zirconium (Zr)	mg/L	<0.00010	8123054	<0.00010	8123054	<0.00010	0.00010	8123054
Dissolved Calcium (Ca)	mg/L	37.3	8121659	63.2	8126403	64.0	0.050	8121659

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NR8577		NR8578		NR8579		
Sampling Date		2015/11/20 13:17		2015/11/20 11:15		2015/11/20 09:04		
COC Number		08413843		08413843		08413843		
	UNITS	**KZ-2**	**QC Batch**	**KZ-7**	**QC Batch**	**KZ-9**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	4.94	8121659	7.28	8121659	7.76	0.050	8121659
Dissolved Potassium (K)	mg/L	2.19	8121659	1.72	8121659	1.72	0.050	8121659
Dissolved Sodium (Na)	mg/L	0.884	8121659	1.24	8121659	1.31	0.050	8121659
Dissolved Sulphur (S)	mg/L	16.1	8121659	12.4	8121659	11.5	3.0	8121659
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NR8580	NR8581	NR8582	NR8583	NR8584		
Sampling Date		2015/11/19 11:30	2015/11/19 12:44	2015/11/19 14:15	2015/11/20 15:00	2015/11/19 09:37		
COC Number		08413843	08413843	08413843	08413843	08413843		
	UNITS	KZ-15	KZ-16	KZ-17	KZ-19	KZ-21	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	212	219	212	<0.50	295	0.50	8121658
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8123122
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00411	0.00186	0.00182	<0.00050	0.00144	0.00050	8123054
Dissolved Antimony (Sb)	mg/L	0.000032	<0.000020	0.000039	<0.000020	0.000058	0.000020	8123054
Dissolved Arsenic (As)	mg/L	0.000344	0.000224	0.000447	<0.000020	0.000595	0.000020	8123054
Dissolved Barium (Ba)	mg/L	0.0817	0.0794	0.0778	0.000261	0.0711	0.000020	8123054
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8123054
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8123054
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8123054
Dissolved Cadmium (Cd)	mg/L	0.0000290	0.0000220	0.0000360	<0.0000050	0.0000120	0.0000050	8123054
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8123054
Dissolved Cobalt (Co)	mg/L	0.0000230	0.0000280	0.0000220	<0.0000050	0.0000610	0.0000050	8123054
Dissolved Copper (Cu)	mg/L	0.000253	0.000249	0.000278	<0.000050	0.000326 (1)	0.000050	8123054
Dissolved Iron (Fe)	mg/L	0.0076	0.0046	0.0094	<0.0010	0.0278	0.0010	8123054
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000240	<0.0000050	<0.0000050	0.0000180	0.0000050	8123054
Dissolved Lithium (Li)	mg/L	0.00301	0.00288	0.00311	<0.00050	0.00695	0.00050	8123054
Dissolved Manganese (Mn)	mg/L	0.0221	0.00829	0.0317	<0.000050	0.0737	0.000050	8123054
Dissolved Molybdenum (Mo)	mg/L	0.00104	0.000445	0.00165	<0.000050	0.00149	0.000050	8123054
Dissolved Nickel (Ni)	mg/L	0.000589	0.000511	0.000702	<0.000020	0.00183	0.000020	8123054
Dissolved Phosphorus (P)	mg/L	0.0029	0.0042	0.0033	<0.0020	0.0035	0.0020	8123054
Dissolved Selenium (Se)	mg/L	0.00122	0.00123	0.00134	<0.000040	0.000700	0.000040	8123054
Dissolved Silicon (Si)	mg/L	3.49	3.45	3.52	<0.050	6.17	0.050	8123054
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8123054
Dissolved Strontium (Sr)	mg/L	0.218	0.230	0.217	0.000151	0.248	0.000050	8123054
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8123054
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8123054
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8123054
Dissolved Uranium (U)	mg/L	0.00321	0.00226	0.00410	0.0000050	0.00330	0.0000020	8123054
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00029	<0.00020	0.00020	8123054
Dissolved Zinc (Zn)	mg/L	0.00390	0.00085	0.00606	<0.00010	0.00148	0.00010	8123054
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00013	0.00010	8123054
Dissolved Calcium (Ca)	mg/L	62.9	65.9	62.2	<0.050	71.2	0.050	8121659

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NR8580	NR8581	NR8582	NR8583	NR8584		
Sampling Date		2015/11/19 11:30	2015/11/19 12:44	2015/11/19 14:15	2015/11/20 15:00	2015/11/19 09:37		
COC Number		08413843	08413843	08413843	08413843	08413843		
	UNITS	**KZ-15**	**KZ-16**	**KZ-17**	**KZ-19**	**KZ-21**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	13.3	13.1	13.8	<0.050	28.6	0.050	8121659
Dissolved Potassium (K)	mg/L	1.37	1.38	1.40	<0.050	2.19	0.050	8121659
Dissolved Sodium (Na)	mg/L	1.23	1.31	1.23	<0.050	2.02	0.050	8121659
Dissolved Sulphur (S)	mg/L	10.7	11.3	11.1	<3.0	15.7	3.0	8121659
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NR8585		NR8643		NR8644		
Sampling Date		2015/11/18 15:22		2015/11/18 12:45		2015/11/18 13:15		
COC Number		08413843		08413844		08413844		
	UNITS	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	265	8121658	268	8121658	261	0.50	8121658
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8123122	<0.0000020	8123122	<0.0000020	0.0000020	8123122
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00168	8123054	0.00677 (1)	8124806	0.00662	0.00050	8123054
Dissolved Antimony (Sb)	mg/L	0.000047	8123054	0.000073	8123054	0.000079	0.000020	8123054
Dissolved Arsenic (As)	mg/L	0.000505	8123054	0.000413	8123054	0.000418	0.000020	8123054
Dissolved Barium (Ba)	mg/L	0.0758	8123054	0.0799	8123054	0.0849	0.000020	8123054
Dissolved Beryllium (Be)	mg/L	<0.000010	8123054	<0.000010	8123054	<0.000010	0.000010	8123054
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8123054	<0.0000050	8123054	<0.0000050	0.0000050	8123054
Dissolved Boron (B)	mg/L	<0.010	8123054	<0.010	8123054	<0.010	0.010	8123054
Dissolved Cadmium (Cd)	mg/L	0.0000130	8123054	0.0000080	8123054	0.0000090	0.0000050	8123054
Dissolved Chromium (Cr)	mg/L	<0.00010	8123054	<0.00010	8123054	<0.00010	0.00010	8123054
Dissolved Cobalt (Co)	mg/L	0.0000500	8123054	0.0000130	8123054	0.0000120	0.0000050	8123054
Dissolved Copper (Cu)	mg/L	0.000322	8123054	0.000442	8123054	0.000419	0.000050	8123054
Dissolved Iron (Fe)	mg/L	0.0281	8123054	0.0068	8123054	0.0069	0.0010	8123054
Dissolved Lead (Pb)	mg/L	0.0000240	8123054	0.0000140	8123054	0.0000100	0.0000050	8123054
Dissolved Lithium (Li)	mg/L	0.00598	8123054	0.00577	8123054	0.00608	0.00050	8123054
Dissolved Manganese (Mn)	mg/L	0.0369	8123054	0.00152	8123054	0.00144	0.000050	8123054
Dissolved Molybdenum (Mo)	mg/L	0.00116	8123054	0.000968	8123054	0.00104	0.000050	8123054
Dissolved Nickel (Ni)	mg/L	0.00113	8123054	0.000792	8123054	0.000761	0.000020	8123054
Dissolved Phosphorus (P)	mg/L	0.0058	8123054	0.0030	8123054	<0.0020	0.0020	8123054
Dissolved Selenium (Se)	mg/L	0.000957	8123054	0.000919	8123054	0.000925	0.000040	8123054
Dissolved Silicon (Si)	mg/L	4.67	8123054	4.40	8123054	4.83	0.050	8123054
Dissolved Silver (Ag)	mg/L	<0.0000050	8123054	<0.0000050	8123054	<0.0000050	0.0000050	8123054
Dissolved Strontium (Sr)	mg/L	0.231	8123054	0.244	8123054	0.238	0.000050	8123054
Dissolved Thallium (Tl)	mg/L	<0.0000020	8123054	<0.0000020	8123054	<0.0000020	0.0000020	8123054
Dissolved Tin (Sn)	mg/L	<0.00020	8123054	<0.00020	8123054	<0.00020	0.00020	8123054
Dissolved Titanium (Ti)	mg/L	<0.00050	8123054	<0.00050	8123054	<0.00050	0.00050	8123054
Dissolved Uranium (U)	mg/L	0.00333	8123054	0.00303	8123054	0.00316	0.0000020	8123054
Dissolved Vanadium (V)	mg/L	<0.00020	8123054	<0.00020	8123054	<0.00020	0.00020	8123054
Dissolved Zinc (Zn)	mg/L	0.00131	8123054	0.00060	8123054	0.00062	0.00010	8123054
Dissolved Zirconium (Zr)	mg/L	0.00011	8123054	<0.00010	8123054	<0.00010	0.00010	8123054
Dissolved Calcium (Ca)	mg/L	70.4	8121659	71.4	8121659	70.1	0.050	8121659

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NR8585		NR8643		NR8644		
Sampling Date		2015/11/18 15:22		2015/11/18 12:45		2015/11/18 13:15		
COC Number		08413843		08413844		08413844		
	UNITS	**KZ-22**	**QC Batch**	**KZ-26**	**QC Batch**	**KZ-28**	**RDL**	**QC Batch**
Dissolved Magnesium (Mg)	mg/L	21.7	8121659	21.7	8121659	21.0	0.050	8121659
Dissolved Potassium (K)	mg/L	1.73	8121659	1.63	8121659	1.55	0.050	8121659
Dissolved Sodium (Na)	mg/L	1.71	8121659	1.78	8121659	1.71	0.050	8121659
Dissolved Sulphur (S)	mg/L	13.4	8121659	13.4	8121659	13.4	3.0	8121659
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NR8645		
Sampling Date		2015/11/23 09:32		
COC Number		08413844		
	UNITS	TRIP BLANK	RDL	QC Batch
Misc. Inorganics				
Dissolved Hardness (CaCO3)	mg/L	<0.50	0.50	8121658
Elements				
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000020	8123122
Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	mg/L	<0.00050	0.00050	8123054
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000020	8123054
Dissolved Arsenic (As)	mg/L	<0.000020	0.000020	8123054
Dissolved Barium (Ba)	mg/L	<0.000020	0.000020	8123054
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000010	8123054
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8123054
Dissolved Boron (B)	mg/L	<0.010	0.010	8123054
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.0000050	8123054
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00010	8123054
Dissolved Cobalt (Co)	mg/L	<0.0000050	0.0000050	8123054
Dissolved Copper (Cu)	mg/L	<0.000050	0.000050	8123054
Dissolved Iron (Fe)	mg/L	<0.0010	0.0010	8123054
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000050	8123054
Dissolved Lithium (Li)	mg/L	0.00055	0.00050	8123054
Dissolved Manganese (Mn)	mg/L	<0.000050	0.000050	8123054
Dissolved Molybdenum (Mo)	mg/L	<0.000050	0.000050	8123054
Dissolved Nickel (Ni)	mg/L	<0.000020	0.000020	8123054
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8123054
Dissolved Selenium (Se)	mg/L	<0.000040	0.000040	8123054
Dissolved Silicon (Si)	mg/L	<0.050	0.050	8123054
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	8123054
Dissolved Strontium (Sr)	mg/L	<0.000050	0.000050	8123054
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000020	8123054
Dissolved Tin (Sn)	mg/L	<0.00020	0.00020	8123054
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00050	8123054
Dissolved Uranium (U)	mg/L	<0.0000020	0.0000020	8123054
Dissolved Vanadium (V)	mg/L	<0.00020	0.00020	8123054
Dissolved Zinc (Zn)	mg/L	<0.00010	0.00010	8123054
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00010	8123054
Dissolved Calcium (Ca)	mg/L	<0.050	0.050	8121659
Dissolved Magnesium (Mg)	mg/L	<0.050	0.050	8121659
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NR8645		
Sampling Date		2015/11/23 09:32		
COC Number		08413844		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Dissolved Potassium (K)	mg/L	<0.050	0.050	8121659
Dissolved Sodium (Na)	mg/L	<0.050	0.050	8121659
Dissolved Sulphur (S)	mg/L	<3.0	3.0	8121659
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NR8577	NR8578	NR8579	NR8580	NR8581		
Sampling Date		2015/11/20 13:17	2015/11/20 11:15	2015/11/20 09:04	2015/11/19 11:30	2015/11/19 12:44		
COC Number		08413843	08413843	08413843	08413843	08413843		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-15	KZ-16	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	112	168	186	219	213	0.50	8122111
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8123140
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00724	0.0195	0.0194	0.0103	0.00304	0.00050	8123042
Total Antimony (Sb)	mg/L	0.000026	0.000056	0.000043	0.000041	0.000022	0.000020	8123042
Total Arsenic (As)	mg/L	0.000077	0.000473	0.000377	0.000547	0.000201	0.000020	8123042
Total Barium (Ba)	mg/L	0.0685	0.0916	0.0949	0.0792	0.0858	0.000020	8123042
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8123042
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8123042
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8123042
Total Cadmium (Cd)	mg/L	0.000209	0.000296	0.0000970	0.0000480	0.0000220	0.0000050	8123042
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8123042
Total Cobalt (Co)	mg/L	0.0000090	0.000150	0.000127	0.0000610	0.0000260	0.0000050	8123042
Total Copper (Cu)	mg/L	0.000501	0.000534	0.000359	0.000331	0.000246	0.000050	8123042
Total Iron (Fe)	mg/L	0.0094	0.751	1.11	0.112	0.0179	0.0010	8123042
Total Lead (Pb)	mg/L	0.0000330	0.000201	0.0000780	0.00223	0.0000580	0.0000050	8123042
Total Lithium (Li)	mg/L	0.00145	0.00262	0.00341	0.00328	0.00302	0.00050	8123042
Total Manganese (Mn)	mg/L	0.000183	0.159	0.0888	0.0473	0.00916	0.000050	8123042
Total Molybdenum (Mo)	mg/L	0.000670	0.000571	0.000623	0.000998	0.000482	0.000050	8123042
Total Nickel (Ni)	mg/L	0.000267	0.000527	0.000414	0.000640	0.000461	0.000020	8123042
Total Phosphorus (P)	mg/L	<0.0020	0.0039	0.0086	0.0062	0.0029	0.0020	8123042
Total Selenium (Se)	mg/L	0.00147	0.00111	0.00126	0.00130	0.00126	0.000040	8123042
Total Silicon (Si)	mg/L	2.47	3.54	3.73	3.30	3.55	0.050	8123042
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000210	<0.0000050	0.0000050	8123042
Total Strontium (Sr)	mg/L	0.127	0.193	0.218	0.219	0.223	0.000050	8123042
Total Thallium (Tl)	mg/L	0.0000020	0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8123042
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8123042
Total Titanium (Ti)	mg/L	<0.00050	0.00080	0.00096	<0.00050	<0.00050	0.00050	8123042
Total Uranium (U)	mg/L	0.00311	0.00134	0.00148	0.00312	0.00240	0.0000020	8123042
Total Vanadium (V)	mg/L	<0.00020	0.00023	<0.00020	<0.00020	<0.00020	0.00020	8123042
Total Zinc (Zn)	mg/L	0.0253	0.0643	0.0212	0.00576	0.00077	0.00010	8123042
Total Zirconium (Zr)	mg/L	<0.00010	0.00011	<0.00010	<0.00010	<0.00010	0.00010	8123042
Total Calcium (Ca)	mg/L	36.9	55.5	61.8	65.9	64.1	0.050	8122396
Total Magnesium (Mg)	mg/L	4.76	7.12	7.70	13.1	12.8	0.050	8122396

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NR8577	NR8578	NR8579	NR8580	NR8581		
Sampling Date		2015/11/20 13:17	2015/11/20 11:15	2015/11/20 09:04	2015/11/19 11:30	2015/11/19 12:44		
COC Number		08413843	08413843	08413843	08413843	08413843		
	UNITS	**KZ-2**	**KZ-7**	**KZ-9**	**KZ-15**	**KZ-16**	**RDL**	**QC Batch**
Total Potassium (K)	mg/L	2.05	1.64	1.69	1.33	1.28	0.050	8122396
Total Sodium (Na)	mg/L	0.821	1.20	1.31	1.21	1.20	0.050	8122396
Total Sulphur (S)	mg/L	16.3	13.0	11.5	10.9	11.0	3.0	8122396
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NR8582	NR8583	NR8584		NR8585		
Sampling Date		2015/11/19 14:15	2015/11/20 15:00	2015/11/19 09:37		2015/11/18 15:22		
COC Number		08413843	08413843	08413843		08413843		
	UNITS	KZ-17	KZ-19	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	213	<0.50	286	8122111	264	0.50	8122111
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8123140	<0.0000020	0.0000020	8123140
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0189	0.00144	0.00329	8123042	0.00714	0.00050	8123275
Total Antimony (Sb)	mg/L	0.000043	<0.000020	0.000057	8123042	0.000047	0.000020	8123275
Total Arsenic (As)	mg/L	0.000719	<0.000020	0.000860	8123042	0.00113	0.000020	8123275
Total Barium (Ba)	mg/L	0.0770	0.000232	0.0697	8123042	0.0735	0.000020	8123275
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8123042	<0.000010	0.000010	8123275
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8123042	<0.0000050	0.0000050	8123275
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	8123042	<0.010	0.010	8123275
Total Cadmium (Cd)	mg/L	0.0000570	<0.0000050	0.0000110	8123042	0.0000170	0.0000050	8123275
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8123042	<0.00010	0.00010	8123275
Total Cobalt (Co)	mg/L	0.0000750	<0.0000050	0.0000710	8123042	0.0000870	0.0000050	8123275
Total Copper (Cu)	mg/L	0.000430	<0.000050	0.000258	8123042	0.000355	0.000050	8123275
Total Iron (Fe)	mg/L	0.159	<0.0010	0.125	8123042	0.255	0.0010	8123275
Total Lead (Pb)	mg/L	0.000115	<0.0000050	0.0000050	8123042	0.000109	0.0000050	8123275
Total Lithium (Li)	mg/L	0.00327	<0.00050	0.00714	8123042	0.00684	0.00050	8123275
Total Manganese (Mn)	mg/L	0.0690	<0.000050	0.0757	8123042	0.0553	0.000050	8123275
Total Molybdenum (Mo)	mg/L	0.00149	<0.000050	0.00147	8123042	0.00116	0.000050	8123275
Total Nickel (Ni)	mg/L	0.000788	<0.000020	0.00170	8123042	0.00115	0.000020	8123275
Total Phosphorus (P)	mg/L	0.0099	<0.0020	0.0084	8123042	0.0074	0.0020	8123275
Total Selenium (Se)	mg/L	0.00133	<0.000040	0.000744	8123042	0.000968	0.000040	8123275
Total Silicon (Si)	mg/L	3.67	<0.050	5.85	8123042	4.80	0.050	8123275
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8123042	<0.0000050	0.0000050	8123275
Total Strontium (Sr)	mg/L	0.216	0.000153	0.233	8123042	0.230	0.000050	8123275
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8123042	<0.0000020	0.0000020	8123275
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8123042	<0.00020	0.00020	8123275
Total Titanium (Ti)	mg/L	0.00096	0.00074	<0.00050	8123042	<0.00050	0.00050	8123275
Total Uranium (U)	mg/L	0.00412	0.0000050	0.00315	8123042	0.00331	0.0000020	8123275
Total Vanadium (V)	mg/L	<0.00020	0.00031	<0.00020	8123042	<0.00020	0.00020	8123275
Total Zinc (Zn)	mg/L	0.00820	<0.00010	0.00121	8123042	0.00196	0.00010	8123275
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00014	8123042	0.00014	0.00010	8123275
Total Calcium (Ca)	mg/L	62.2	<0.050	70.4	8122396	70.2	0.050	8122396
Total Magnesium (Mg)	mg/L	14.0	<0.050	26.7	8122396	21.6	0.050	8122396

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NR8582	NR8583	NR8584		NR8585		
Sampling Date		2015/11/19 14:15	2015/11/20 15:00	2015/11/19 09:37		2015/11/18 15:22		
COC Number		08413843	08413843	08413843		08413843		
	UNITS	KZ-17	KZ-19	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Total Potassium (K)	mg/L	1.40	<0.050	2.04	8122396	1.72	0.050	8122396
Total Sodium (Na)	mg/L	1.23	<0.050	1.94	8122396	1.74	0.050	8122396
Total Sulphur (S)	mg/L	11.1	<3.0	15.2	8122396	13.3	3.0	8122396
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NR8643	NR8644	NR8645		
Sampling Date		2015/11/18 12:45	2015/11/18 13:15	2015/11/23 09:32		
COC Number		08413844	08413844	08413844		
	UNITS	KZ-26	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	258	259	<0.50	0.50	8122111
Elements						
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8123140
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.00537	0.00981	<0.00050	0.00050	8123275
Total Antimony (Sb)	mg/L	0.000067	0.000071	<0.000020	0.000020	8123275
Total Arsenic (As)	mg/L	0.000509	0.000530	<0.000020	0.000020	8123275
Total Barium (Ba)	mg/L	0.0752	0.0772	<0.000020	0.000020	8123275
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8123275
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8123275
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	8123275
Total Cadmium (Cd)	mg/L	0.0000100	0.0000130	<0.0000050	0.0000050	8123275
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8123275
Total Cobalt (Co)	mg/L	0.0000220	0.0000330	<0.0000050	0.0000050	8123275
Total Copper (Cu)	mg/L	0.000490	0.000505	<0.000050	0.000050	8123275
Total Iron (Fe)	mg/L	0.0425	0.0634	<0.0010	0.0010	8123275
Total Lead (Pb)	mg/L	0.0000130	0.0000550	<0.0000050	0.0000050	8123275
Total Lithium (Li)	mg/L	0.00584	0.00644	0.00053	0.00050	8123275
Total Manganese (Mn)	mg/L	0.00487	0.00498	<0.000050	0.000050	8123275
Total Molybdenum (Mo)	mg/L	0.000944	0.000945	<0.000050	0.000050	8123275
Total Nickel (Ni)	mg/L	0.000744	0.000803	<0.000020	0.000020	8123275
Total Phosphorus (P)	mg/L	0.0055	0.0049	<0.0020	0.0020	8123275
Total Selenium (Se)	mg/L	0.000912	0.000908	<0.000040	0.000040	8123275
Total Silicon (Si)	mg/L	4.45	4.45	<0.050	0.050	8123275
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8123275
Total Strontium (Sr)	mg/L	0.236	0.236	<0.000050	0.000050	8123275
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8123275
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8123275
Total Titanium (Ti)	mg/L	<0.00050	0.00062	<0.00050	0.00050	8123275
Total Uranium (U)	mg/L	0.00289	0.00309	<0.0000020	0.0000020	8123275
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8123275
Total Zinc (Zn)	mg/L	0.00077	0.00096	<0.00010	0.00010	8123275
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8123275
Total Calcium (Ca)	mg/L	67.7	69.1	<0.050	0.050	8122396
Total Magnesium (Mg)	mg/L	21.7	20.9	<0.050	0.050	8122396

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NR8643	NR8644	NR8645		
Sampling Date		2015/11/18 12:45	2015/11/18 13:15	2015/11/23 09:32		
COC Number		08413844	08413844	08413844		
	UNITS	KZ-26	KZ-28	TRIP BLANK	RDL	QC Batch
Total Potassium (K)	mg/L	1.59	1.55	<0.050	0.050	8122396
Total Sodium (Na)	mg/L	1.70	1.75	<0.050	0.050	8122396
Total Sulphur (S)	mg/L	13.7	13.8	<3.0	3.0	8122396
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8577
Sample ID: KZ-2
Matrix: Water

Collected: 2015/11/20
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Name Redacted
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	
Chloride by Automated Colourimetry	KONE/COL	8124897	N/A	2015/11/25	
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	
Ion Balance	CALC	8121740	N/A	2015/11/26	
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8123054	N/A	2015/11/24	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8123042	N/A	2015/11/24	
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	
pH Water	AT/ALK	8124296	N/A	2015/11/25	
Sulphate by Automated Colourimetry	KONE/COL	8123424	N/A	2015/11/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	
Total Phosphorus - unpreserved	KONE/COL	8125101	N/A	2015/11/25	
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	

Maxxam ID: NR8577 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2015/11/20
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8123042	N/A	2015/11/24	
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8578
Sample ID: KZ-7
Matrix: Water

Collected: 2015/11/20
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Name Redacted
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	
Chloride by Automated Colourimetry	KONE/COL	8124897	N/A	2015/11/25	
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	
Ion Balance	CALC	8121740	N/A	2015/11/26	
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8127531	N/A	2015/11/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8123042	N/A	2015/11/24	
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	
pH Water	AT/ALK	8124296	N/A	2015/11/25	
Sulphate by Automated Colourimetry	KONE/COL	8123424	N/A	2015/11/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8128660	2015/11/28	2015/11/28	
Total Phosphorus - unpreserved	KONE/COL	8128662	N/A	2015/11/28	
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	

Maxxam ID: NR8578 Dup
Sample ID: KZ-7
Matrix: Water

Collected: 2015/11/20
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	Name Redacted

Maxxam ID: NR8579
Sample ID: KZ-9
Matrix: Water

Collected: 2015/11/20
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Name Redacted
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8579
Sample ID: KZ-9
Matrix: Water

Collected: 2015/11/20
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	
Ion Balance	CALC	8121740	N/A	2015/11/26	
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8123054	N/A	2015/11/24	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8123042	N/A	2015/11/24	
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	
pH Water	AT/ALK	8124296	N/A	2015/11/25	
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	
Total Phosphorus - unpreserved	KONE/COL	8125101	N/A	2015/11/25	
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	

Maxxam ID: NR8580
Sample ID: KZ-15
Matrix: Water

Collected: 2015/11/19
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Name Redacted
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8580
Sample ID: KZ-15
Matrix: Water

Collected: 2015/11/19
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance	CALC	8121740	N/A	2015/11/26	Name Redacted
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8123054	N/A	2015/11/24	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8123042	N/A	2015/11/24	
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	
pH Water	AT/ALK	8124296	N/A	2015/11/25	
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	
Total Phosphorus - unpreserved	KONE/COL	8125108	N/A	2015/11/25	
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	

Maxxam ID: NR8581
Sample ID: KZ-16
Matrix: Water

Collected: 2015/11/19
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Name Redacted
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	
Ion Balance	CALC	8121740	N/A	2015/11/26	
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8123054	N/A	2015/11/24	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8123042	N/A	2015/11/24	
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8581
Sample ID: KZ-16
Matrix: Water

Collected: 2015/11/19
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	Name Redacted
pH Water	AT/ALK	8124296	N/A	2015/11/25	
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	
Total Phosphorus - unpreserved	KONE/COL	8125108	N/A	2015/11/25	
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	

Maxxam ID: NR8581 Dup
Sample ID: KZ-16
Matrix: Water

Collected: 2015/11/19
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Name Redacted
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	

Maxxam ID: NR8582
Sample ID: KZ-17
Matrix: Water

Collected: 2015/11/19
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Name Redacted
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	
Ion Balance	CALC	8121740	N/A	2015/11/26	
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8123054	N/A	2015/11/24	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8123042	N/A	2015/11/24	
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8582
Sample ID: KZ-17
Matrix: Water

Collected: 2015/11/19
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH Water	AT/ALK	8124296	N/A	2015/11/25	Name Redacted
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	
Total Phosphorus - unpreserved	KONE/COL	8125108	N/A	2015/11/25	
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	

Maxxam ID: NR8583
Sample ID: KZ-19
Matrix: Water

Collected: 2015/11/20
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Name Redacted
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	
Ion Balance	CALC	8121740	N/A	2015/11/26	
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8123054	N/A	2015/11/24	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8123042	N/A	2015/11/24	
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	
pH Water	AT/ALK	8124296	N/A	2015/11/25	
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	
Total Phosphorus - unpreserved	KONE/COL	8125108	N/A	2015/11/25	
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8583 Dup
Sample ID: KZ-19
Matrix: Water

Collected: 2015/11/20
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	Name Redacted
Total Phosphorus - unpreserved	KONE/COL	8125108	N/A	2015/11/25	

Maxxam ID: NR8584
Sample ID: KZ-21
Matrix: Water

Collected: 2015/11/19
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Name Redacted
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	
Ion Balance	CALC	8121740	N/A	2015/11/26	
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8123054	N/A	2015/11/24	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8123042	N/A	2015/11/24	
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	
pH Water	AT/ALK	8124296	N/A	2015/11/25	
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	
Total Phosphorus - unpreserved	KONE/COL	8125101	N/A	2015/11/25	
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	

Maxxam ID: NR8585
Sample ID: KZ-22
Matrix: Water

Collected: 2015/11/18
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Name Redacted
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8585
Sample ID: KZ-22
Matrix: Water

Collected: 2015/11/18
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	
Ion Balance	CALC	8121740	N/A	2015/11/26	
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8123054	N/A	2015/11/24	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8123275	N/A	2015/11/25	
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	
pH Water	AT/ALK	8124296	N/A	2015/11/25	
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	
Total Phosphorus - unpreserved	KONE/COL	8125108	N/A	2015/11/25	
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	

Maxxam ID: NR8585 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2015/11/18
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8123275	N/A	2015/11/25	Name Redacted

Maxxam ID: NR8643
Sample ID: KZ-26
Matrix: Water

Collected: 2015/11/18
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Name Redacted
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8643
Sample ID: KZ-26
Matrix: Water

Collected: 2015/11/18
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	Name Redacted
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	
Ion Balance	CALC	8121740	N/A	2015/11/26	
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8124806	N/A	2015/11/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8123275	N/A	2015/11/25	
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	
pH Water	AT/ALK	8124296	N/A	2015/11/25	
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	
Total Phosphorus - unpreserved	KONE/COL	8125108	N/A	2015/11/25	
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	

Maxxam ID: NR8644
Sample ID: KZ-28
Matrix: Water

Collected: 2015/11/18
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Name Redacted
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8124783	N/A	2015/11/25	
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	
Ion Balance	CALC	8121740	N/A	2015/11/26	
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8644
Sample ID: KZ-28
Matrix: Water

Collected: 2015/11/18
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	Name Redacted
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8123054	N/A	2015/11/24	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8123275	N/A	2015/11/25	
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	
Filter and HNO3 Preserve for Metals	ICP	8121710	N/A	2015/11/23	
pH Water	AT/ALK	8124296	N/A	2015/11/25	
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	
Total Phosphorus - unpreserved	KONE/COL	8125101	N/A	2015/11/25	
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	

Maxxam ID: NR8645
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/11/23
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8123319	N/A	2015/11/24	Name Redacted
Alkalinity - Water	AT/ALK	8124292	2015/11/25	2015/11/25	
Chloride by Automated Colourimetry	KONE/COL	8123428	N/A	2015/11/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8125043	N/A	2015/11/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8125057	N/A	2015/11/25	
Colour (True) by Kone Lab	KONE	8124958	N/A	2015/11/24	
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8124784	N/A	2015/11/25	
Conductance - water	AT/ALK	8124293	N/A	2015/11/25	
Fluoride	ISE/ISE	8123943	N/A	2015/11/24	
Hardness Total (calculated as CaCO3)	CALC	8122111	N/A	2015/11/25	
Hardness (calculated as CaCO3)	CALC	8121658	N/A	2015/11/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	
Ion Balance	CALC	8121740	N/A	2015/11/26	
Sum of cations, anions	CALC	8122395	N/A	2015/11/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8121659	N/A	2015/11/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8123054	N/A	2015/11/24	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8122396	N/A	2015/11/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8123275	N/A	2015/11/25	
Ammonia-N (Unpreserved)	KONE/COL	8125099	N/A	2015/11/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8123764	N/A	2015/11/24	
Nitrite (N) (low level)	TRAA/COL	8123768	N/A	2015/11/24	
Nitrogen - Nitrate (as N)	CALC	8122397	N/A	2015/11/24	
pH Water	AT/ALK	8124296	N/A	2015/11/25	
Sulphate by Automated Colourimetry	KONE/COL	8123432	N/A	2015/11/24	

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NR8645
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/11/23
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8125098	2015/11/25	2015/11/25	Name Redacted
Total Phosphorus - unpreserved	KONE/COL	8125101	N/A	2015/11/25	
Total Suspended Solids-Low Level	BAL/BAL	8122942	2015/11/24	2015/11/25	

Maxxam ID: NR8645 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/11/23
Shipped:
Received: 2015/11/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8123122	N/A	2015/11/24	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8123140	2015/11/24	2015/11/24	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.7°C

Sample NR8578, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample NR8578, Na, K, Ca, Mg, S by CRC ICPMS (diss.): Test repeated.
Sample NR8643, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8122942	Total Suspended Solids	2015/11/25			98	80 - 120	<1.0	mg/L		
8123042	Total Aluminum (Al)	2015/11/24	93	80 - 120	108	80 - 120	<0.00050	mg/L	3.8	20
8123042	Total Antimony (Sb)	2015/11/24	98	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8123042	Total Arsenic (As)	2015/11/24	99	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8123042	Total Barium (Ba)	2015/11/24	NC	80 - 120	104	80 - 120	<0.000020	mg/L	6.4	20
8123042	Total Beryllium (Be)	2015/11/24	91	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8123042	Total Bismuth (Bi)	2015/11/24	95	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8123042	Total Boron (B)	2015/11/24					<0.010	mg/L	NC	20
8123042	Total Cadmium (Cd)	2015/11/24	97	80 - 120	101	80 - 120	<0.0000050	mg/L	6.4	20
8123042	Total Chromium (Cr)	2015/11/24	94	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8123042	Total Cobalt (Co)	2015/11/24	91	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8123042	Total Copper (Cu)	2015/11/24	89	80 - 120	99	80 - 120	<0.000050	mg/L	3.5	20
8123042	Total Iron (Fe)	2015/11/24	93	80 - 120	108	80 - 120	<0.0010	mg/L	6.8	20
8123042	Total Lead (Pb)	2015/11/24	98	80 - 120	106	80 - 120	<0.0000050	mg/L	3.1	20
8123042	Total Lithium (Li)	2015/11/24	90	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8123042	Total Manganese (Mn)	2015/11/24	94	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8123042	Total Molybdenum (Mo)	2015/11/24	NC	80 - 120	96	80 - 120	<0.000050	mg/L	3.3	20
8123042	Total Nickel (Ni)	2015/11/24	90	80 - 120	99	80 - 120	<0.000020	mg/L	1.5	20
8123042	Total Phosphorus (P)	2015/11/24					<0.0020	mg/L	NC	20
8123042	Total Selenium (Se)	2015/11/24	97	80 - 120	96	80 - 120	<0.000040	mg/L	2.0	20
8123042	Total Silicon (Si)	2015/11/24					<0.050	mg/L	1.2	20
8123042	Total Silver (Ag)	2015/11/24	91	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8123042	Total Strontium (Sr)	2015/11/24	NC	80 - 120	103	80 - 120	<0.000050	mg/L	2.5	20
8123042	Total Thallium (Tl)	2015/11/24	91	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8123042	Total Tin (Sn)	2015/11/24	96	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8123042	Total Titanium (Ti)	2015/11/24	95	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8123042	Total Uranium (U)	2015/11/24	103	80 - 120	106	80 - 120	<0.0000020	mg/L	2.0	20
8123042	Total Vanadium (V)	2015/11/24	97	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20
8123042	Total Zinc (Zn)	2015/11/24	NC	80 - 120	100	80 - 120	<0.00010	mg/L	1.3	20
8123042	Total Zirconium (Zr)	2015/11/24					<0.00010	mg/L	NC	20
8123054	Dissolved Aluminum (Al)	2015/11/24	101	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8123054	Dissolved Antimony (Sb)	2015/11/24	97	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8123054	Dissolved Arsenic (As)	2015/11/24	96	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8123054	Dissolved Barium (Ba)	2015/11/24	98	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8123054	Dissolved Beryllium (Be)	2015/11/24	94	80 - 120	99	80 - 120	<0.000010	mg/L	NC	20
8123054	Dissolved Bismuth (Bi)	2015/11/24	96	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8123054	Dissolved Boron (B)	2015/11/24					<0.010	mg/L	NC	20
8123054	Dissolved Cadmium (Cd)	2015/11/24	99	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8123054	Dissolved Chromium (Cr)	2015/11/24	101	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8123054	Dissolved Cobalt (Co)	2015/11/24	99	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8123054	Dissolved Copper (Cu)	2015/11/24	100	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8123054	Dissolved Iron (Fe)	2015/11/24	105	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
8123054	Dissolved Lead (Pb)	2015/11/24	99	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8123054	Dissolved Lithium (Li)	2015/11/24	94	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8123054	Dissolved Manganese (Mn)	2015/11/24	100	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8123054	Dissolved Molybdenum (Mo)	2015/11/24	93	80 - 120	96	80 - 120	<0.000050	mg/L	NC	20
8123054	Dissolved Nickel (Ni)	2015/11/24	100	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8123054	Dissolved Phosphorus (P)	2015/11/24					<0.0020	mg/L	NC	20
8123054	Dissolved Selenium (Se)	2015/11/24	93	80 - 120	96	80 - 120	<0.000040	mg/L	NC	20
8123054	Dissolved Silicon (Si)	2015/11/24					<0.050	mg/L	NC	20
8123054	Dissolved Silver (Ag)	2015/11/24	91	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8123054	Dissolved Strontium (Sr)	2015/11/24	94	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8123054	Dissolved Thallium (Tl)	2015/11/24	96	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8123054	Dissolved Tin (Sn)	2015/11/24	96	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8123054	Dissolved Titanium (Ti)	2015/11/24	94	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8123054	Dissolved Uranium (U)	2015/11/24	99	80 - 120	108	80 - 120	<0.0000020	mg/L	NC	20
8123054	Dissolved Vanadium (V)	2015/11/24	103	80 - 120	107	80 - 120	<0.00020	mg/L	NC	20
8123054	Dissolved Zinc (Zn)	2015/11/24	103	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8123054	Dissolved Zirconium (Zr)	2015/11/24					<0.00010	mg/L	NC	20
8123122	Dissolved Mercury (Hg)	2015/11/24	104	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8123140	Total Mercury (Hg)	2015/11/24	102	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8123275	Total Aluminum (Al)	2015/11/25	100	80 - 120	103	80 - 120	<0.00050	mg/L	6.4	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8123275	Total Antimony (Sb)	2015/11/25	106	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8123275	Total Arsenic (As)	2015/11/25	99	80 - 120	98	80 - 120	<0.000020	mg/L	0.27	20
8123275	Total Barium (Ba)	2015/11/25	NC	80 - 120	103	80 - 120	<0.000020	mg/L	2.6	20
8123275	Total Beryllium (Be)	2015/11/25	99	80 - 120	95	80 - 120	<0.000010	mg/L	NC	20
8123275	Total Bismuth (Bi)	2015/11/25	100	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8123275	Total Boron (B)	2015/11/25					<0.010	mg/L	NC	20
8123275	Total Cadmium (Cd)	2015/11/25	98	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8123275	Total Chromium (Cr)	2015/11/25	98	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8123275	Total Cobalt (Co)	2015/11/25	95	80 - 120	100	80 - 120	<0.0000050	mg/L	0	20
8123275	Total Copper (Cu)	2015/11/25	93	80 - 120	101	80 - 120	<0.000050	mg/L	6.8	20
8123275	Total Iron (Fe)	2015/11/25	NC	80 - 120	109	80 - 120	<0.0010	mg/L	1.7	20
8123275	Total Lead (Pb)	2015/11/25	103	80 - 120	107	80 - 120	<0.0000050	mg/L	3.7	20
8123275	Total Lithium (Li)	2015/11/25	NC	80 - 120	103	80 - 120	0.00069, RDL=0.00050	mg/L	13	20
8123275	Total Manganese (Mn)	2015/11/25	NC	80 - 120	100	80 - 120	<0.000050	mg/L	0.31	20
8123275	Total Molybdenum (Mo)	2015/11/25	NC	80 - 120	96	80 - 120	<0.000050	mg/L	0.78	20
8123275	Total Nickel (Ni)	2015/11/25	92	80 - 120	100	80 - 120	<0.000020	mg/L	2.3	20
8123275	Total Phosphorus (P)	2015/11/25					<0.0020	mg/L	NC	20
8123275	Total Selenium (Se)	2015/11/25	100	80 - 120	95	80 - 120	<0.000040	mg/L	1.2	20
8123275	Total Silicon (Si)	2015/11/25					<0.050	mg/L	1.2	20
8123275	Total Silver (Ag)	2015/11/25	101	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8123275	Total Strontium (Sr)	2015/11/25	NC	80 - 120	98	80 - 120	<0.000050	mg/L	1.4	20
8123275	Total Thallium (Tl)	2015/11/25	98	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8123275	Total Tin (Sn)	2015/11/25	104	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8123275	Total Titanium (Ti)	2015/11/25	95	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8123275	Total Uranium (U)	2015/11/25	105	80 - 120	105	80 - 120	<0.0000020	mg/L	2.3	20
8123275	Total Vanadium (V)	2015/11/25	101	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8123275	Total Zinc (Zn)	2015/11/25	96	80 - 120	101	80 - 120	<0.00010	mg/L	2.3	20
8123275	Total Zirconium (Zr)	2015/11/25					<0.00010	mg/L	NC	20
8123319	Acidity (pH 4.5)	2015/11/24					<0.50	mg/L	NC	20
8123319	Acidity (pH 8.3)	2015/11/24			104	80 - 120	<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8123424	Dissolved Sulphate (SO4)	2015/11/24	NC	80 - 120	93	80 - 120	<0.50	mg/L	1.2	20
8123428	Dissolved Chloride (Cl)	2015/11/24	95	80 - 120	98	80 - 120	<0.50	mg/L	2.3	20
8123432	Dissolved Sulphate (SO4)	2015/11/24			92	80 - 120	<0.50	mg/L	3.1	20
8123764	Nitrate plus Nitrite (N)	2015/11/24	100	80 - 120	102	80 - 120	<0.0020	mg/L	0.44	25
8123768	Nitrite (N)	2015/11/24	98	80 - 120	101	80 - 120	<0.0020	mg/L	NC	25
8123943	Fluoride (F)	2015/11/24	110	80 - 120	98	80 - 120	0.011, RDL=0.010	mg/L	1.4	20
8124292	Alkalinity (PP as CaCO3)	2015/11/25					<0.50	mg/L	NC	20
8124292	Alkalinity (Total as CaCO3)	2015/11/25	NC	80 - 120	91	80 - 120	0.57, RDL=0.50	mg/L	0.26	20
8124292	Bicarbonate (HCO3)	2015/11/25					0.70, RDL=0.50	mg/L	0.26	20
8124292	Carbonate (CO3)	2015/11/25					<0.50	mg/L	NC	20
8124292	Hydroxide (OH)	2015/11/25					<0.50	mg/L	NC	20
8124293	Conductivity	2015/11/25			96	80 - 120	1.1, RDL=1.0	uS/cm	0.33	20
8124296	pH	2015/11/25			102	97 - 103			0.32	N/A
8124783	Dissolved Organic Carbon (C)	2015/11/25	109	80 - 120	101	80 - 120	<0.50	mg/L	12	20
8124784	Dissolved Organic Carbon (C)	2015/11/25	112	80 - 120	100	80 - 120	<0.50	mg/L	NC	20
8124806	Dissolved Aluminum (Al)	2015/11/25			110	80 - 120	<0.00050	mg/L		
8124897	Dissolved Chloride (Cl)	2015/11/25			100	80 - 120	<0.50	mg/L		
8124958	True Colour	2015/11/24			106	80 - 120	<5.0	Col. Unit	NC	20
8125043	Strong Acid Dissoc. Cyanide (CN)	2015/11/25	98	80 - 120	94	80 - 120	<0.00050	mg/L	NC	20
8125057	Weak Acid Dissoc. Cyanide (CN)	2015/11/25	95	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8125098	Dissolved Phosphorus (P)	2015/11/25	111	80 - 120	104	80 - 120	<0.0020	mg/L	NC	20
8125099	Total Ammonia (N)	2015/11/25	110	80 - 120	100	80 - 120	<0.0050	mg/L	NC	20
8125101	Total Phosphorus (P)	2015/11/25	NC	80 - 120	112	80 - 120	<0.0020	mg/L	1.4	20
8125108	Total Phosphorus (P)	2015/11/25	100	80 - 120	109	80 - 120	<0.0020	mg/L	NC	20
8127531	Dissolved Aluminum (Al)	2015/11/27			96	80 - 120	<0.00050	mg/L		
8128660	Dissolved Phosphorus (P)	2015/11/28	90	80 - 120	92	80 - 120	<0.0020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8128662	Total Phosphorus (P)	2015/11/28	90	80 - 120	92	80 - 120	<0.0020	mg/L	NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A4311
Report Date: 2015/11/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Name Data Validation Coordinator

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

08413843

CHAIN OF CUSTODY RECORD

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #:

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[X] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PO: V6E 4A4		Whitehorse, YT PO: Y1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6483	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Drop Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

Rush Confirmation #:

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

LABORATORY USE ONLY

CUSTODY SEAL Y / N — Present / Intact

COOLER TEMPERATURES: NA | 1.3, 7/4.5, 7 | 2.3.3

COOLING MEDIA PRESENT Y / N

COMMENTS

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL MERCURY	DISSOLVED LOW LEVEL MERCURY	LOW LEVEL TSS	DISSOLVED SO4, NO3	AMMONIA	CYANIDE (CAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2	MR 8577	20/11/2015	13:17	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
2	KZ-7	MR 8578	20/11/2015	11:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
3	KZ-9	MR 8579	20/11/2015	9:04	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
4																				
5	KZ-15	MR 8580	19/11/2015	11:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
6	KZ-16	MR 8581	19/11/2015	12:44	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
7	KZ-17	MR 8582	19/11/2015	14:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
8	KZ-19	MR 8583	20/11/2015	15:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
9	KZ-21	MR 8584	19/11/2015	9:37	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
10	KZ-22	MR 8586	18/11/2015	15:22	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	

B5A4311_COC

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	2015/11/22	10:30	Signature Redacted	2015/11/23	09:32

B 5A4311

08413844

CHAIN OF CUSTODY RECORD

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

BBY FCD-00077/05

COC #:

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL Y (N) Present: NA Intact:

COOLER TEMPERATURES: 1.3, 1.5, 2.3

COOLING MEDIA PRESENT (Y) N

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	~~KZ-26~~	~~NR8643~~	~~18/11/2015~~	~~12:45~~	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		~~DOC not filtered or preserved~~
2	KZ-28	NR8644	18/11/2015	13:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		DOC not filtered or preserved
3	Trip Blank	NR8645			Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
4																					
5																					
6																					
7																					
8																					
9																					
10																					

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
			Signature Redacted	2015/11/23	09:32	B5A4311

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08414227, 08414228

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/12/11
Report #: R2094741
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B5A8198
Received: 2015/12/04, 13:40

Sample Matrix: Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	14	N/A	2015/12/08	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	14	2015/12/05	2015/12/05	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	14	N/A	2015/12/07	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	14	N/A	2015/12/08	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	14	N/A	2015/12/08	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	14	N/A	2015/12/05	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	13	N/A	2015/12/07	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2015/12/07	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	14	N/A	2015/12/05	BBY6SOP-00026	SM 22 2510 B m
Fluoride	14	N/A	2015/12/07	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	14	N/A	2015/12/08	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	14	N/A	2015/12/08	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	14	N/A	2015/12/08	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	14	2015/12/08	2015/12/08	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	14	N/A	2015/12/08	BBY WI-00033	SM 22 1030E
Sum of cations, anions	14	N/A	2015/12/08	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	14	N/A	2015/12/08	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	14	N/A	2015/12/08	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	14	N/A	2015/12/08	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	14	N/A	2015/12/08	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	14	N/A	2015/12/07	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	14	N/A	2015/12/05	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	14	N/A	2015/12/05	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	14	N/A	2015/12/05	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	13	N/A	2015/12/07	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	14	N/A	2015/12/05	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	14	N/A	2015/12/07	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	14	2015/12/05	2015/12/05	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	14	N/A	2015/12/05	BBY6SOP-00013	SM 22 4500-P E m

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08414227, 08414228

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2015/12/11
Report #: R2094741
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B5A8198
Received: 2015/12/04, 13:40

Sample Matrix: Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Suspended Solids-Low Level	5	2015/12/07	2015/12/08	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	9	2015/12/08	2015/12/08	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.

(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Morgan Melnychuk, Burnaby Project Manager
Email: MMelnychuk@maxxam.ca
Phone# (604)638-8034 Ext:8034

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NU0016	NU0017	NU0018	NU0019	NU0020		
Sampling Date		2015/12/03 08:21	2015/12/02 16:41	2015/12/02 12:18	2015/12/02 14:41	2015/12/02 09:07		
COC Number		08414227	08414227	08414227	08414227	08414227		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8137883
Acidity (pH 8.3)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8137883
Calculated Parameters								
Anion Sum	meq/L	2.4	3.5	3.9	1.8	4.6	N/A	8135237
Cation Sum	meq/L	2.4	3.5	3.8	1.8	4.6	N/A	8135237
Filter and HNO3 Preservation	N/A	LAB	LAB	LAB	LAB	LAB	N/A	8136230
Ion Balance	N/A	1.0	0.99	0.98	1.0	1.0	0.010	8134200
Nitrate (N)	mg/L	0.138	0.0959	0.175	0.0855	0.194	0.0020	8134304
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8138190
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8138245
Fluoride (F)	mg/L	0.037	0.054	0.068	0.039	0.078	0.010	8138236
Dissolved Organic Carbon (C)	mg/L	0.76	1.64	1.90	3.09	1.55	0.50	8136813
Alkalinity (Total as CaCO3)	mg/L	69.9	135	161	75.6	193	0.50	8135721
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8135721
Bicarbonate (HCO3)	mg/L	85.3	165	197	92.3	235	0.50	8135721
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8135721
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8135721
Anions								
Dissolved Sulphate (SO4)	mg/L	48.4	38.5	31.5	15.4	31.9	0.50	8136867
Dissolved Chloride (Cl)	mg/L	<0.50	<0.50	<0.50	<0.50	0.59	0.50	8136863
MISCELLANEOUS								
True Colour	Col. Unit	<5.0	<5.0	16.4	13.9	<5.0	5.0	8135787
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0022	0.0021	0.0023	0.0023	0.0020	8135779
Total Ammonia (N)	mg/L	<0.0050 (1)	0.0229 (1)	0.0234 (1)	<0.0050 (1)	0.0084 (1)	0.0050	8135778
Nitrate plus Nitrite (N)	mg/L	0.138	0.0959	0.175	0.0855	0.194	0.0020	8135760
Nitrite (N)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8135761
Total Phosphorus (P)	mg/L	<0.0020	0.0020	0.0023	0.0037	0.0028	0.0020	8135783
Physical Properties								
Conductivity	uS/cm	249	342	379	183	426	1.0	8135723
pH	pH	8.00	8.07	7.75	8.05	8.07	N/A	8135722

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NU0016	NU0017	NU0018	NU0019	NU0020		
Sampling Date		2015/12/03 08:21	2015/12/02 16:41	2015/12/02 12:18	2015/12/02 14:41	2015/12/02 09:07		
COC Number		08414227	08414227	08414227	08414227	08414227		
	UNITS	**KZ-2**	**KZ-7**	**KZ-9**	**KZ-13**	**KZ-15**	**RDL**	**QC Batch**
Physical Properties								
Total Suspended Solids	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8137550
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NU0021	NU0022	NU0023		NU0024		
Sampling Date		2015/12/02 10:20	2015/12/02 10:00	2015/12/03 09:37		2015/12/01 15:11		
COC Number		08414227	08414227	08414227		08414227		
	UNITS	KZ-16	KZ-17	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	8137883	<0.50	0.50	8137883
Acidity (pH 8.3)	mg/L	<0.50	<0.50	<0.50	8137883	<0.50	0.50	8137883
Calculated Parameters								
Anion Sum	meq/L	4.6	4.4	0.014	8135237	6.1	N/A	8135237
Cation Sum	meq/L	4.9	4.6	0.0012	8135237	6.0	N/A	8135237
Filter and HNO3 Preservation	N/A	LAB	LAB	LAB	8136230	LAB	N/A	8136230
Ion Balance	N/A	1.1	1.0	0.086 (1)	8134200	0.99	0.010	8134200
Nitrate (N)	mg/L	0.233	0.164	<0.0020	8134304	0.105	0.0020	8134304
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	8138190	<0.00050	0.00050	8138190
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	8138245	<0.00050	0.00050	8138245
Fluoride (F)	mg/L	0.061	0.096	0.012	8138236	0.160	0.010	8138236
Dissolved Organic Carbon (C)	mg/L	1.29	1.87	<0.50	8136813	3.26	0.50	8136813
Alkalinity (Total as CaCO3)	mg/L	195	187	0.67	8135721	254	0.50	8135721
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	8135721	<0.50	0.50	8135721
Bicarbonate (HCO3)	mg/L	238	228	0.82	8135721	310	0.50	8135721
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	8135721	<0.50	0.50	8135721
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	8135721	<0.50	0.50	8135721
Anions								
Dissolved Sulphate (SO4)	mg/L	32.5	31.6	<0.50	8136867	45.5	0.50	8136867
Dissolved Chloride (Cl)	mg/L	0.54	0.61	<0.50	8136863	0.72	0.50	8136863
MISCELLANEOUS								
True Colour	Col. Unit	<5.0	5.6	<5.0	8135787	29.0 (2)	5.0	8135787
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0041	<0.0020	8135779	0.0095 (2)	0.0020	8135779
Total Ammonia (N)	mg/L	<0.0050 (3)	0.0120 (3)	<0.0050 (3)	8135778	0.0653 (2)	0.0050	8135778
Nitrate plus Nitrite (N)	mg/L	0.233	0.164	<0.0020	8135760	0.108 (2)	0.0020	8135760
Nitrite (N)	mg/L	<0.0020	<0.0020	<0.0020	8135761	0.0025 (2)	0.0020	8135761
Total Phosphorus (P)	mg/L	<0.0020	0.0038	<0.0020	8135783	0.0100 (2)	0.0020	8135783

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(3) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NU0021	NU0022	NU0023		NU0024		
Sampling Date		2015/12/02 10:20	2015/12/02 10:00	2015/12/03 09:37		2015/12/01 15:11		
COC Number		08414227	08414227	08414227		08414227		
	UNITS	KZ-16	KZ-17	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Physical Properties								
Conductivity	uS/cm	434	416	<1.0	8135723	546	1.0	8135723
pH	pH	8.03	8.08	5.92	8135722	8.05	N/A	8135722
Physical Properties								
Total Suspended Solids	mg/L	<1.0	<1.0	<1.0	8137550	2.7	1.0	8136208

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NU0025		NU0031		NU0032		
Sampling Date		2015/12/01 14:13		2015/12/01 11:45		2015/12/01 10:28		
COC Number		08414227		08414228		08414228		
	UNITS	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Misc. Inorganics								
Acidity (pH 4.5)	mg/L	<0.50	8137883	<0.50	8137883	<0.50	0.50	8137883
Acidity (pH 8.3)	mg/L	<0.50	8137883	<0.50	8137883	<0.50	0.50	8137883
Calculated Parameters								
Anion Sum	meq/L	5.5	8135237	5.3	8135237	5.3	N/A	8135237
Cation Sum	meq/L	5.5	8135237	5.4	8135237	5.6	N/A	8135237
Filter and HNO3 Preservation	N/A	LAB	8136230	LAB	8136230	LAB	N/A	8136230
Ion Balance	N/A	1.0	8134200	1.0	8134200	1.0	0.010	8134200
Nitrate (N)	mg/L	0.152	8134304	0.157	8134304	0.161	0.0020	8134304
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00050	8138190	0.00051	8138190	0.00051	0.00050	8138190
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8138245	<0.00050	8138245	0.00069	0.00050	8138245
Fluoride (F)	mg/L	0.120	8138236	0.100	8138236	0.100	0.010	8138236
Dissolved Organic Carbon (C)	mg/L	1.91	8136813	1.64	8136813	1.44	0.50	8136813
Alkalinity (Total as CaCO3)	mg/L	230	8135721	222	8135725	223	0.50	8135721
Alkalinity (PP as CaCO3)	mg/L	<0.50	8135721	<0.50	8135725	<0.50	0.50	8135721
Bicarbonate (HCO3)	mg/L	281	8135721	270	8135725	273	0.50	8135721
Carbonate (CO3)	mg/L	<0.50	8135721	<0.50	8135725	<0.50	0.50	8135721
Hydroxide (OH)	mg/L	<0.50	8135721	<0.50	8135725	<0.50	0.50	8135721
Anions								
Dissolved Sulphate (SO4)	mg/L	40.3	8136867	39.5	8136861	39.2	0.50	8136867
Dissolved Chloride (Cl)	mg/L	<0.50	8136863	0.59	8136855	0.59	0.50	8136863
MISCELLANEOUS								
True Colour	Col. Unit	18.3 (1)	8135787	8.0 (1)	8135787	6.2 (1)	5.0	8135787
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0082 (1)	8135779	0.0025 (1)	8135779	0.0031 (1)	0.0020	8135779
Total Ammonia (N)	mg/L	0.0438 (1)	8135778	0.0084 (1)	8135778	0.0193 (1)	0.0050	8135778
Nitrate plus Nitrite (N)	mg/L	0.152 (1)	8135760	0.157 (1)	8135760	0.161 (1)	0.0020	8135760
Nitrite (N)	mg/L	<0.0020 (1)	8135761	<0.0020 (1)	8135761	<0.0020 (1)	0.0020	8135761
Total Phosphorus (P)	mg/L	0.0080 (1)	8135783	0.0025 (1)	8135783	0.0028 (1)	0.0020	8135783
Physical Properties								
Conductivity	uS/cm	506	8135723	485	8135728	487	1.0	8135723
pH	pH	8.08	8135722	8.20	8135727	8.29	N/A	8135722

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NU0025		NU0031		NU0032		
Sampling Date		2015/12/01 14:13		2015/12/01 11:45		2015/12/01 10:28		
COC Number		08414227		08414228		08414228		
	UNITS	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	1.5	8136208	1.1	8136208	1.0	1.0	8136208
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NU0033		NU0034		
Sampling Date		2015/12/03 18:45		2015/12/02 17:45		
COC Number		08414228		08414228		
	UNITS	TRIP BLANK	QC Batch	KZ-6	RDL	QC Batch
Misc. Inorganics						
Acidity (pH 4.5)	mg/L	<0.50	8137883	<0.50	0.50	8137883
Acidity (pH 8.3)	mg/L	<0.50	8137883	<0.50	0.50	8137883
Calculated Parameters						
Anion Sum	meq/L	0.021	8135237	3.5	N/A	8135237
Cation Sum	meq/L	0.00050	8135237	3.4	N/A	8135237
Filter and HNO3 Preservation	N/A		8136230	LAB	N/A	8136230
Ion Balance	N/A	0.024 (1)	8134200	0.97	0.010	8134200
Nitrate (N)	mg/L	<0.0020	8134304	0.138	0.0020	8134304
Misc. Inorganics						
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8138190	<0.00050	0.00050	8138190
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8138245	<0.00050	0.00050	8138245
Fluoride (F)	mg/L	0.011	8138236	0.055	0.010	8138236
Dissolved Organic Carbon (C)	mg/L	<0.50	8135780	1.35	0.50	8136813
Alkalinity (Total as CaCO3)	mg/L	1.03	8135721	147	0.50	8135721
Alkalinity (PP as CaCO3)	mg/L	<0.50	8135721	<0.50	0.50	8135721
Bicarbonate (HCO3)	mg/L	1.26	8135721	180	0.50	8135721
Carbonate (CO3)	mg/L	<0.50	8135721	<0.50	0.50	8135721
Hydroxide (OH)	mg/L	<0.50	8135721	<0.50	0.50	8135721
Anions						
Dissolved Sulphate (SO4)	mg/L	<0.50	8136867	23.6	0.50	8136867
Dissolved Chloride (Cl)	mg/L	<0.50	8136863	<0.50	0.50	8136863
MISCELLANEOUS						
True Colour	Col. Unit	<5.0	8135787	5.1	5.0	8135787
Nutrients						
Dissolved Phosphorus (P)	mg/L	<0.0020	8135779	0.0026	0.0020	8135779
Total Ammonia (N)	mg/L	<0.0050	8135778	0.0116 (2)	0.0050	8135778
Nitrate plus Nitrite (N)	mg/L	<0.0020	8135760	0.138	0.0020	8135760
Nitrite (N)	mg/L	<0.0020	8135761	<0.0020	0.0020	8135761
Total Phosphorus (P)	mg/L	<0.0020	8135783	0.0022	0.0020	8135783
Physical Properties						
Conductivity	uS/cm	1.3	8135723	327	1.0	8135723

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).
(2) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NU0033		NU0034		
Sampling Date		2015/12/03 18:45		2015/12/02 17:45		
COC Number		08414228		08414228		
	UNITS	TRIP BLANK	QC Batch	KZ-6	RDL	QC Batch
pH	pH	6.26	8135722	8.25	N/A	8135722
Physical Properties						
Total Suspended Solids	mg/L	<1.0	8136208	<1.0	1.0	8137550

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NU0016	NU0017	NU0018	NU0019	NU0020		
Sampling Date		2015/12/03 08:21	2015/12/02 16:41	2015/12/02 12:18	2015/12/02 14:41	2015/12/02 09:07		
COC Number		08414227	08414227	08414227	08414227	08414227		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	116	169	186	87.6	224	0.50	8135236
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8137659
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00193	0.00134	0.00100	0.00487	0.00051	0.00050	8137300
Dissolved Antimony (Sb)	mg/L	0.000021	0.000051	0.000036	0.000030	0.000031	0.000020	8137300
Dissolved Arsenic (As)	mg/L	0.000061	0.000176	0.000181	0.000156	0.000412	0.000020	8137300
Dissolved Barium (Ba)	mg/L	0.0654	0.0863	0.0916	0.101	0.0798	0.000020	8137300
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8137300
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8137300
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8137300
Dissolved Cadmium (Cd)	mg/L	0.000171	0.000117	0.0000540	0.0000150	0.0000220	0.0000050	8137300
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8137300
Dissolved Cobalt (Co)	mg/L	0.0000070	0.0000900	0.0000880	0.0000240	0.0000190	0.0000050	8137300
Dissolved Copper (Cu)	mg/L	0.000420	0.000214	0.000222	0.000385	0.000226	0.000050	8137300
Dissolved Iron (Fe)	mg/L	<0.0010	0.111	0.111	0.0417	0.0102	0.0010	8137300
Dissolved Lead (Pb)	mg/L	0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8137300
Dissolved Lithium (Li)	mg/L	0.00111	0.00216	0.00319	0.00147	0.00262	0.00050	8137300
Dissolved Manganese (Mn)	mg/L	<0.000050	0.110	0.0797	0.0226	0.0191	0.000050	8137300
Dissolved Molybdenum (Mo)	mg/L	0.000665	0.000575	0.000661	0.000664	0.00116	0.000050	8137300
Dissolved Nickel (Ni)	mg/L	0.000275	0.000479	0.000373	0.000351	0.000600	0.000020	8137300
Dissolved Phosphorus (P)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8137300
Dissolved Selenium (Se)	mg/L	0.00180	0.00118	0.00134	0.000306	0.00155	0.000040	8137300
Dissolved Silicon (Si)	mg/L	2.51	3.77	4.09	3.66	3.85	0.050	8137300
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8137300
Dissolved Strontium (Sr)	mg/L	0.127	0.184	0.211	0.0861	0.221	0.000050	8137300
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8137300
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8137300
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8137300
Dissolved Uranium (U)	mg/L	0.00326	0.00137	0.00157	0.000939	0.00352	0.0000020	8137300
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8137300
Dissolved Zinc (Zn)	mg/L	0.0207	0.0434	0.0132	0.00142	0.00226	0.00010	8137300
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8137300
Dissolved Calcium (Ca)	mg/L	38.0	55.1	61.5	29.6	65.1	0.050	8135145

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NU0016	NU0017	NU0018	NU0019	NU0020		
Sampling Date		2015/12/03 08:21	2015/12/02 16:41	2015/12/02 12:18	2015/12/02 14:41	2015/12/02 09:07		
COC Number		08414227	08414227	08414227	08414227	08414227		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	5.16	7.50	7.97	3.32	14.9	0.050	8135145
Dissolved Potassium (K)	mg/L	1.97	1.70	1.68	1.73	1.35	0.050	8135145
Dissolved Sodium (Na)	mg/L	0.867	1.22	1.30	1.03	1.31	0.050	8135145
Dissolved Sulphur (S)	mg/L	17.1	14.0	12.3	5.7	12.2	3.0	8135145

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NU0021		NU0022	NU0023		
Sampling Date		2015/12/02 10:20		2015/12/02 10:00	2015/12/03 09:37		
COC Number		08414227		08414227	08414227		
	UNITS	KZ-16	QC Batch	KZ-17	KZ-19	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	239	8135236	223	<0.50	0.50	8135236
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	8137659	<0.0000020	<0.0000020	0.0000020	8137659
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	<0.00050	8137300	0.00060	<0.00050	0.00050	8137300
Dissolved Antimony (Sb)	mg/L	<0.000020	8137300	0.000039	<0.000020	0.000020	8137300
Dissolved Arsenic (As)	mg/L	0.000204	8137300	0.000553	<0.000020	0.000020	8137300
Dissolved Barium (Ba)	mg/L	0.0784	8137300	0.0760	<0.000020	0.000020	8137300
Dissolved Beryllium (Be)	mg/L	<0.000010	8137300	<0.000010	<0.000010	0.000010	8137300
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8137300	<0.0000050	<0.0000050	0.0000050	8137300
Dissolved Boron (B)	mg/L	<0.010	8137300	<0.010	<0.010	0.010	8137300
Dissolved Cadmium (Cd)	mg/L	0.0000160	8137300	0.0000300	<0.0000050	0.0000050	8137300
Dissolved Chromium (Cr)	mg/L	<0.00010	8137300	<0.00010	<0.00010	0.00010	8137300
Dissolved Cobalt (Co)	mg/L	0.0000240	8137300	0.0000210	<0.0000050	0.0000050	8137300
Dissolved Copper (Cu)	mg/L	0.000196	8137300	0.000228	<0.000050	0.000050	8137300
Dissolved Iron (Fe)	mg/L	0.0027	8137300	0.0183	<0.0010	0.0010	8137300
Dissolved Lead (Pb)	mg/L	<0.0000050	8137300	<0.0000050	<0.0000050	0.0000050	8137300
Dissolved Lithium (Li)	mg/L	0.00286	8137300	0.00306	<0.00050	0.00050	8137300
Dissolved Manganese (Mn)	mg/L	0.00785	8137300	0.0300	<0.000050	0.000050	8137300
Dissolved Molybdenum (Mo)	mg/L	0.000466	8137300	0.00174	<0.000050	0.000050	8137300
Dissolved Nickel (Ni)	mg/L	0.000458	8137300	0.000674	<0.000020	0.000020	8137300
Dissolved Phosphorus (P)	mg/L	<0.0020	8137300	<0.0020	<0.0020	0.0020	8137300
Dissolved Selenium (Se)	mg/L	0.00143	8139141	0.00159	<0.000040	0.000040	8137300
Dissolved Silicon (Si)	mg/L	3.69	8137300	4.03	<0.050	0.050	8137300
Dissolved Silver (Ag)	mg/L	<0.0000050	8137300	<0.0000050	<0.0000050	0.0000050	8137300
Dissolved Strontium (Sr)	mg/L	0.226	8137300	0.211	<0.000050	0.000050	8137300
Dissolved Thallium (Tl)	mg/L	<0.0000020	8137300	<0.0000020	<0.0000020	0.0000020	8137300
Dissolved Tin (Sn)	mg/L	<0.00020	8137300	<0.00020	<0.00020	0.00020	8137300
Dissolved Titanium (Ti)	mg/L	<0.00050	8137300	<0.00050	<0.00050	0.00050	8137300
Dissolved Uranium (U)	mg/L	0.00248	8137300	0.00426	<0.0000020	0.0000020	8137300
Dissolved Vanadium (V)	mg/L	<0.00020	8137300	<0.00020	<0.00020	0.00020	8137300
Dissolved Zinc (Zn)	mg/L	0.00040	8137300	0.00375	<0.00010	0.00010	8137300
Dissolved Zirconium (Zr)	mg/L	<0.00010	8137300	<0.00010	<0.00010	0.00010	8137300
Dissolved Calcium (Ca)	mg/L	72.9	8135145	65.6	<0.050	0.050	8135145

RDL = Reportable Detection Limit

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NU0021		NU0022	NU0023		
Sampling Date		2015/12/02 10:20		2015/12/02 10:00	2015/12/03 09:37		
COC Number		08414227		08414227	08414227		
	UNITS	KZ-16	QC Batch	KZ-17	KZ-19	RDL	QC Batch
Dissolved Magnesium (Mg)	mg/L	13.8	8135145	14.5	<0.050	0.050	8135145
Dissolved Potassium (K)	mg/L	1.32	8135145	1.35	<0.050	0.050	8135145
Dissolved Sodium (Na)	mg/L	1.28	8135145	1.22	<0.050	0.050	8135145
Dissolved Sulphur (S)	mg/L	12.0	8135145	11.6	<3.0	3.0	8135145
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NU0024	NU0025		NU0031		
Sampling Date		2015/12/01 15:11	2015/12/01 14:13		2015/12/01 11:45		
COC Number		08414227	08414227		08414228		
	UNITS	KZ-21	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	293	268	8135236	263	0.50	8135236
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8137659	<0.0000020	0.0000020	8137659
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00067	0.00064	8137300	0.00076	0.00050	8137300
Dissolved Antimony (Sb)	mg/L	0.000043	0.000042	8137300	0.000060	0.000020	8137300
Dissolved Arsenic (As)	mg/L	0.00105	0.000906	8137300	0.000514	0.000020	8137300
Dissolved Barium (Ba)	mg/L	0.0693	0.0699	8137300	0.0738	0.000020	8137300
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	8137300	<0.000010	0.000010	8137300
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8137300	<0.0000050	0.0000050	8137300
Dissolved Boron (B)	mg/L	<0.010	<0.010	8137300	<0.010	0.010	8137300
Dissolved Cadmium (Cd)	mg/L	0.0000070	0.0000100	8137300	0.0000050	0.0000050	8137300
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	8137300	<0.00010	0.00010	8137300
Dissolved Cobalt (Co)	mg/L	0.0000520	0.0000390	8137300	0.0000110	0.0000050	8137300
Dissolved Copper (Cu)	mg/L	0.000220	0.000237	8137300	0.000353	0.000050	8137300
Dissolved Iron (Fe)	mg/L	0.0802	0.0702 (1)	8139141	0.0128	0.0010	8137300
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	8137300	<0.0000050	0.0000050	8137300
Dissolved Lithium (Li)	mg/L	0.00710	0.00510	8137300	0.00566	0.00050	8137300
Dissolved Manganese (Mn)	mg/L	0.0740	0.0392	8137300	0.000557	0.000050	8137300
Dissolved Molybdenum (Mo)	mg/L	0.00156	0.00135	8137300	0.00103	0.000050	8137300
Dissolved Nickel (Ni)	mg/L	0.00172	0.00113	8137300	0.000663	0.000020	8137300
Dissolved Phosphorus (P)	mg/L	0.0044	0.0034	8137300	<0.0020	0.0020	8137300
Dissolved Selenium (Se)	mg/L	0.000783	0.00114	8137300	0.00107	0.000040	8137300
Dissolved Silicon (Si)	mg/L	6.15	5.13	8137300	4.97	0.050	8137300
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	8137300	<0.0000050	0.0000050	8137300
Dissolved Strontium (Sr)	mg/L	0.225	0.233	8137300	0.240	0.000050	8137300
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8137300	<0.0000020	0.0000020	8137300
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	8137300	<0.00020	0.00020	8137300
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	8137300	<0.00050	0.00050	8137300
Dissolved Uranium (U)	mg/L	0.00318	0.00342	8137300	0.00307	0.0000020	8137300
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	8137300	<0.00020	0.00020	8137300
Dissolved Zinc (Zn)	mg/L	0.00048	0.00057 (1)	8139141	0.00023	0.00010	8137300
Dissolved Zirconium (Zr)	mg/L	0.00016	0.00012	8137300	<0.00010	0.00010	8137300

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NU0024	NU0025		NU0031		
Sampling Date		2015/12/01 15:11	2015/12/01 14:13		2015/12/01 11:45		
COC Number		08414227	08414227		08414228		
	UNITS	KZ-21	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Dissolved Calcium (Ca)	mg/L	72.5	69.5	8135145	69.1	0.050	8135145
Dissolved Magnesium (Mg)	mg/L	27.2	22.9	8135145	21.9	0.050	8135145
Dissolved Potassium (K)	mg/L	1.91	1.65	8135145	1.48	0.050	8135145
Dissolved Sodium (Na)	mg/L	1.85	1.70	8135145	1.77	0.050	8135145
Dissolved Sulphur (S)	mg/L	15.2	14.5	8135145	14.4	3.0	8135145
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NU0032		NU0033	NU0034		
Sampling Date		2015/12/01 10:28		2015/12/03 18:45	2015/12/02 17:45		
COC Number		08414228		08414228	08414228		
	UNITS	KZ-28	QC Batch	TRIP BLANK	KZ-6	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	272	8135236	<0.50	165	0.50	8135236
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	8137659	<0.0000020	<0.0000020	0.0000020	8137659
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00067	8137300	<0.00050	0.00108	0.00050	8137300
Dissolved Antimony (Sb)	mg/L	0.000062	8137300	<0.000020	<0.000020	0.000020	8137300
Dissolved Arsenic (As)	mg/L	0.000537	8137300	<0.000020	0.000066	0.000020	8137300
Dissolved Barium (Ba)	mg/L	0.0762	8137300	<0.000020	0.0445	0.000020	8137300
Dissolved Beryllium (Be)	mg/L	<0.000010	8137300	<0.000010	<0.000010	0.000010	8137300
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8137300	<0.0000050	<0.0000050	0.0000050	8137300
Dissolved Boron (B)	mg/L	<0.010	8137300	<0.010	<0.010	0.010	8137300
Dissolved Cadmium (Cd)	mg/L	0.0000050	8137300	<0.0000050	0.0000100	0.0000050	8137300
Dissolved Chromium (Cr)	mg/L	<0.00010	8137300	<0.00010	<0.00010	0.00010	8137300
Dissolved Cobalt (Co)	mg/L	0.0000100	8137300	<0.0000050	0.0000060	0.0000050	8137300
Dissolved Copper (Cu)	mg/L	0.000378	8137300	<0.000050	0.000105	0.000050	8137300
Dissolved Iron (Fe)	mg/L	0.0156 (1)	8139141	<0.0010	0.0083	0.0010	8137300
Dissolved Lead (Pb)	mg/L	<0.0000050	8137300	<0.0000050	<0.0000050	0.0000050	8137300
Dissolved Lithium (Li)	mg/L	0.00550	8137300	<0.00050	0.00082	0.00050	8137300
Dissolved Manganese (Mn)	mg/L	0.000433	8139141	<0.000050	0.000077	0.000050	8137300
Dissolved Molybdenum (Mo)	mg/L	0.00107	8137300	<0.000050	0.000585	0.000050	8137300
Dissolved Nickel (Ni)	mg/L	0.000704	8137300	<0.000020	0.000126	0.000020	8137300
Dissolved Phosphorus (P)	mg/L	0.0025	8137300	<0.0020	<0.0020	0.0020	8137300
Dissolved Selenium (Se)	mg/L	0.00113	8137300	<0.000040	0.00114	0.000040	8137300
Dissolved Silicon (Si)	mg/L	4.96	8137300	<0.050	3.40	0.050	8137300
Dissolved Silver (Ag)	mg/L	<0.0000050	8137300	<0.0000050	<0.0000050	0.0000050	8137300
Dissolved Strontium (Sr)	mg/L	0.239	8137300	<0.000050	0.166	0.000050	8137300
Dissolved Thallium (Tl)	mg/L	<0.0000020	8137300	<0.0000020	<0.0000020	0.0000020	8137300
Dissolved Tin (Sn)	mg/L	<0.00020	8137300	<0.00020	<0.00020	0.00020	8137300
Dissolved Titanium (Ti)	mg/L	<0.00050	8137300	<0.00050	<0.00050	0.00050	8137300
Dissolved Uranium (U)	mg/L	0.00326	8137300	<0.0000020	0.00116	0.0000020	8137300
Dissolved Vanadium (V)	mg/L	<0.00020	8137300	<0.00020	<0.00020	0.00020	8137300
Dissolved Zinc (Zn)	mg/L	0.00025	8137300	<0.00010	0.00016	0.00010	8137300
Dissolved Zirconium (Zr)	mg/L	<0.00010	8137300	<0.00010	<0.00010	0.00010	8137300

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NU0032		NU0033	NU0034		
Sampling Date		2015/12/01 10:28		2015/12/03 18:45	2015/12/02 17:45		
COC Number		08414228		08414228	08414228		
	UNITS	KZ-28	QC Batch	TRIP BLANK	KZ-6	RDL	QC Batch
Dissolved Calcium (Ca)	mg/L	70.4	8135145	<0.050	54.8	0.050	8135145
Dissolved Magnesium (Mg)	mg/L	23.4	8135145	<0.050	6.92	0.050	8135145
Dissolved Potassium (K)	mg/L	1.63	8135145	<0.050	0.916	0.050	8135145
Dissolved Sodium (Na)	mg/L	1.88	8135145	<0.050	0.741	0.050	8135145
Dissolved Sulphur (S)	mg/L	16.1	8135145	<3.0	8.0	3.0	8135145
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NU0016	NU0017	NU0018	NU0019	NU0020		
Sampling Date		2015/12/03 08:21	2015/12/02 16:41	2015/12/02 12:18	2015/12/02 14:41	2015/12/02 09:07		
COC Number		08414227	08414227	08414227	08414227	08414227		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	124	175	199	89.8	236	0.50	8134268
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8137916
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00959	0.0288	0.0226	0.0273	0.0103	0.00050	8136449
Total Antimony (Sb)	mg/L	0.000028	0.000061	0.000041	0.000034	0.000033	0.000020	8136449
Total Arsenic (As)	mg/L	0.000088	0.000428	0.000370	0.000229	0.000505	0.000020	8136449
Total Barium (Ba)	mg/L	0.0695	0.0953	0.0979	0.111	0.0859	0.000020	8136449
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8136449
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8136449
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8136449
Total Cadmium (Cd)	mg/L	0.000237	0.000281	0.0000820	0.0000340	0.0000380	0.0000050	8136449
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8136449
Total Cobalt (Co)	mg/L	0.0000070	0.000156	0.000129	0.0000470	0.0000400	0.0000050	8136449
Total Copper (Cu)	mg/L	0.000541	0.000489	0.000341	0.000500	0.000279	0.000050	8136449
Total Iron (Fe)	mg/L	0.0017	0.710	1.18	0.132	0.0764	0.0010	8136449
Total Lead (Pb)	mg/L	0.0000190	0.000177	0.0000600	0.0000520	0.0000200	0.0000050	8136449
Total Lithium (Li)	mg/L	0.00090	0.00241	0.00306	0.00130	0.00312	0.00050	8136449
Total Manganese (Mn)	mg/L	<0.000050	0.141	0.0898	0.0420	0.0320	0.000050	8136449
Total Molybdenum (Mo)	mg/L	0.000700	0.000567	0.000641	0.000633	0.00107	0.000050	8136449
Total Nickel (Ni)	mg/L	0.000292	0.000590	0.000415	0.000398	0.000650	0.000020	8136449
Total Phosphorus (P)	mg/L	<0.0020	0.0050	0.0044	0.0027	0.0023	0.0020	8136449
Total Selenium (Se)	mg/L	0.00178	0.00111	0.00124	0.000296	0.00134	0.000040	8136449
Total Silicon (Si)	mg/L	2.62	3.68	3.88	3.74	3.76	0.050	8136449
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8136449
Total Strontium (Sr)	mg/L	0.130	0.189	0.212	0.0911	0.216	0.000050	8136449
Total Thallium (Tl)	mg/L	0.0000020	0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8136449
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8136449
Total Titanium (Ti)	mg/L	<0.00050	0.00058	<0.00050	0.00102	<0.00050	0.00050	8136449
Total Uranium (U)	mg/L	0.00348	0.00146	0.00164	0.00107	0.00360	0.0000020	8136449
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8136449
Total Zinc (Zn)	mg/L	0.0286	0.0761	0.0200	0.00377	0.00435	0.00010	8136449
Total Zirconium (Zr)	mg/L	<0.00010	0.00011	<0.00010	<0.00010	<0.00010	0.00010	8136449
Total Calcium (Ca)	mg/L	40.7	57.3	66.2	30.3	69.8	0.050	8135146

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NU0016	NU0017	NU0018	NU0019	NU0020		
Sampling Date		2015/12/03 08:21	2015/12/02 16:41	2015/12/02 12:18	2015/12/02 14:41	2015/12/02 09:07		
COC Number		08414227	08414227	08414227	08414227	08414227		
	UNITS	**KZ-2**	**KZ-7**	**KZ-9**	**KZ-13**	**KZ-15**	**RDL**	**QC Batch**
Total Magnesium (Mg)	mg/L	5.38	7.62	8.11	3.44	14.9	0.050	8135146
Total Potassium (K)	mg/L	2.07	1.78	1.71	1.84	1.44	0.050	8135146
Total Sodium (Na)	mg/L	0.890	1.23	1.36	1.11	1.32	0.050	8135146
Total Sulphur (S)	mg/L	18.0	13.2	11.4	5.6	11.5	3.0	8135146

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NU0021		NU0022	NU0023	NU0024		
Sampling Date		2015/12/02 10:20		2015/12/02 10:00	2015/12/03 09:37	2015/12/01 15:11		
COC Number		08414227		08414227	08414227	08414227		
	UNITS	KZ-16	QC Batch	KZ-17	KZ-19	KZ-21	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	238	8134268	221	<0.50	303	0.50	8134268
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	8137916	<0.0000020	<0.0000020	<0.0000020	0.0000020	8137985
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0103	8136449	0.0140	0.00609	0.00082	0.00050	8136449
Total Antimony (Sb)	mg/L	<0.000020	8136449	0.000051	<0.000020	0.000049	0.000020	8136449
Total Arsenic (As)	mg/L	0.000247	8136449	0.000761	<0.000020	0.00114	0.000020	8136449
Total Barium (Ba)	mg/L	0.0914	8136449	0.0914	<0.000020	0.0706	0.000020	8136449
Total Beryllium (Be)	mg/L	<0.000010	8136449	<0.000010	<0.000010	<0.000010	0.000010	8136449
Total Bismuth (Bi)	mg/L	<0.0000050	8136449	<0.0000050	<0.0000050	<0.0000050	0.0000050	8136449
Total Boron (B)	mg/L	<0.010	8136449	<0.010	<0.010	<0.010	0.010	8136449
Total Cadmium (Cd)	mg/L	0.0000210	8136449	0.0000500	<0.0000050	0.0000070	0.0000050	8136449
Total Chromium (Cr)	mg/L	<0.00010	8136449	<0.00010	<0.00010	<0.00010	0.00010	8136449
Total Cobalt (Co)	mg/L	0.0000310	8136449	0.0000570	<0.0000050	0.0000600	0.0000050	8136449
Total Copper (Cu)	mg/L	0.000261	8136449	0.000330	<0.000050	0.000217	0.000050	8136449
Total Iron (Fe)	mg/L	0.0224	8136449	0.141	<0.0010	0.0965	0.0010	8136449
Total Lead (Pb)	mg/L	0.0000090	8136449	0.0000360	<0.0000050	<0.0000050	0.0000050	8136449
Total Lithium (Li)	mg/L	0.00252	8136449	0.00330	<0.00050	0.00686	0.00050	8136449
Total Manganese (Mn)	mg/L	0.00984	8136449	0.0556	<0.000050	0.0804	0.000050	8136449
Total Molybdenum (Mo)	mg/L	0.000473	8136449	0.00173	<0.000050	0.00161	0.000050	8136449
Total Nickel (Ni)	mg/L	0.000530	8136449	0.000786	<0.000020	0.00180	0.000020	8136449
Total Phosphorus (P)	mg/L	<0.0020	8136449	0.0035	<0.0020	0.0057	0.0020	8136449
Total Selenium (Se)	mg/L	0.00134	8136449	0.00142	<0.000040	0.000800	0.000040	8136449
Total Silicon (Si)	mg/L	3.62	8136449	3.79	<0.050	6.48	0.050	8136449
Total Silver (Ag)	mg/L	<0.0000050	8136449	<0.0000050	<0.0000050	<0.0000050	0.0000050	8136449
Total Strontium (Sr)	mg/L	0.235	8136449	0.208	0.000097	0.251	0.000050	8136449
Total Thallium (Tl)	mg/L	<0.0000020	8136449	<0.0000020	<0.0000020	<0.0000020	0.0000020	8136449
Total Tin (Sn)	mg/L	<0.00020	8136449	<0.00020	<0.00020	<0.00020	0.00020	8136449
Total Titanium (Ti)	mg/L	<0.00050	8136449	<0.00050	<0.00050	<0.00050	0.00050	8136449
Total Uranium (U)	mg/L	0.00265	8136449	0.00491	<0.0000020	0.00336	0.0000020	8136449
Total Vanadium (V)	mg/L	<0.00020	8136449	<0.00020	<0.00020	<0.00020	0.00020	8136449
Total Zinc (Zn)	mg/L	0.00080	8136449	0.00724	0.00013	0.00041	0.00010	8136449
Total Zirconium (Zr)	mg/L	<0.00010	8136449	<0.00010	<0.00010	0.00018	0.00010	8136449
Total Calcium (Ca)	mg/L	70.9	8135146	64.5	<0.050	74.2	0.050	8135146

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NU0021		NU0022	NU0023	NU0024		
Sampling Date		2015/12/02 10:20		2015/12/02 10:00	2015/12/03 09:37	2015/12/01 15:11		
COC Number		08414227		08414227	08414227	08414227		
	UNITS	KZ-16	QC Batch	KZ-17	KZ-19	KZ-21	RDL	QC Batch
Total Magnesium (Mg)	mg/L	14.7	8135146	14.5	<0.050	28.7	0.050	8135146
Total Potassium (K)	mg/L	1.42	8135146	1.44	<0.050	2.06	0.050	8135146
Total Sodium (Na)	mg/L	1.38	8135146	1.27	<0.050	1.98	0.050	8135146
Total Sulphur (S)	mg/L	11.1	8135146	11.1	<3.0	16.5	3.0	8135146

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NU0025	NU0031	NU0032	NU0033	NU0034		
Sampling Date		2015/12/01 14:13	2015/12/01 11:45	2015/12/01 10:28	2015/12/03 18:45	2015/12/02 17:45		
COC Number		08414227	08414228	08414228	08414228	08414228		
	UNITS	KZ-22	KZ-26	KZ-28	TRIP BLANK	KZ-6	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	273	273	265	<0.50	166	0.50	8134268
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8137985
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00074	0.00080	0.00097	<0.00050	0.00117	0.00050	8136449
Total Antimony (Sb)	mg/L	0.000040	0.000064	0.000063	<0.000020	<0.000020	0.000020	8136449
Total Arsenic (As)	mg/L	0.000953	0.000559	0.000532	<0.000020	0.000069	0.000020	8136449
Total Barium (Ba)	mg/L	0.0759	0.0792	0.0782	<0.000020	0.0446	0.000020	8136449
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8136449
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8136449
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8136449
Total Cadmium (Cd)	mg/L	0.0000110	0.0000050	0.0000060	<0.0000050	0.0000090	0.0000050	8136449
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8136449
Total Cobalt (Co)	mg/L	0.0000390	0.0000100	0.0000100	<0.0000050	0.0000080	0.0000050	8136449
Total Copper (Cu)	mg/L	0.000240	0.000341	0.000327	<0.000050	0.000103	0.000050	8136449
Total Iron (Fe)	mg/L	0.0546	0.0166	0.0111	<0.0010	0.0087	0.0010	8136449
Total Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8136449
Total Lithium (Li)	mg/L	0.00572	0.00587	0.00613	<0.00050	0.00072	0.00050	8136449
Total Manganese (Mn)	mg/L	0.0392	0.000649	0.000595	<0.000050	0.000105	0.000050	8136449
Total Molybdenum (Mo)	mg/L	0.00140	0.00109	0.00106	<0.000050	0.000570	0.000050	8136449
Total Nickel (Ni)	mg/L	0.00111	0.000672	0.000639	<0.000020	0.000120	0.000020	8136449
Total Phosphorus (P)	mg/L	0.0033	<0.0020	0.0026	<0.0020	0.0034	0.0020	8136449
Total Selenium (Se)	mg/L	0.00115	0.00116	0.00117	<0.000040	0.00108	0.000040	8136449
Total Silicon (Si)	mg/L	5.44	5.19	5.11	<0.050	3.36	0.050	8136449
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8136449
Total Strontium (Sr)	mg/L	0.244	0.248	0.244	<0.000050	0.166	0.000050	8136449
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8136449
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8136449
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8136449
Total Uranium (U)	mg/L	0.00349	0.00325	0.00318	0.0000040	0.00111	0.0000020	8136449
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8136449
Total Zinc (Zn)	mg/L	0.00043	0.00028	0.00019	<0.00010	0.00018	0.00010	8136449
Total Zirconium (Zr)	mg/L	0.00011	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8136449
Total Calcium (Ca)	mg/L	71.3	73.2	70.7	<0.050	55.1	0.050	8135146

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NU0025	NU0031	NU0032	NU0033	NU0034		
Sampling Date		2015/12/01 14:13	2015/12/01 11:45	2015/12/01 10:28	2015/12/03 18:45	2015/12/02 17:45		
COC Number		08414227	08414228	08414228	08414228	08414228		
	UNITS	**KZ-22**	**KZ-26**	**KZ-28**	**TRIP BLANK**	**KZ-6**	**RDL**	**QC Batch**
Total Magnesium (Mg)	mg/L	23.1	22.0	21.6	<0.050	7.04	0.050	8135146
Total Potassium (K)	mg/L	1.72	1.57	1.51	<0.050	0.936	0.050	8135146
Total Sodium (Na)	mg/L	1.75	1.76	1.77	<0.050	0.760	0.050	8135146
Total Sulphur (S)	mg/L	14.9	15.2	14.4	<3.0	8.4	3.0	8135146

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0016
Sample ID: KZ-2
Matrix: Water

Collected: 2015/12/03
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Name Redacted
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	
Mercury (Total-LowLevel) by CVAF	CV/AF	8137916	2015/12/08	2015/12/08	
Ion Balance	CALC	8134200	N/A	2015/12/08	
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	
pH Water	AT/ALK	8135722	N/A	2015/12/05	
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	
Total Suspended Solids-Low Level	BAL/BAL	8137550	2015/12/08	2015/12/08	

Maxxam ID: NU0016 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2015/12/03
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0017
Sample ID: KZ-7
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Name Redacted
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	
Mercury (Total-LowLevel) by CVAF	CV/AF	8137916	2015/12/08	2015/12/08	
Ion Balance	CALC	8134200	N/A	2015/12/08	
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	
pH Water	AT/ALK	8135722	N/A	2015/12/05	
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	
Total Suspended Solids-Low Level	BAL/BAL	8137550	2015/12/08	2015/12/08	

Maxxam ID: NU0017 Dup
Sample ID: KZ-7
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Name Redacted
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	

Maxxam ID: NU0018
Sample ID: KZ-9
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0018
Sample ID: KZ-9
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	Name Redacted
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	
Mercury (Total-LowLevel) by CVAF	CV/AF	8137916	2015/12/08	2015/12/08	
Ion Balance	CALC	8134200	N/A	2015/12/08	
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	
pH Water	AT/ALK	8135722	N/A	2015/12/05	
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	
Total Suspended Solids-Low Level	BAL/BAL	8137550	2015/12/08	2015/12/08	

Maxxam ID: NU0019
Sample ID: KZ-13
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Name Redacted
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0019
Sample ID: KZ-13
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	
Mercury (Total-LowLevel) by CVAF	CV/AF	8137916	2015/12/08	2015/12/08	
Ion Balance	CALC	8134200	N/A	2015/12/08	
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	
pH Water	AT/ALK	8135722	N/A	2015/12/05	
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	
Total Suspended Solids-Low Level	BAL/BAL	8137550	2015/12/08	2015/12/08	

Maxxam ID: NU0020
Sample ID: KZ-15
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Name Redacted
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	
Mercury (Total-LowLevel) by CVAF	CV/AF	8137916	2015/12/08	2015/12/08	
Ion Balance	CALC	8134200	N/A	2015/12/08	
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0020
Sample ID: KZ-15
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	
pH Water	AT/ALK	8135722	N/A	2015/12/05	
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	
Total Suspended Solids-Low Level	BAL/BAL	8137550	2015/12/08	2015/12/08	

Maxxam ID: NU0021
Sample ID: KZ-16
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Name Redacted
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	
Mercury (Total-LowLevel) by CVAF	CV/AF	8137916	2015/12/08	2015/12/08	
Ion Balance	CALC	8134200	N/A	2015/12/08	
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	
pH Water	AT/ALK	8135722	N/A	2015/12/05	
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0021 **Collected:** 2015/12/02
Sample ID: KZ-16 **Shipped:**
Matrix: Water **Received:** 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Suspended Solids-Low Level	BAL/BAL	8137550	2015/12/08	2015/12/08	Name Redacted

Maxxam ID: NU0021 Dup **Collected:** 2015/12/02
Sample ID: KZ-16 **Shipped:**
Matrix: Water **Received:** 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8137916	2015/12/08	2015/12/08	Name Redacted

Maxxam ID: NU0022 **Collected:** 2015/12/02
Sample ID: KZ-17 **Shipped:**
Matrix: Water **Received:** 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Name Redacted
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	
Mercury (Total-LowLevel) by CVAF	CV/AF	8137985	2015/12/08	2015/12/08	
Ion Balance	CALC	8134200	N/A	2015/12/08	
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	
pH Water	AT/ALK	8135722	N/A	2015/12/05	
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	
Total Suspended Solids-Low Level	BAL/BAL	8137550	2015/12/08	2015/12/08	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0023
Sample ID: KZ-19
Matrix: Water

Collected: 2015/12/03
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Name Redacted
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	
Mercury (Total-LowLevel) by CVAF	CV/AF	8137985	2015/12/08	2015/12/08	
Ion Balance	CALC	8134200	N/A	2015/12/08	
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	
pH Water	AT/ALK	8135722	N/A	2015/12/05	
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	
Total Suspended Solids-Low Level	BAL/BAL	8137550	2015/12/08	2015/12/08	

Maxxam ID: NU0024
Sample ID: KZ-21
Matrix: Water

Collected: 2015/12/01
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Name Redacted
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0024
Sample ID: KZ-21
Matrix: Water

Collected: 2015/12/01
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	Name Redacted
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	
Mercury (Total-LowLevel) by CVAF	CV/AF	8137985	2015/12/08	2015/12/08	
Ion Balance	CALC	8134200	N/A	2015/12/08	
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	
pH Water	AT/ALK	8135722	N/A	2015/12/05	
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	
Total Suspended Solids-Low Level	BAL/BAL	8136208	2015/12/07	2015/12/08	

Maxxam ID: NU0025
Sample ID: KZ-22
Matrix: Water

Collected: 2015/12/01
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Name Redacted
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	
Mercury (Total-LowLevel) by CVAF	CV/AF	8137985	2015/12/08	2015/12/08	
Ion Balance	CALC	8134200	N/A	2015/12/08	
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0025
Sample ID: KZ-22
Matrix: Water

Collected: 2015/12/01
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	Name Redacted
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	
pH Water	AT/ALK	8135722	N/A	2015/12/05	
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	
Total Suspended Solids-Low Level	BAL/BAL	8136208	2015/12/07	2015/12/08	

Maxxam ID: NU0025 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2015/12/01
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	Name Redacted

Maxxam ID: NU0031
Sample ID: KZ-26
Matrix: Water

Collected: 2015/12/01
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Name Redacted
Alkalinity - Water	AT/ALK	8135725	2015/12/05	2015/12/05	
Chloride by Automated Colourimetry	KONE/COL	8136855	N/A	2015/12/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	
Conductance - water	AT/ALK	8135728	N/A	2015/12/05	
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	
Mercury (Total-LowLevel) by CVAF	CV/AF	8137985	2015/12/08	2015/12/08	
Ion Balance	CALC	8134200	N/A	2015/12/08	
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0031
Sample ID: KZ-26
Matrix: Water

Collected: 2015/12/01
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	
pH Water	AT/ALK	8135727	N/A	2015/12/05	
Sulphate by Automated Colourimetry	KONE/COL	8136861	N/A	2015/12/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	
Total Suspended Solids-Low Level	BAL/BAL	8136208	2015/12/07	2015/12/08	

Maxxam ID: NU0031 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2015/12/01
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	

Maxxam ID: NU0032
Sample ID: KZ-28
Matrix: Water

Collected: 2015/12/01
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Name Redacted
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	
Mercury (Total-LowLevel) by CVAF	CV/AF	8137985	2015/12/08	2015/12/08	
Ion Balance	CALC	8134200	N/A	2015/12/08	
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0032
Sample ID: KZ-28
Matrix: Water

Collected: 2015/12/01
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	
pH Water	AT/ALK	8135722	N/A	2015/12/05	
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	
Total Suspended Solids-Low Level	BAL/BAL	8136208	2015/12/07	2015/12/08	

Maxxam ID: NU0033
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/12/03
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Name Redacted
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8135780	N/A	2015/12/07	
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	
Mercury (Total-LowLevel) by CVAF	CV/AF	8137985	2015/12/08	2015/12/08	
Ion Balance	CALC	8134200	N/A	2015/12/08	
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	
pH Water	AT/ALK	8135722	N/A	2015/12/05	
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	
Total Suspended Solids-Low Level	BAL/BAL	8136208	2015/12/07	2015/12/08	

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: NU0033 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2015/12/03
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8135780	N/A	2015/12/07	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	

Maxxam ID: NU0034
Sample ID: KZ-6
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8137883	N/A	2015/12/08	Name Redacted
Alkalinity - Water	AT/ALK	8135721	2015/12/05	2015/12/05	
Chloride by Automated Colourimetry	KONE/COL	8136863	N/A	2015/12/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8138190	N/A	2015/12/08	
Cyanide WAD (weak acid dissociable)	TECH/COL	8138245	N/A	2015/12/08	
Colour (True) by Kone Lab	KONE	8135787	N/A	2015/12/05	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8136813	N/A	2015/12/07	
Conductance - water	AT/ALK	8135723	N/A	2015/12/05	
Fluoride	ISE/ISE	8138236	N/A	2015/12/07	
Hardness Total (calculated as CaCO3)	CALC	8134268	N/A	2015/12/08	
Hardness (calculated as CaCO3)	CALC	8135236	N/A	2015/12/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8137659	N/A	2015/12/08	
Mercury (Total-LowLevel) by CVAF	CV/AF	8137985	2015/12/08	2015/12/08	
Ion Balance	CALC	8134200	N/A	2015/12/08	
Sum of cations, anions	CALC	8135237	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8135145	N/A	2015/12/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8137300	N/A	2015/12/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8135146	N/A	2015/12/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8136449	N/A	2015/12/08	
Ammonia-N (Unpreserved)	KONE/COL	8135778	N/A	2015/12/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8135760	N/A	2015/12/05	
Nitrite (N) (low level)	TRAA/COL	8135761	N/A	2015/12/05	
Nitrogen - Nitrate (as N)	CALC	8134304	N/A	2015/12/05	
Filter and HNO3 Preserve for Metals	ICP	8136230	N/A	2015/12/07	
pH Water	AT/ALK	8135722	N/A	2015/12/05	
Sulphate by Automated Colourimetry	KONE/COL	8136867	N/A	2015/12/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8135779	2015/12/05	2015/12/05	
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	
Total Suspended Solids-Low Level	BAL/BAL	8137550	2015/12/08	2015/12/08	

Maxxam ID: NU0034 Dup
Sample ID: KZ-6
Matrix: Water

Collected: 2015/12/02
Shipped:
Received: 2015/12/04

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - unpreserved	KONE/COL	8135783	N/A	2015/12/05	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
Package 2	3.0°C
Package 3	1.7°C
Package 4	2.0°C

Sample NU0021, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample NU0024, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample NU0025, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample NU0032, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8135721	Alkalinity (PP as CaCO3)	2015/12/05					<0.50	mg/L	NC	20
8135721	Alkalinity (Total as CaCO3)	2015/12/05	NC	80 - 120	94	80 - 120	<0.50	mg/L	0.41	20
8135721	Bicarbonate (HCO3)	2015/12/05					<0.50	mg/L	0.41	20
8135721	Carbonate (CO3)	2015/12/05					<0.50	mg/L	NC	20
8135721	Hydroxide (OH)	2015/12/05					<0.50	mg/L	NC	20
8135722	pH	2015/12/05			102	97 - 103			0.25	N/A
8135723	Conductivity	2015/12/05			101	80 - 120	<1.0	uS/cm	0.67	20
8135725	Alkalinity (PP as CaCO3)	2015/12/05					<0.50	mg/L	NC	20
8135725	Alkalinity (Total as CaCO3)	2015/12/05	NC	80 - 120	96	80 - 120	0.63, RDL=0.50	mg/L	3.9	20
8135725	Bicarbonate (HCO3)	2015/12/05					0.77, RDL=0.50	mg/L	3.9	20
8135725	Carbonate (CO3)	2015/12/05					<0.50	mg/L	NC	20
8135725	Hydroxide (OH)	2015/12/05					<0.50	mg/L	NC	20
8135727	pH	2015/12/05			102	97 - 103			0.13	N/A
8135728	Conductivity	2015/12/05			101	80 - 120	<1.0	uS/cm	0.43	20
8135760	Nitrate plus Nitrite (N)	2015/12/05	99	80 - 120	106	80 - 120	<0.0020	mg/L	0	25
8135761	Nitrite (N)	2015/12/05	100	80 - 120	105	80 - 120	<0.0020	mg/L	NC	25
8135778	Total Ammonia (N)	2015/12/07	NC	80 - 120	96	80 - 120	<0.0050	mg/L	0.98	20
8135779	Dissolved Phosphorus (P)	2015/12/05	NC	80 - 120	91	80 - 120	<0.0020	mg/L	0.12	20
8135780	Dissolved Organic Carbon (C)	2015/12/07	99	80 - 120	105	80 - 120	<0.50	mg/L	NC	20
8135783	Total Phosphorus (P)	2015/12/05	94	80 - 120	94	80 - 120	<0.0020	mg/L	NC	20
8135787	True Colour	2015/12/05			106	80 - 120	<5.0	Col. Unit	NC	20
8136208	Total Suspended Solids	2015/12/07			102	80 - 120	<1.0	mg/L		
8136449	Total Aluminum (Al)	2015/12/08	99	80 - 120	98	80 - 120	<0.00050	mg/L	14	20
8136449	Total Antimony (Sb)	2015/12/08	101	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8136449	Total Arsenic (As)	2015/12/08	97	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8136449	Total Barium (Ba)	2015/12/08	100	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8136449	Total Beryllium (Be)	2015/12/08	94	80 - 120	94	80 - 120	<0.000010	mg/L	NC	20
8136449	Total Bismuth (Bi)	2015/12/08	99	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8136449	Total Boron (B)	2015/12/08	100	80 - 120	97	80 - 120	<0.010	mg/L	NC	20
8136449	Total Cadmium (Cd)	2015/12/08	97	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8136449	Total Chromium (Cr)	2015/12/08	99	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8136449	Total Cobalt (Co)	2015/12/08	100	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8136449	Total Copper (Cu)	2015/12/08	96	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8136449	Total Iron (Fe)	2015/12/08	108	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20
8136449	Total Lead (Pb)	2015/12/08	103	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8136449	Total Lithium (Li)	2015/12/08	93	80 - 120	93	80 - 120	<0.00050	mg/L	NC	20
8136449	Total Manganese (Mn)	2015/12/08	96	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8136449	Total Molybdenum (Mo)	2015/12/08	96	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8136449	Total Nickel (Ni)	2015/12/08	96	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8136449	Total Phosphorus (P)	2015/12/08					<0.0020	mg/L		
8136449	Total Selenium (Se)	2015/12/08	92	80 - 120	92	80 - 120	<0.000040	mg/L	NC	20
8136449	Total Silicon (Si)	2015/12/08					<0.050	mg/L	0.69	20
8136449	Total Silver (Ag)	2015/12/08	90	80 - 120	82	80 - 120	<0.0000050	mg/L	NC	20
8136449	Total Strontium (Sr)	2015/12/08	96	80 - 120	93	80 - 120	<0.000050	mg/L	NC	20
8136449	Total Thallium (Tl)	2015/12/08	98	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8136449	Total Tin (Sn)	2015/12/08	101	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8136449	Total Titanium (Ti)	2015/12/08	92	80 - 120	89	80 - 120	<0.00050	mg/L	NC	20
8136449	Total Uranium (U)	2015/12/08	105	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8136449	Total Vanadium (V)	2015/12/08	105	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
8136449	Total Zinc (Zn)	2015/12/08	96	80 - 120	94	80 - 120	<0.00010	mg/L	0.63	20
8136449	Total Zirconium (Zr)	2015/12/08					<0.00010	mg/L	NC	20
8136813	Dissolved Organic Carbon (C)	2015/12/07	104	80 - 120	108	80 - 120	<0.50	mg/L	NC	20
8136855	Dissolved Chloride (Cl)	2015/12/07	NC	80 - 120	97	80 - 120	<0.50	mg/L	9.4	20
8136861	Dissolved Sulphate (SO4)	2015/12/07	NC	80 - 120	108	80 - 120	<0.50	mg/L	NC	20
8136863	Dissolved Chloride (Cl)	2015/12/07	102	80 - 120	109	80 - 120	<0.50	mg/L	1.1	20
8136867	Dissolved Sulphate (SO4)	2015/12/07	NC	80 - 120	90	80 - 120	<0.50	mg/L	2.1	20
8137300	Dissolved Aluminum (Al)	2015/12/08	106	80 - 120	120	80 - 120	<0.00050	mg/L	NC	20
8137300	Dissolved Antimony (Sb)	2015/12/08	103	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8137300	Dissolved Arsenic (As)	2015/12/08	104	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8137300	Dissolved Barium (Ba)	2015/12/08	NC	80 - 120	100	80 - 120	<0.000020	mg/L	0.84	20
8137300	Dissolved Beryllium (Be)	2015/12/08	110	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8137300	Dissolved Bismuth (Bi)	2015/12/08	101	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8137300	Dissolved Boron (B)	2015/12/08	113	80 - 120	119	80 - 120	<0.010	mg/L	NC	20
8137300	Dissolved Cadmium (Cd)	2015/12/08	98	80 - 120	99	80 - 120	<0.0000050	mg/L	2.3	20
8137300	Dissolved Chromium (Cr)	2015/12/08	102	80 - 120	107	80 - 120	<0.00010	mg/L	NC	20
8137300	Dissolved Cobalt (Co)	2015/12/08	101	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8137300	Dissolved Copper (Cu)	2015/12/08	99	80 - 120	101	80 - 120	<0.000050	mg/L	1.9	20
8137300	Dissolved Iron (Fe)	2015/12/08	102	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20
8137300	Dissolved Lead (Pb)	2015/12/08	106	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8137300	Dissolved Lithium (Li)	2015/12/08	98	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8137300	Dissolved Manganese (Mn)	2015/12/08	98	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8137300	Dissolved Molybdenum (Mo)	2015/12/08	NC	80 - 120	101	80 - 120	<0.000050	mg/L	0.75	20
8137300	Dissolved Nickel (Ni)	2015/12/08	99	80 - 120	106	80 - 120	<0.000020	mg/L	1.8	20
8137300	Dissolved Phosphorus (P)	2015/12/08					<0.0020	mg/L	NC	20
8137300	Dissolved Selenium (Se)	2015/12/08	100	80 - 120	96	80 - 120	<0.000040	mg/L	0.78	20
8137300	Dissolved Silicon (Si)	2015/12/08					<0.050	mg/L	2.3	20
8137300	Dissolved Silver (Ag)	2015/12/08	85	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8137300	Dissolved Strontium (Sr)	2015/12/08	NC	80 - 120	98	80 - 120	<0.000050	mg/L	1.4	20
8137300	Dissolved Thallium (Tl)	2015/12/08	105	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
8137300	Dissolved Tin (Sn)	2015/12/08	101	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8137300	Dissolved Titanium (Ti)	2015/12/08	97	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8137300	Dissolved Uranium (U)	2015/12/08	112	80 - 120	107	80 - 120	<0.0000020	mg/L	3.0	20
8137300	Dissolved Vanadium (V)	2015/12/08	107	80 - 120	110	80 - 120	<0.00020	mg/L	NC	20
8137300	Dissolved Zinc (Zn)	2015/12/08	NC	80 - 120	106	80 - 120	<0.00010	mg/L	4.2	20
8137300	Dissolved Zirconium (Zr)	2015/12/08					<0.00010	mg/L	NC	20
8137550	Total Suspended Solids	2015/12/08			101	80 - 120	<1.0	mg/L		
8137659	Dissolved Mercury (Hg)	2015/12/08	100	80 - 120	94	80 - 120	<0.0000020	mg/L	NC	20
8137883	Acidity (pH 4.5)	2015/12/08					<0.50	mg/L	NC	20
8137883	Acidity (pH 8.3)	2015/12/08			100	80 - 120	<0.50	mg/L	NC	20
8137916	Total Mercury (Hg)	2015/12/08	96	80 - 120	93	80 - 120	<0.0000020	mg/L	NC	20
8137985	Total Mercury (Hg)	2015/12/08	93	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8138190	Strong Acid Dissoc. Cyanide (CN)	2015/12/08	99	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8138236	Fluoride (F)	2015/12/07	94	80 - 120	94	80 - 120	<0.010	mg/L	0	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8138245	Weak Acid Dissoc. Cyanide (CN)	2015/12/08	100	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8139141	Dissolved Iron (Fe)	2015/12/09	NC	80 - 120	105	80 - 120	<0.0010	mg/L	4.0	20
8139141	Dissolved Manganese (Mn)	2015/12/09	NC	80 - 120	100	80 - 120	<0.000050	mg/L	1.3	20
8139141	Dissolved Selenium (Se)	2015/12/09	96	80 - 120	94	80 - 120	<0.000040	mg/L	NC	20
8139141	Dissolved Zinc (Zn)	2015/12/09	99	80 - 120	100	80 - 120	<0.00010	mg/L	9.0	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B5A8198
Report Date: 2015/12/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Name BBY Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Updated CoC

CHAIN OF CUSTODY RECORD

08414227

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	X Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 1 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: Y1A 2V3	Site Location:	Kudz Ze Kayah	Same Day 2 Days 1 Day 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		Date Required:
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature	Rush Confirmation #:

Regulatory Criteria	Special Instructions
BC CSR Soil / BC CSR Water / CCME (Specify) / Other (Specify) / Drinking Water / BC Water Quality	Return Cooler / Ship Sample Bottles (Please Specify) / USE SCENARIO # 12685

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested: TOTAL LOW LEVEL METALS INCL. MERCURY; DISSOLVED LOW LEVEL METALS INCL. MERCURY; LOW LEVEL TSS; ANIONS (Cl, F, SO4, NO2, NO3); AMMONIA; CYANIDE (SAD & WAD); CONDUCTIVITY; pH; ALKALINITY & ACIDITY; TRUE COLOR; DOC; TOTAL PHOSPHORUS - LOW LEVEL; DISSOLVED PHOSPHORUS - LOW LEVEL; # OF CONTAINERS SUBMITTED; HOLD - DO NOT ANALYZE

LABORATORY USE ONLY: CUSTODY SEAL Y / N (Present / Intact); COOLER TEMPERATURES

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	# OF CONTAINERS SUBMITTED	COOLER TEMPERATURES	COMMENTS
1	KZ-2	MM0016	2015/12/03	08:21	Water	12	11.2	
2	KZ-7	MM0017	2015/12/02	16:41	Water	12	3.3	
3	KZ-9	MM0018	2015/12/02	12:18	Water	12	2.1/2.3	
4	KZ-13	MM0019	2015/12/02	19:41	Water	12		
5	KZ-15	MM0020	2015/12/02	09:07	Water	12		
6	KZ-16	MM0021	2015/12/02	10:20	Water	12		
7	KZ-17	MM0022	2015/12/02	10:00	Water	12		
8	KZ-19	MM0023	2015/12/03	07:37	Water	12		
9	KZ-21	MM0024	2015/12/01	15:11	Water	12		
10	KZ-22	MM0025	2015/12/01	19:13	Water	12		

B5A8198_COC

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2015/12/03	19:45	Signature Redacted	2015/12/04	13:40	B5A8198

Updated CoC

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

08414228

BBY FCD-00077/05

Page 2 2

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

Invoice Information		Report Information (if differs from invoice)		Project Info		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature	Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-26	NH0031	2015/12/01	11:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
2	KZ-28	NH0032	2015/12/01	10:28	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
3	Trip Blank	NH0033	N/A	N/A	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
4	KZ-6	NH0034	2015/12/02	17:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
5																							
6																							
7																							
8																							
9																							
10																							

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		1,1,2
NA		3,3,3
NA		2,2,1,3

COOLING MEDIA PRESENT Y / N

COMMENTS

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2015/12/03	18:45	Signature Redacted	2010/12/04	13:40	B5A8128

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08417751, 08417753

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/06/09
Report #: R2193597
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B605186
Received: 2016/01/22, 12:50

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	13	N/A	2016/01/25	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	13	2016/01/25	2016/01/25	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	13	N/A	2016/01/25	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	13	N/A	2016/01/25	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	13	N/A	2016/01/25	BBY6SOP-00004	SM 22 4500-CN O m
Colour (True) by Kone Lab	13	N/A	2016/01/23	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	12	N/A	2016/01/26	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2016/01/26	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	13	N/A	2016/01/25	BBY6SOP-00026	SM 22 2510 B m
Fluoride	13	N/A	2016/01/25	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	13	N/A	2016/01/26	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	13	N/A	2016/01/26	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	13	N/A	2016/01/26	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	13	2016/01/26	2016/01/26	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	13	N/A	2016/01/26	BBY WI-00033	SM 22 1030E
Sum of cations, anions	13	N/A	2016/01/26	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	13	N/A	2016/01/26	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	13	N/A	2016/01/26	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	13	N/A	2016/01/26	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	13	N/A	2016/01/26	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Unpreserved)	13	N/A	2016/01/25	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	13	N/A	2016/01/23	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	13	N/A	2016/01/23	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	13	N/A	2016/01/23	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	12	N/A	2016/01/25	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	13	N/A	2016/01/25	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	13	N/A	2016/01/25	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	13	2016/01/26	2016/01/26	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	13	N/A	2016/01/26	BBY6SOP-00013	SM 22 4500-P E m

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08417751, 08417753

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/06/09
Report #: R2193597
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B605186
Received: 2016/01/22, 12:50

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Suspended Solids-Low Level	13	2016/01/25	2016/01/26	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone and Fax Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NZ7218		NZ7219		NZ7220		
Sampling Date		2016/01/20 15:00		2016/01/20 13:34		2016/01/20 12:15		
COC Number		08417751		08417751		08417751		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.7	8172804	3.7	8172804	3.8	N/A	8172804
Cation Sum	meq/L	2.7	8172804	3.7	8172804	3.8	N/A	8172804
Filter and HNO3 Preservation	N/A	LAB	8173876	LAB	8173876	LAB	N/A	8173876
Ion Balance	N/A	1.0	8172803	1.0	8172803	1.0	0.010	8172803
Nitrate (N)	mg/L	0.163	8173137	0.173	8173137	0.125	0.0020	8173137
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00053	8174205	<0.00050	8174205	0.00058	0.00050	8174205
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00062	8174322	<0.00050	8174322	0.00067	0.00050	8174322
Fluoride (F)	mg/L	0.051	8174942	0.066	8174940	0.073	0.010	8174942
Dissolved Organic Carbon (C)	mg/L	0.80	8175678	1.27	8175678	1.61	0.50	8175678
Acidity (pH 4.5)	mg/L	<0.50	8174238	<0.50	8174238	<0.50	0.50	8174238
Alkalinity (Total as CaCO3)	mg/L	79.1	8174445	160	8174445	153	0.50	8174453
Acidity (pH 8.3)	mg/L	1.92	8174238	<0.50	8174238	<0.50	0.50	8174238
Alkalinity (PP as CaCO3)	mg/L	<0.50	8174445	<0.50	8174445	<0.50	0.50	8174453
Bicarbonate (HCO3)	mg/L	96.5	8174445	195	8174445	187	0.50	8174453
Carbonate (CO3)	mg/L	<0.50	8174445	<0.50	8174445	<0.50	0.50	8174453
Hydroxide (OH)	mg/L	<0.50	8174445	<0.50	8174445	<0.50	0.50	8174453
Anions								
Dissolved Sulphate (SO4)	mg/L	52.7	8174515	23.9	8174512	36.2	0.50	8174515
Dissolved Chloride (Cl)	mg/L	<0.50	8174513	<0.50	8174509	0.63	0.50	8174513
MISCELLANEOUS								
True Colour	Col. Unit	<5.0	8175668	<5.0	8175668	10.7	5.0	8175668
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	8175680	0.0027 (1)	8175680	0.0025 (1)	0.0020	8175680
Total Ammonia (N)	mg/L	0.016 (1)	8174601	0.012 (1)	8174601	0.038 (1)	0.0050	8174601
Nitrate plus Nitrite (N)	mg/L	0.163	8173573	0.173	8173573	0.125	0.0020	8173573
Nitrite (N)	mg/L	<0.0020	8173574	<0.0020	8173574	<0.0020	0.0020	8173574
Total Phosphorus (P)	mg/L	<0.0020 (1)	8175682	0.0028 (1)	8175682	0.0025 (1)	0.0020	8175682
Physical Properties								
Conductivity	uS/cm	264	8174447	340	8174447	356	1.0	8174455

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NZ7218		NZ7219		NZ7220		
Sampling Date		2016/01/20 15:00		2016/01/20 13:34		2016/01/20 12:15		
COC Number		08417751		08417751		08417751		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
pH	pH	7.72	8174446	8.16	8174446	8.16		8174454
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8174317	<1.0	8174317	<1.0	1.0	8174317
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NZ7221	NZ7222	NZ7223		NZ7224		
Sampling Date		2016/01/20 11:15	2016/01/21 10:30	2016/01/20 08:30		2016/01/20 09:15		
COC Number		08417751	08417751	08417751		08417751		
	UNITS	KZ-9	KZ-13	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	4.4	1.9	5.5	8172804	6.2	N/A	8172804
Cation Sum	meq/L	4.5	1.9	5.7	8172804	6.1	N/A	8172804
Filter and HNO3 Preservation	N/A	LAB	LAB	LAB	8173876	LAB	N/A	8173876
Ion Balance	N/A	1.0	1.0	1.0	8172803	1.0	0.010	8172803
Nitrate (N)	mg/L	0.199	0.154	0.209	8173137	0.253	0.0020	8173137
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00055	0.00063	0.00050	8174205	0.00051	0.00050	8174205
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00065	0.00072	0.00062	8174322	0.00072	0.00050	8174322
Fluoride (F)	mg/L	0.088	0.045	0.100	8174940	0.082	0.010	8174940
Dissolved Organic Carbon (C)	mg/L	0.84	1.43	1.70	8175678	1.56	0.50	8175678
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	8174238	<0.50	0.50	8174238
Alkalinity (Total as CaCO3)	mg/L	184	77.5	235	8174453	263	0.50	8174445
Acidity (pH 8.3)	mg/L	3.30	0.67	1.51	8174238	4.77	0.50	8174238
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	8174453	<0.50	0.50	8174445
Bicarbonate (HCO3)	mg/L	224	94.6	286	8174453	321	0.50	8174445
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	8174453	<0.50	0.50	8174445
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	8174453	<0.50	0.50	8174445
Anions								
Dissolved Sulphate (SO4)	mg/L	34.1	13.8	36.7	8174512	41.5	0.50	8174512
Dissolved Chloride (Cl)	mg/L	0.98	0.57	0.82	8174509	0.78	0.50	8174509
MISCELLANEOUS								
True Colour	Col. Unit	18.4	10.6	<5.0	8175668	<5.0	5.0	8175668
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0021 (1)	0.0022 (1)	0.0057 (1)	8175680	0.0020 (1)	0.0020	8175680
Total Ammonia (N)	mg/L	0.034 (1)	0.0090 (1)	0.036 (1)	8174601	<0.0050 (1)	0.0050	8174601
Nitrate plus Nitrite (N)	mg/L	0.199	0.154	0.209	8173573	0.253	0.0020	8173573
Nitrite (N)	mg/L	<0.0020	<0.0020	<0.0020	8173574	<0.0020	0.0020	8173574
Total Phosphorus (P)	mg/L	0.0025 (1)	0.0026 (1)	0.0034 (1)	8175682	0.0023 (1)	0.0020	8175682
Physical Properties								
Conductivity	uS/cm	405	181	490	8174455	544	1.0	8174447

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NZ7221	NZ7222	NZ7223		NZ7224		
Sampling Date		2016/01/20 11:15	2016/01/21 10:30	2016/01/20 08:30		2016/01/20 09:15		
COC Number		08417751	08417751	08417751		08417751		
	UNITS	KZ-9	KZ-13	KZ-15	QC Batch	KZ-16	RDL	QC Batch
pH	pH	8.00	7.99	8.19	8174454	7.88		8174446
Physical Properties								
Total Suspended Solids	mg/L	1.0	<1.0	<1.0	8174317	<1.0	1.0	8174317
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NZ7225	NZ7226		NZ7227	NZ7229	NZ7230		
Sampling Date		2016/01/20 09:50	2016/01/21 11:00		2016/01/19 14:55	2016/01/19 14:00	2016/01/20 10:45		
COC Number		08417751	08417751		08417751	08417753	08417753		
	UNITS	**KZ-17**	**KZ-19**	**QC Batch**	**KZ-21**	**KZ-22**	**KZ-28**	**RDL**	**QC Batch**
Calculated Parameters									
Anion Sum	meq/L	5.2	0.016	8172804	7.2	6.5	5.3	N/A	8172804
Cation Sum	meq/L	5.6	0.0028	8172804	7.5	6.8	5.6	N/A	8172804
Filter and HNO3 Preservation	N/A	LAB	LAB	8173876	LAB	LAB	LAB	N/A	8173876
Ion Balance	N/A	1.1	0.17	8172803	1.0	1.0	1.0	0.010	8172803
Nitrate (N)	mg/L	0.204	<0.0020	8173137	0.185	0.223	0.203	0.0020	8173137
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00061	0.00053	8174205	0.00065	0.00059	0.00060	0.00050	8174205
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00073	0.00067	8174322	0.00061	0.00077	0.00064	0.00050	8174322
Fluoride (F)	mg/L	0.110	<0.010	8174940	0.200	0.160	0.110	0.010	8174940
Dissolved Organic Carbon (C)	mg/L	1.15	<0.50	8175678	2.38	2.23	1.15	0.50	8175678
Acidity (pH 4.5)	mg/L	<0.50	<0.50	8174238	<0.50	<0.50	<0.50	0.50	8174238
Alkalinity (Total as CaCO3)	mg/L	223	0.81	8174453	315	280	226	0.50	8174445
Acidity (pH 8.3)	mg/L	<0.50	<0.50	8174238	4.47	<0.50	<0.50	0.50	8174238
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	8174453	<0.50	<0.50	<0.50	0.50	8174445
Bicarbonate (HCO3)	mg/L	272	0.99	8174453	384	342	276	0.50	8174445
Carbonate (CO3)	mg/L	<0.50	<0.50	8174453	<0.50	<0.50	<0.50	0.50	8174445
Hydroxide (OH)	mg/L	<0.50	<0.50	8174453	<0.50	<0.50	<0.50	0.50	8174445
Anions									
Dissolved Sulphate (SO4)	mg/L	33.7	<0.50	8174512	39.4	42.8	34.9	0.50	8174512
Dissolved Chloride (Cl)	mg/L	1.3	<0.50	8174509	0.60	0.83	0.79	0.50	8174509
MISCELLANEOUS									
True Colour	Col. Unit	<5.0	<5.0	8175668	17.1 (1)	10.4 (1)	5.1	5.0	8175668
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0028 (2)	<0.0020 (2)	8175680	0.0070 (1)	0.0043 (1)	0.0032 (2)	0.0020	8175680
Total Ammonia (N)	mg/L	0.0078 (2)	0.022 (2)	8174601	0.095	0.043	0.015 (2)	0.0050	8174601
Nitrate plus Nitrite (N)	mg/L	0.204	<0.0020	8173573	0.185 (1)	0.223 (1)	0.203	0.0020	8173573
Nitrite (N)	mg/L	<0.0020	<0.0020	8173574	<0.0020 (1)	<0.0020 (1)	<0.0020	0.0020	8173574
Total Phosphorus (P)	mg/L	0.0033 (2)	<0.0020 (2)	8175682	0.0066 (1)	0.0042 (1)	0.0031 (2)	0.0020	8175682

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.
(2) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NZ7225	NZ7226		NZ7227	NZ7229	NZ7230		
Sampling Date		2016/01/20 09:50	2016/01/21 11:00		2016/01/19 14:55	2016/01/19 14:00	2016/01/20 10:45		
COC Number		08417751	08417751		08417751	08417753	08417753		
	UNITS	KZ-17	KZ-19	QC Batch	KZ-21	KZ-22	KZ-28	RDL	QC Batch
Physical Properties									
Conductivity	uS/cm	471	1.4	8174455	620	570	469	1.0	8174447
pH	pH	8.17	5.96	8174454	8.02	8.15	8.18		8174446
Physical Properties									
Total Suspended Solids	mg/L	<1.0	<1.0	8174317	<1.0	1.0	<1.0	1.0	8174317
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NZ7231		
Sampling Date		2016/01/22 12:50		
COC Number		08417753		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Anion Sum	meq/L	0.016	N/A	8172804
Cation Sum	meq/L	0.0047	N/A	8172804
Ion Balance	N/A	0.30	0.010	8172803
Nitrate (N)	mg/L	<0.0020	0.0020	8173137
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8174205
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00052	0.00050	8174322
Fluoride (F)	mg/L	<0.010	0.010	8174940
Dissolved Organic Carbon (C)	mg/L	<0.50 (1)	0.50	8175679
Acidity (pH 4.5)	mg/L	<0.50	0.50	8174238
Alkalinity (Total as CaCO3)	mg/L	0.79	0.50	8174445
Acidity (pH 8.3)	mg/L	<0.50	0.50	8174238
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8174445
Bicarbonate (HCO3)	mg/L	0.96	0.50	8174445
Carbonate (CO3)	mg/L	<0.50	0.50	8174445
Hydroxide (OH)	mg/L	<0.50	0.50	8174445
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8174512
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8174509
MISCELLANEOUS				
True Colour	Col. Unit	<5.0	5.0	8175668
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	0.0020	8175680
Total Ammonia (N)	mg/L	<0.0050	0.0050	8174601
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	8173573
Nitrite (N)	mg/L	<0.0020	0.0020	8173574
Total Phosphorus (P)	mg/L	<0.0020 (1)	0.0020	8175682
Physical Properties				
Conductivity	uS/cm	1.5	1.0	8174447
pH	pH	5.33		8174446

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NZ7231		
Sampling Date		2016/01/22 12:50		
COC Number		08417753		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8174317
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NZ7218		NZ7219	NZ7220	NZ7221		
Sampling Date		2016/01/20 15:00		2016/01/20 13:34	2016/01/20 12:15	2016/01/20 11:15		
COC Number		08417751		08417751	08417751	08417751		
	UNITS	KZ-2	QC Batch	KZ-6	KZ-7	KZ-9	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	131	8172332	183	186	219	0.50	8172332
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8175082	<0.0000020	<0.0000020	<0.0000020	0.0000020	8175082
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00113	8176397	0.00209	0.00227	0.00202	0.00050	8174294
Dissolved Antimony (Sb)	mg/L	<0.000020	8174294	<0.000020	0.000028	0.000025	0.000020	8174294
Dissolved Arsenic (As)	mg/L	0.000066	8174294	0.000094	0.000154	0.000184	0.000020	8174294
Dissolved Barium (Ba)	mg/L	0.0733	8174294	0.0510	0.103	0.108	0.000020	8174294
Dissolved Beryllium (Be)	mg/L	<0.000010	8174294	<0.000010	<0.000010	<0.000010	0.000010	8174294
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8174294	<0.0000050	<0.0000050	<0.0000050	0.0000050	8174294
Dissolved Boron (B)	mg/L	<0.010	8174294	<0.010	<0.010	<0.010	0.010	8174294
Dissolved Cadmium (Cd)	mg/L	0.000218	8174294	0.0000160	0.0000400	0.0000550	0.0000050	8174294
Dissolved Chromium (Cr)	mg/L	<0.00010	8174294	<0.00010	<0.00010	<0.00010	0.00010	8174294
Dissolved Cobalt (Co)	mg/L	0.0000070	8174294	0.0000060	0.0000660	0.000130	0.0000050	8174294
Dissolved Copper (Cu)	mg/L	0.000414	8174294	0.000155	0.000132	0.000189	0.000050	8174294
Dissolved Iron (Fe)	mg/L	<0.0010	8174294	0.0024	0.0091	0.0148	0.0010	8174294
Dissolved Lead (Pb)	mg/L	0.0000160	8174294	0.0000160	<0.0000050	<0.0000050	0.0000050	8174294
Dissolved Lithium (Li)	mg/L	0.00105	8174294	0.00056	0.00285	0.00355	0.00050	8174294
Dissolved Manganese (Mn)	mg/L	<0.000050	8174294	0.000104	0.0981	0.115	0.000050	8174294
Dissolved Molybdenum (Mo)	mg/L	0.000748	8174294	0.000636	0.000690	0.000722	0.000050	8174294
Dissolved Nickel (Ni)	mg/L	0.000250	8174294	0.000122	0.000394	0.000455	0.000020	8174294
Dissolved Phosphorus (P)	mg/L	<0.0020	8174294	<0.0020	<0.0020	0.0034	0.0020	8174294
Dissolved Selenium (Se)	mg/L	0.00186	8174294	0.00119	0.000995	0.00119	0.000040	8174294
Dissolved Silicon (Si)	mg/L	2.47	8174294	3.16	3.84	4.15	0.050	8174294
Dissolved Silver (Ag)	mg/L	<0.0000050	8174294	<0.0000050	<0.0000050	<0.0000050	0.0000050	8174294
Dissolved Strontium (Sr)	mg/L	0.148	8174294	0.185	0.213	0.259	0.000050	8174294
Dissolved Thallium (Tl)	mg/L	0.0000020	8174294	<0.0000020	<0.0000020	<0.0000020	0.0000020	8174294
Dissolved Tin (Sn)	mg/L	<0.00020	8174294	<0.00020	<0.00020	<0.00020	0.00020	8174294
Dissolved Titanium (Ti)	mg/L	<0.00050	8174294	<0.00050	<0.00050	<0.00050	0.00050	8174294
Dissolved Uranium (U)	mg/L	0.00438	8174294	0.00132	0.00153	0.00177	0.0000020	8174294
Dissolved Vanadium (V)	mg/L	<0.00020	8174294	<0.00020	<0.00020	<0.00020	0.00020	8174294
Dissolved Zinc (Zn)	mg/L	0.0263	8174294	0.00052	0.0400	0.0133	0.00010	8174294

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NZ7218		NZ7219	NZ7220	NZ7221		
Sampling Date		2016/01/20 15:00		2016/01/20 13:34	2016/01/20 12:15	2016/01/20 11:15		
COC Number		08417751		08417751	08417751	08417751		
	UNITS	KZ-2	QC Batch	KZ-6	KZ-7	KZ-9	RDL	QC Batch
Dissolved Zirconium (Zr)	mg/L	<0.00010	8174294	<0.00010	<0.00010	<0.00010	0.00010	8174294
Dissolved Calcium (Ca)	mg/L	42.3	8172485	60.9	61.7	73.5	0.050	8172485
Dissolved Magnesium (Mg)	mg/L	6.12	8172485	7.46	7.77	8.58	0.050	8172485
Dissolved Potassium (K)	mg/L	2.37	8172485	1.04	1.87	1.96	0.050	8172485
Dissolved Sodium (Na)	mg/L	0.924	8172485	0.793	1.30	1.59	0.050	8172485
Dissolved Sulphur (S)	mg/L	16.9	8172485	8.4	13.0	12.1	3.0	8172485
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NZ7222	NZ7223		NZ7224		
Sampling Date		2016/01/21 10:30	2016/01/20 08:30		2016/01/20 09:15		
COC Number		08417751	08417751		08417751		
	UNITS	KZ-13	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	89.4	282	8172332	302	0.50	8172332
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8175082	<0.0000020	0.0000020	8175082
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00357	0.00185	8174294	0.00179	0.00050	8174294
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000025	8174294	<0.000020	0.000020	8174294
Dissolved Arsenic (As)	mg/L	0.000123	0.000392	8174294	0.000165	0.000020	8174294
Dissolved Barium (Ba)	mg/L	0.139	0.100	8174294	0.112	0.000020	8174294
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	8174294	<0.000010	0.000010	8174294
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8174294	0.0000050	0.0000050	8174294
Dissolved Boron (B)	mg/L	<0.010	<0.010	8174294	<0.010	0.010	8174294
Dissolved Cadmium (Cd)	mg/L	0.0000270	0.0000420	8174294	0.0000260	0.0000050	8174294
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	8174294	0.00011	0.00010	8174294
Dissolved Cobalt (Co)	mg/L	0.0000220	0.0000180	8174294	0.0000300	0.0000050	8174294
Dissolved Copper (Cu)	mg/L	0.000272	0.000250	8174294	0.000199	0.000050	8176397
Dissolved Iron (Fe)	mg/L	0.0305	0.0035	8174294	0.0037	0.0010	8174294
Dissolved Lead (Pb)	mg/L	0.0000050	<0.0000050	8174294	<0.0000050	0.0000050	8174294
Dissolved Lithium (Li)	mg/L	0.00096	0.00362	8174294	0.00350	0.00050	8174294
Dissolved Manganese (Mn)	mg/L	0.0575	0.0306	8174294	0.0112	0.000050	8174294
Dissolved Molybdenum (Mo)	mg/L	0.000755	0.00143	8174294	0.000406	0.000050	8174294
Dissolved Nickel (Ni)	mg/L	0.000291	0.000824	8174294	0.000745	0.000020	8174294
Dissolved Phosphorus (P)	mg/L	0.0031	<0.0020	8174294	0.0045	0.0020	8174294
Dissolved Selenium (Se)	mg/L	0.000277	0.00151	8174294	0.00173	0.000040	8174294
Dissolved Silicon (Si)	mg/L	3.82	4.21	8174294	4.39	0.050	8174294
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	8174294	<0.0000050	0.0000050	8174294
Dissolved Strontium (Sr)	mg/L	0.0956	0.281	8174294	0.320	0.000050	8174294
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8174294	<0.0000020	0.0000020	8174294
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	8174294	<0.00020	0.00020	8174294
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	8174294	<0.00050	0.00050	8174294
Dissolved Uranium (U)	mg/L	0.000788	0.00512	8174294	0.00346	0.0000020	8174294
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	8174294	<0.00020	0.00020	8174294
Dissolved Zinc (Zn)	mg/L	0.00243	0.00560	8174294	0.00114	0.00010	8174294
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NZ7222	NZ7223		NZ7224		
Sampling Date		2016/01/21 10:30	2016/01/20 08:30		2016/01/20 09:15		
COC Number		08417751	08417751		08417751		
	UNITS	**KZ-13**	**KZ-15**	**QC Batch**	**KZ-16**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	8174294	<0.00010	0.00010	8174294
Dissolved Calcium (Ca)	mg/L	30.5	83.5	8172485	88.9	0.050	8172485
Dissolved Magnesium (Mg)	mg/L	3.24	17.9	8172485	19.4	0.050	8172485
Dissolved Potassium (K)	mg/L	2.37	1.60	8172485	1.64	0.050	8172485
Dissolved Sodium (Na)	mg/L	1.16	1.49	8172485	1.64	0.050	8172485
Dissolved Sulphur (S)	mg/L	5.0	12.9	8172485	14.5	3.0	8172485
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NZ7225		NZ7226		NZ7227		
Sampling Date		2016/01/20 09:50		2016/01/21 11:00		2016/01/19 14:55		
COC Number		08417751		08417751		08417751		
	UNITS	KZ-17	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	275	8172332	<0.50	8172332	363	0.50	8172332
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8175082	<0.0000020	8175082	<0.0000020	0.0000020	8175082
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00185	8174294	0.00087	8174294	0.00121	0.00050	8174294
Dissolved Antimony (Sb)	mg/L	0.000031	8174294	<0.000020	8174294	0.000026	0.000020	8174294
Dissolved Arsenic (As)	mg/L	0.000413	8174294	<0.000020	8174294	0.000606	0.000020	8174294
Dissolved Barium (Ba)	mg/L	0.0973	8174294	<0.000020	8176397	0.0897	0.000020	8174294
Dissolved Beryllium (Be)	mg/L	<0.000010	8174294	<0.000010	8174294	<0.000010	0.000010	8174294
Dissolved Bismuth (Bi)	mg/L	0.0000060	8174294	0.0000050	8174294	0.0000070	0.0000050	8174294
Dissolved Boron (B)	mg/L	<0.010	8174294	<0.010	8174294	<0.010	0.010	8174294
Dissolved Cadmium (Cd)	mg/L	0.0000400	8174294	<0.0000050	8174294	0.0000140	0.0000050	8174294
Dissolved Chromium (Cr)	mg/L	<0.00010	8174294	<0.00010	8174294	<0.00010	0.00010	8174294
Dissolved Cobalt (Co)	mg/L	0.0000150	8174294	<0.0000050	8174294	0.000131	0.0000050	8174294
Dissolved Copper (Cu)	mg/L	0.000278	8174294	<0.000050	8174294	0.000191	0.000050	8174294
Dissolved Iron (Fe)	mg/L	0.0036	8174294	<0.0010	8174294	0.0091	0.0010	8174294
Dissolved Lead (Pb)	mg/L	0.0000060	8174294	0.0000050	8174294	0.0000050	0.0000050	8174294
Dissolved Lithium (Li)	mg/L	0.00374 (1)	8174294	<0.00050	8174294	0.00955	0.00050	8174294
Dissolved Manganese (Mn)	mg/L	0.0302	8174294	<0.000050	8174294	0.164	0.000050	8174294
Dissolved Molybdenum (Mo)	mg/L	0.00173	8174294	<0.000050	8174294	0.00171	0.000050	8174294
Dissolved Nickel (Ni)	mg/L	0.000813	8174294	<0.000020	8174294	0.00229	0.000020	8174294
Dissolved Phosphorus (P)	mg/L	<0.0020	8174294	<0.0020	8174294	<0.0020	0.0020	8174294
Dissolved Selenium (Se)	mg/L	0.00144	8174294	<0.000040	8174294	0.000555	0.000040	8174294
Dissolved Silicon (Si)	mg/L	4.24	8174294	<0.050	8174294	7.11	0.050	8174294
Dissolved Silver (Ag)	mg/L	<0.0000050	8174294	<0.0000050	8174294	<0.0000050	0.0000050	8174294
Dissolved Strontium (Sr)	mg/L	0.271	8174294	0.000161	8174294	0.299	0.000050	8174294
Dissolved Thallium (Tl)	mg/L	<0.0000020	8174294	<0.0000020	8174294	<0.0000020	0.0000020	8174294
Dissolved Tin (Sn)	mg/L	<0.00020	8174294	<0.00020	8174294	<0.00020	0.00020	8174294
Dissolved Titanium (Ti)	mg/L	<0.00050	8174294	<0.00050	8174294	<0.00050	0.00050	8174294
Dissolved Uranium (U)	mg/L	0.00570	8174294	<0.0000020	8176397	0.00338	0.0000020	8174294
Dissolved Vanadium (V)	mg/L	<0.00020	8174294	<0.00020	8174294	<0.00020	0.00020	8174294

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NZ7225		NZ7226		NZ7227		
Sampling Date		2016/01/20 09:50		2016/01/21 11:00		2016/01/19 14:55		
COC Number		08417751		08417751		08417751		
	UNITS	**KZ-17**	**QC Batch**	**KZ-19**	**QC Batch**	**KZ-21**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	0.00576	8174294	<0.00010	8174294	0.00114	0.00010	8174294
Dissolved Zirconium (Zr)	mg/L	<0.00010	8174294	<0.00010	8174294	0.00018	0.00010	8174294
Dissolved Calcium (Ca)	mg/L	80.0	8172485	<0.050	8172485	90.1	0.050	8172485
Dissolved Magnesium (Mg)	mg/L	18.2	8172485	<0.050	8172485	33.6	0.050	8172485
Dissolved Potassium (K)	mg/L	1.62	8172485	<0.050	8172485	2.67	0.050	8172485
Dissolved Sodium (Na)	mg/L	1.54	8172485	<0.050	8172485	2.70	0.050	8172485
Dissolved Sulphur (S)	mg/L	12.7	8172485	<3.0	8172485	14.3	3.0	8172485
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NZ7229	NZ7230	NZ7231		
Sampling Date		2016/01/19 14:00	2016/01/20 10:45	2016/01/22 12:50		
COC Number		08417753	08417753	08417753		
	UNITS	KZ-22	KZ-28	TRIP BLANK	RDL	QC Batch
Misc. Inorganics						
Dissolved Hardness (CaCO3)	mg/L	334	273	<0.50	0.50	8172332
Elements						
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8175082
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	0.00171	0.00109	<0.00050	0.00050	8174294
Dissolved Antimony (Sb)	mg/L	0.000029	0.000029	<0.000020	0.000020	8174294
Dissolved Arsenic (As)	mg/L	0.000677	0.000410	<0.000020	0.000020	8174294
Dissolved Barium (Ba)	mg/L	0.0939	0.0946	<0.000020	0.000020	8174294
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8174294
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000060	<0.0000050	0.0000050	8174294
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	8174294
Dissolved Cadmium (Cd)	mg/L	0.0000160	0.0000380	<0.0000050	0.0000050	8174294
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8174294
Dissolved Cobalt (Co)	mg/L	0.0000730	0.0000160	<0.0000050	0.0000050	8174294
Dissolved Copper (Cu)	mg/L	0.000272	0.000257	<0.000050	0.000050	8174294
Dissolved Iron (Fe)	mg/L	0.0056	0.0029	<0.0010	0.0010	8174294
Dissolved Lead (Pb)	mg/L	0.0000060	<0.0000050	<0.0000050	0.0000050	8174294
Dissolved Lithium (Li)	mg/L	0.00674	0.00316	<0.00050	0.00050	8174294
Dissolved Manganese (Mn)	mg/L	0.0769	0.0298	<0.000050	0.000050	8174294
Dissolved Molybdenum (Mo)	mg/L	0.00143	0.00163	<0.000050	0.000050	8174294
Dissolved Nickel (Ni)	mg/L	0.00142	0.000782	<0.000020	0.000020	8174294
Dissolved Phosphorus (P)	mg/L	<0.0020	<0.0020		0.0020	8174294
Dissolved Selenium (Se)	mg/L	0.00102	0.00154	<0.000040	0.000040	8174294
Dissolved Silicon (Si)	mg/L	5.84	4.22	<0.050	0.050	8174294
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8174294
Dissolved Strontium (Sr)	mg/L	0.299	0.268	<0.000050	0.000050	8174294
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8174294
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8174294
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8174294
Dissolved Uranium (U)	mg/L	0.00416	0.00557	<0.0000020	0.0000020	8174294
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8174294
Dissolved Zinc (Zn)	mg/L	0.00134	0.00560	<0.00010	0.00010	8174294
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		NZ7229	NZ7230	NZ7231		
Sampling Date		2016/01/19 14:00	2016/01/20 10:45	2016/01/22 12:50		
COC Number		08417753	08417753	08417753		
	UNITS	KZ-22	KZ-28	TRIP BLANK	RDL	QC Batch
Dissolved Zirconium (Zr)	mg/L	0.00011	<0.00010	<0.00010	0.00010	8174294
Dissolved Calcium (Ca)	mg/L	88.1	80.0	<0.050	0.050	8172485
Dissolved Magnesium (Mg)	mg/L	27.7	17.7	<0.050	0.050	8172485
Dissolved Potassium (K)	mg/L	2.17	1.57	<0.050	0.050	8172485
Dissolved Sodium (Na)	mg/L	2.30	1.46	<0.050	0.050	8172485
Dissolved Sulphur (S)	mg/L	15.5	12.8	<3.0	3.0	8172485
RDL = Reportable Detection Limit						

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NZ7218	NZ7219	NZ7220	NZ7221	NZ7222		
Sampling Date		2016/01/20 15:00	2016/01/20 13:34	2016/01/20 12:15	2016/01/20 11:15	2016/01/21 10:30		
COC Number		08417751	08417751	08417751	08417751	08417751		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-9	KZ-13	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	129	183	191	228	88.8	0.50	8172331
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8175081
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00318 (1)	0.00758	0.0151	0.00854	0.0149	0.00050	8174261
Total Antimony (Sb)	mg/L	0.000020	<0.000020	0.000035	0.000025	<0.000020	0.000020	8174261
Total Arsenic (As)	mg/L	0.000069	0.000086	0.000523	0.000416	0.000188	0.000020	8174261
Total Barium (Ba)	mg/L	0.0725	0.0540	0.105	0.108	0.139	0.000020	8174261
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8174261
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8174261
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8174261
Total Cadmium (Cd)	mg/L	0.000220	0.0000360	0.000194	0.0000740	0.0000410	0.0000050	8174261
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8174261
Total Cobalt (Co)	mg/L	0.0000090	0.0000180	0.000150	0.000176	0.0000510	0.0000050	8174261
Total Copper (Cu)	mg/L	0.000531	0.000174	0.000409	0.000263	0.000347	0.000050	8174261
Total Iron (Fe)	mg/L	0.0051 (1)	0.0932	0.935	1.54	0.171	0.0010	8174261
Total Lead (Pb)	mg/L	0.0000280	0.0000270	0.000216	0.0000560	0.0000420	0.0000050	8174261
Total Lithium (Li)	mg/L	0.00091	0.00081	0.00312	0.00414	0.00095	0.00050	8174261
Total Manganese (Mn)	mg/L	0.000103	0.0148	0.138	0.127	0.0824	0.000050	8174261
Total Molybdenum (Mo)	mg/L	0.000730	0.000629	0.000650	0.000703	0.000737	0.000050	8174261
Total Nickel (Ni)	mg/L	0.000263	0.000176	0.000514	0.000510	0.000362	0.000020	8174261
Total Phosphorus (P)	mg/L	0.0026	0.0061	0.0076	0.0070	<0.0020	0.0020	8174261
Total Selenium (Se)	mg/L	0.00210	0.00124	0.00102	0.00129	0.000297	0.000040	8174261
Total Silicon (Si)	mg/L	2.55	3.19	3.95	4.27	4.08	0.050	8174261
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8174261
Total Strontium (Sr)	mg/L	0.152	0.190	0.221	0.260	0.0940	0.000050	8174261
Total Thallium (Tl)	mg/L	0.0000020	<0.0000020	0.0000020	<0.0000020	<0.0000020	0.0000020	8174261
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8174261
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00059	<0.00050	0.00058	0.00050	8174261
Total Uranium (U)	mg/L	0.00441	0.00135	0.00162	0.00178	0.000861	0.0000020	8174261
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8174261

RDL = Reportable Detection Limit
(1) Duplicate RPD above control limit - (10% of analytes failure allowed).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NZ7218	NZ7219	NZ7220	NZ7221	NZ7222		
Sampling Date		2016/01/20 15:00	2016/01/20 13:34	2016/01/20 12:15	2016/01/20 11:15	2016/01/21 10:30		
COC Number		08417751	08417751	08417751	08417751	08417751		
	UNITS	**KZ-2**	**KZ-6**	**KZ-7**	**KZ-9**	**KZ-13**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.0285	0.00131	0.0651	0.0171	0.00388	0.00010	8174261
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00019	<0.00010	<0.00010	0.00010	8174261
Total Calcium (Ca)	mg/L	41.5	60.6	62.6	76.4	30.0	0.050	8172695
Total Magnesium (Mg)	mg/L	6.23	7.74	8.34	8.96	3.41	0.050	8172695
Total Potassium (K)	mg/L	2.36	1.08	1.95	1.97	2.35	0.050	8172695
Total Sodium (Na)	mg/L	0.946	0.819	1.36	1.58	1.19	0.050	8172695
Total Sulphur (S)	mg/L	18.5	8.5	13.7	12.1	5.2	3.0	8172695
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NZ7223	NZ7224	NZ7225		NZ7226		
Sampling Date		2016/01/20 08:30	2016/01/20 09:15	2016/01/20 09:50		2016/01/21 11:00		
COC Number		08417751	08417751	08417751		08417751		
	UNITS	KZ-15	KZ-16	KZ-17	QC Batch	KZ-19	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	271	312	274	8172331	<0.50	0.50	8172331
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8175081	<0.0000020	0.0000020	8175081
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00305	0.00091	0.00537	8174261	<0.00050	0.00050	8174261
Total Antimony (Sb)	mg/L	0.000026	<0.000020	0.000029	8174261	<0.000020	0.000020	8174261
Total Arsenic (As)	mg/L	0.000531	0.000195	0.000750	8174261	<0.000020	0.000020	8174261
Total Barium (Ba)	mg/L	0.0961	0.112	0.0934	8174261	<0.000020	0.000020	8270237
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8174261	<0.000010	0.000010	8174261
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8174261	0.0000060	0.0000050	8174261
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	8174261	<0.010	0.010	8174261
Total Cadmium (Cd)	mg/L	0.0000490	0.0000280	0.0000530	8174261	<0.0000050	0.0000050	8174261
Total Chromium (Cr)	mg/L	0.00144	<0.00010	<0.00010	8174261	<0.00010	0.00010	8174261
Total Cobalt (Co)	mg/L	0.0000590	0.0000310	0.0000620	8174261	<0.0000050	0.0000050	8174261
Total Copper (Cu)	mg/L	0.000305	0.000236	0.000343	8174261	0.000378	0.000050	8174261
Total Iron (Fe)	mg/L	0.0858	0.0122	0.149	8174261	<0.0010	0.0010	8174261
Total Lead (Pb)	mg/L	0.0000310	<0.0000050	0.0000440	8174261	0.0000080	0.0000050	8174261
Total Lithium (Li)	mg/L	0.00352	0.00377	0.00287	8174261	<0.00050	0.00050	8174261
Total Manganese (Mn)	mg/L	0.0468	0.0121	0.0700	8174261	<0.000050	0.000050	8174261
Total Molybdenum (Mo)	mg/L	0.00132	0.000403	0.00147	8174261	<0.000050	0.000050	8174261
Total Nickel (Ni)	mg/L	0.00183	0.000749	0.000991	8174261	<0.000020	0.000020	8174261
Total Phosphorus (P)	mg/L	0.0064	0.0025	0.0064	8174261	<0.0020	0.0020	8174261
Total Selenium (Se)	mg/L	0.00156	0.00179	0.00147	8174261	<0.000040	0.000040	8174261
Total Silicon (Si)	mg/L	4.32	4.38	4.09	8174261	<0.050	0.050	8174261
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8174261	<0.0000050	0.0000050	8174261
Total Strontium (Sr)	mg/L	0.273	0.322	0.289	8174261	<0.000050	0.000050	8270237
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8174261	<0.0000020	0.0000020	8174261
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8174261	<0.00020	0.00020	8174261
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8174261	<0.00050	0.00050	8174261
Total Uranium (U)	mg/L	0.00498	0.00345	0.00550	8174261	<0.0000020	0.0000020	8270237
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8174261	<0.00020	0.00020	8174261
Total Zinc (Zn)	mg/L	0.00622	0.00118	0.00798	8174261	0.00025	0.00010	8174261
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NZ7223	NZ7224	NZ7225		NZ7226		
Sampling Date		2016/01/20 08:30	2016/01/20 09:15	2016/01/20 09:50		2016/01/21 11:00		
COC Number		08417751	08417751	08417751		08417751		
	UNITS	KZ-15	KZ-16	KZ-17	QC Batch	KZ-19	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8174261	<0.00010	0.00010	8174261
Total Calcium (Ca)	mg/L	78.3	92.3	77.6	8172695	<0.050	0.050	8172695
Total Magnesium (Mg)	mg/L	18.3	19.8	19.6	8172695	<0.050	0.050	8172695
Total Potassium (K)	mg/L	1.58	1.64	1.75	8172695	<0.050	0.050	8172695
Total Sodium (Na)	mg/L	1.53	1.69	1.68	8172695	<0.050	0.050	8172695
Total Sulphur (S)	mg/L	14.0	15.1	14.4	8172695	<3.0	3.0	8172695
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NZ7227	NZ7229	NZ7230	NZ7231		
Sampling Date		2016/01/19 14:55	2016/01/19 14:00	2016/01/20 10:45	2016/01/22 12:50		
COC Number		08417751	08417753	08417753	08417753		
	UNITS	KZ-21	KZ-22	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	359	363	268	<0.50	0.50	8172331
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8175081
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00720	0.00571	0.00471	<0.00050	0.00050	8174261
Total Antimony (Sb)	mg/L	0.000028	0.000028	0.000028	<0.000020	0.000020	8174261
Total Arsenic (As)	mg/L	0.00372	0.00228	0.000688	<0.000020	0.000020	8174261
Total Barium (Ba)	mg/L	0.0900	0.0914	0.0928	<0.000020	0.000020	8174261
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8174261
Total Bismuth (Bi)	mg/L	0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8174261
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8174261
Total Cadmium (Cd)	mg/L	0.0000200	0.0000260	0.0000540	<0.0000050	0.0000050	8174261
Total Chromium (Cr)	mg/L	0.00010	<0.00010	0.00018	<0.00010	0.00010	8174261
Total Cobalt (Co)	mg/L	0.000318	0.000166	0.0000620	<0.0000050	0.0000050	8174261
Total Copper (Cu)	mg/L	0.000272	0.000278	0.000313	<0.000050	0.000050	8174261
Total Iron (Fe)	mg/L	1.32	0.651	0.134	<0.0010	0.0010	8174261
Total Lead (Pb)	mg/L	0.0000490	0.0000360	0.0000320	<0.0000050	0.0000050	8174261
Total Lithium (Li)	mg/L	0.00983	0.00657	0.00344	<0.00050	0.00050	8174261
Total Manganese (Mn)	mg/L	0.232	0.111	0.0627	<0.000050	0.000050	8174261
Total Molybdenum (Mo)	mg/L	0.00156	0.00128	0.00145	<0.000050	0.000050	8174261
Total Nickel (Ni)	mg/L	0.00259	0.00160	0.00103	<0.000020	0.000020	8174261
Total Phosphorus (P)	mg/L	0.0228	0.0127	0.0043	<0.0020	0.0020	8174261
Total Selenium (Se)	mg/L	0.000637	0.00123	0.00154	<0.000040	0.000040	8174261
Total Silicon (Si)	mg/L	7.29	7.04	4.14	<0.050	0.050	8174261
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8174261
Total Strontium (Sr)	mg/L	0.303	0.306	0.266	<0.000050	0.000050	8174261
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8174261
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8174261
Total Titanium (Ti)	mg/L	0.00056	<0.00050	<0.00050	<0.00050	0.00050	8174261
Total Uranium (U)	mg/L	0.00333	0.00403	0.00538	<0.0000020	0.0000020	8174261
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8174261
Total Zinc (Zn)	mg/L	0.00225	0.00209	0.00726	<0.00010	0.00010	8174261

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		NZ7227	NZ7229	NZ7230	NZ7231		
Sampling Date		2016/01/19 14:55	2016/01/19 14:00	2016/01/20 10:45	2016/01/22 12:50		
COC Number		08417751	08417753	08417753	08417753		
	UNITS	KZ-21	KZ-22	KZ-28	TRIP BLANK	RDL	QC Batch
Total Zirconium (Zr)	mg/L	0.00035	0.00019	<0.00010	<0.00010	0.00010	8174261
Total Calcium (Ca)	mg/L	88.7	99.2	77.8	<0.050	0.050	8172695
Total Magnesium (Mg)	mg/L	33.5	28.0	17.8	<0.050	0.050	8172695
Total Potassium (K)	mg/L	2.62	2.16	1.57	<0.050	0.050	8172695
Total Sodium (Na)	mg/L	2.62	2.35	1.53	<0.050	0.050	8172695
Total Sulphur (S)	mg/L	14.4	16.3	13.1	<3.0	3.0	8172695
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7218
Sample ID: KZ-2
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Name Redacted
Alkalinity - Water	AT/ALK	8174445	2016/01/25	2016/01/25	
Chloride by Automated Colourimetry	KONE/COL	8174513	N/A	2016/01/25	
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	
Conductance - water	AT/ALK	8174447	N/A	2016/01/25	
Fluoride	ISE/ISE	8174942	N/A	2016/01/25	
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	
Ion Balance	CALC	8172803	N/A	2016/01/26	
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8176397	N/A	2016/01/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	
pH Water	AT/ALK	8174446	N/A	2016/01/25	
Sulphate by Automated Colourimetry	KONE/COL	8174515	N/A	2016/01/25	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	

Maxxam ID: NZ7218 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7219
Sample ID: KZ-6
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Name Redacted
Alkalinity - Water	AT/ALK	8174445	2016/01/25	2016/01/25	
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	
Conductance - water	AT/ALK	8174447	N/A	2016/01/25	
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	
Ion Balance	CALC	8172803	N/A	2016/01/26	
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	
pH Water	AT/ALK	8174446	N/A	2016/01/25	
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	

Maxxam ID: NZ7220
Sample ID: KZ-7
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Name Redacted
Alkalinity - Water	AT/ALK	8174453	2016/01/25	2016/01/25	
Chloride by Automated Colourimetry	KONE/COL	8174513	N/A	2016/01/25	
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	
Conductance - water	AT/ALK	8174455	N/A	2016/01/25	
Fluoride	ISE/ISE	8174942	N/A	2016/01/25	
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7220
Sample ID: KZ-7
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	
Ion Balance	CALC	8172803	N/A	2016/01/26	
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	
pH Water	AT/ALK	8174454	N/A	2016/01/25	
Sulphate by Automated Colourimetry	KONE/COL	8174515	N/A	2016/01/25	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	

Maxxam ID: NZ7220 Dup
Sample ID: KZ-7
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8174513	N/A	2016/01/25	Name Redacted
Sulphate by Automated Colourimetry	KONE/COL	8174515	N/A	2016/01/25	

Maxxam ID: NZ7221
Sample ID: KZ-9
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Name Redacted
Alkalinity - Water	AT/ALK	8174453	2016/01/25	2016/01/25	
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	
Conductance - water	AT/ALK	8174455	N/A	2016/01/25	
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7221
Sample ID: KZ-9
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	Name Redacted
Ion Balance	CALC	8172803	N/A	2016/01/26	
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	
pH Water	AT/ALK	8174454	N/A	2016/01/25	
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	

Maxxam ID: NZ7221 Dup
Sample ID: KZ-9
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	Name

Maxxam ID: NZ7222
Sample ID: KZ-13
Matrix: Water

Collected: 2016/01/21
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Name Redacted
Alkalinity - Water	AT/ALK	8174453	2016/01/25	2016/01/25	
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	
Conductance - water	AT/ALK	8174455	N/A	2016/01/25	
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	
Ion Balance	CALC	8172803	N/A	2016/01/26	
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7222
Sample ID: KZ-13
Matrix: Water

Collected: 2016/01/21
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	Name Redacted
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	
pH Water	AT/ALK	8174454	N/A	2016/01/25	
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	

Maxxam ID: NZ7223
Sample ID: KZ-15
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Name Redacted
Alkalinity - Water	AT/ALK	8174453	2016/01/25	2016/01/25	
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	
Conductance - water	AT/ALK	8174455	N/A	2016/01/25	
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	
Ion Balance	CALC	8172803	N/A	2016/01/26	
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	
pH Water	AT/ALK	8174454	N/A	2016/01/25	

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7223
Sample ID: KZ-15
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	Name Redacted
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	

Maxxam ID: NZ7223 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	Name Redacted
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	

Maxxam ID: NZ7224
Sample ID: KZ-16
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Name Redacted
Alkalinity - Water	AT/ALK	8174445	2016/01/25	2016/01/25	
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	
Conductance - water	AT/ALK	8174447	N/A	2016/01/25	
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	
Ion Balance	CALC	8172803	N/A	2016/01/26	
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	
pH Water	AT/ALK	8174446	N/A	2016/01/25	
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7224
Sample ID: KZ-16
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	Name Redacted
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	

Maxxam ID: NZ7225
Sample ID: KZ-17
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Name Redacted
Alkalinity - Water	AT/ALK	8174453	2016/01/25	2016/01/25	
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	
Conductance - water	AT/ALK	8174455	N/A	2016/01/25	
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	
Ion Balance	CALC	8172803	N/A	2016/01/26	
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	
pH Water	AT/ALK	8174454	N/A	2016/01/25	
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	

Maxxam ID: NZ7226
Sample ID: KZ-19
Matrix: Water

Collected: 2016/01/21
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Name Redacted
Alkalinity - Water	AT/ALK	8174453	2016/01/25	2016/01/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7226
Sample ID: KZ-19
Matrix: Water

Collected: 2016/01/21
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	
Conductance - water	AT/ALK	8174455	N/A	2016/01/25	
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	
Ion Balance	CALC	8172803	N/A	2016/01/26	
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	
pH Water	AT/ALK	8174454	N/A	2016/01/25	
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	

Maxxam ID: NZ7227
Sample ID: KZ-21
Matrix: Water

Collected: 2016/01/19
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Name Redacted
Alkalinity - Water	AT/ALK	8174445	2016/01/25	2016/01/25	
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	
Conductance - water	AT/ALK	8174447	N/A	2016/01/25	
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7227
Sample ID: KZ-21
Matrix: Water

Collected: 2016/01/19
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	Name Redacted
Ion Balance	CALC	8172803	N/A	2016/01/26	
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	
pH Water	AT/ALK	8174446	N/A	2016/01/25	
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	

Maxxam ID: NZ7229
Sample ID: KZ-22
Matrix: Water

Collected: 2016/01/19
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Name Redacted
Alkalinity - Water	AT/ALK	8174445	2016/01/25	2016/01/25	
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	
Conductance - water	AT/ALK	8174447	N/A	2016/01/25	
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	
Ion Balance	CALC	8172803	N/A	2016/01/26	
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7229
Sample ID: KZ-22
Matrix: Water

Collected: 2016/01/19
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	Name Redacted
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	
pH Water	AT/ALK	8174446	N/A	2016/01/25	
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	

Maxxam ID: NZ7229 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2016/01/19
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	Name

Maxxam ID: NZ7230
Sample ID: KZ-28
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Name Redacted
Alkalinity - Water	AT/ALK	8174445	2016/01/25	2016/01/25	
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8175678	N/A	2016/01/26	
Conductance - water	AT/ALK	8174447	N/A	2016/01/25	
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	
Ion Balance	CALC	8172803	N/A	2016/01/26	
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	
Filter and HNO3 Preserve for Metals	ICP	8173876	N/A	2016/01/25	
pH Water	AT/ALK	8174446	N/A	2016/01/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7230
Sample ID: KZ-28
Matrix: Water

Collected: 2016/01/20
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	Name Redacted
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	

Maxxam ID: NZ7231
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/01/22
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8174238	N/A	2016/01/25	Name Redacted
Alkalinity - Water	AT/ALK	8174445	2016/01/25	2016/01/25	
Chloride by Automated Colourimetry	KONE/COL	8174509	N/A	2016/01/25	
Cyanide SAD (strong acid dissociable)	TECH/COL	8174205	N/A	2016/01/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8174322	N/A	2016/01/25	
Colour (True) by Kone Lab	KONE	8175668	N/A	2016/01/23	
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8175679	N/A	2016/01/26	
Conductance - water	AT/ALK	8174447	N/A	2016/01/25	
Fluoride	ISE/ISE	8174940	N/A	2016/01/25	
Hardness Total (calculated as CaCO3)	CALC	8172331	N/A	2016/01/26	
Hardness (calculated as CaCO3)	CALC	8172332	N/A	2016/01/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	
Mercury (Total-LowLevel) by CVAF	CV/AF	8175081	2016/01/26	2016/01/26	
Ion Balance	CALC	8172803	N/A	2016/01/26	
Sum of cations, anions	CALC	8172804	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8172485	N/A	2016/01/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8174294	N/A	2016/01/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8172695	N/A	2016/01/26	
Elements by ICPMS Low Level (total)	ICP/CRCM	8174261	N/A	2016/01/26	
Ammonia-N (Unpreserved)	KONE/COL	8174601	N/A	2016/01/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8173573	N/A	2016/01/23	
Nitrite (N) (low level)	TRAA/COL	8173574	N/A	2016/01/23	
Nitrogen - Nitrate (as N)	CALC	8173137	N/A	2016/01/23	
pH Water	AT/ALK	8174446	N/A	2016/01/25	
Sulphate by Automated Colourimetry	KONE/COL	8174512	N/A	2016/01/25	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8175680	2016/01/26	2016/01/26	
Total Phosphorus - unpreserved	KONE/COL	8175682	N/A	2016/01/26	
Total Suspended Solids-Low Level	BAL/BAL	8174317	2016/01/25	2016/01/26	

Maxxam ID: NZ7231 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/01/22
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8175679	N/A	2016/01/26	Name

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: NZ7231 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/01/22
Shipped:
Received: 2016/01/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8175082	N/A	2016/01/26	ENname

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.7°C
Package 2	4.0°C
Package 3	5.7°C

Revised report V2 (2016/05/19): Due to client request, samples were reanalyzed for Total Barium. Corrected values for sample NZ7226 are included in this report (MM4).

Revised report V3 (2016/06/08): Corrected values for NZ7226 are included in this report for Total Strontium and Uranium, after review of all metals data greater than 3 times the RDL.

Sample NZ7218, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample NZ7224, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample NZ7226, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample NZ7226, Elements by ICPMS Low Level (total): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8173573	Nitrate plus Nitrite (N)	2016/01/23	NC	80 - 120	99	80 - 120	<0.0020	mg/L	4.4	25
8173574	Nitrite (N)	2016/01/23	98	80 - 120	94	80 - 120	<0.0020	mg/L	NC	25
8174205	Strong Acid Dissoc. Cyanide (CN)	2016/01/25	102	80 - 120	102	80 - 120	0.00051, RDL=0.00050	mg/L	NC	20
8174238	Acidity (pH 4.5)	2016/01/25					<0.50	mg/L	NC	20
8174238	Acidity (pH 8.3)	2016/01/25			102	80 - 120	<0.50	mg/L	4.1	20
8174261	Total Aluminum (Al)	2016/01/26	101	80 - 120	111	80 - 120	<0.00050	mg/L	22 (1)	20
8174261	Total Antimony (Sb)	2016/01/26	107	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
8174261	Total Arsenic (As)	2016/01/26	109	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8174261	Total Barium (Ba)	2016/01/26	NC	80 - 120	101	80 - 120	<0.000020	mg/L	3.3	20
8174261	Total Beryllium (Be)	2016/01/26	96	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8174261	Total Bismuth (Bi)	2016/01/26	103	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8174261	Total Boron (B)	2016/01/26	97	80 - 120	99	80 - 120	<0.010	mg/L	NC	20
8174261	Total Cadmium (Cd)	2016/01/26	103	80 - 120	104	80 - 120	<0.0000050	mg/L	2.2	20
8174261	Total Chromium (Cr)	2016/01/26	104	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8174261	Total Cobalt (Co)	2016/01/26	100	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8174261	Total Copper (Cu)	2016/01/26	98	80 - 120	102	80 - 120	<0.000050	mg/L	8.8	20
8174261	Total Iron (Fe)	2016/01/26	97	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20
8174261	Total Lead (Pb)	2016/01/26	103	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8174261	Total Lithium (Li)	2016/01/26	100	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8174261	Total Manganese (Mn)	2016/01/26	101	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8174261	Total Molybdenum (Mo)	2016/01/26	NC	80 - 120	100	80 - 120	<0.000050	mg/L	2.3	20
8174261	Total Nickel (Ni)	2016/01/26	99	80 - 120	100	80 - 120	<0.000020	mg/L	0.38	20
8174261	Total Phosphorus (P)	2016/01/26					<0.0020	mg/L	NC	20
8174261	Total Selenium (Se)	2016/01/26	104	80 - 120	100	80 - 120	<0.000040	mg/L	3.7	20
8174261	Total Silicon (Si)	2016/01/26					<0.050	mg/L	1.6	20
8174261	Total Silver (Ag)	2016/01/26	98	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8174261	Total Strontium (Sr)	2016/01/26	NC	80 - 120	101	80 - 120	<0.000050	mg/L	0.047	20
8174261	Total Thallium (Tl)	2016/01/26	100	80 - 120	110	80 - 120	<0.0000020	mg/L	NC	20
8174261	Total Tin (Sn)	2016/01/26	104	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20
8174261	Total Titanium (Ti)	2016/01/26	99	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8174261	Total Uranium (U)	2016/01/26	110	80 - 120	112	80 - 120	<0.0000020	mg/L	2.6	20
8174261	Total Vanadium (V)	2016/01/26	105	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8174261	Total Zinc (Zn)	2016/01/26	NC	80 - 120	108	80 - 120	0.00018, RDL=0.00010	mg/L	1.4	20
8174261	Total Zirconium (Zr)	2016/01/26					<0.00010	mg/L	NC	20
8174294	Dissolved Aluminum (Al)	2016/01/26	103	80 - 120	107	80 - 120	<0.00050	mg/L		
8174294	Dissolved Antimony (Sb)	2016/01/26	103	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8174294	Dissolved Arsenic (As)	2016/01/26	104	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8174294	Dissolved Barium (Ba)	2016/01/26	NC	80 - 120	100	80 - 120	<0.000020	mg/L	1.2	20
8174294	Dissolved Beryllium (Be)	2016/01/26	95	80 - 120	93	80 - 120	<0.000010	mg/L	NC	20
8174294	Dissolved Bismuth (Bi)	2016/01/26	99	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8174294	Dissolved Boron (B)	2016/01/26	93	80 - 120	90	80 - 120	<0.010	mg/L	NC	20
8174294	Dissolved Cadmium (Cd)	2016/01/26	100	80 - 120	103	80 - 120	<0.0000050	mg/L	0.92	20
8174294	Dissolved Chromium (Cr)	2016/01/26	102	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8174294	Dissolved Cobalt (Co)	2016/01/26	98	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8174294	Dissolved Copper (Cu)	2016/01/26	96	80 - 120	103	80 - 120	<0.000050	mg/L	0.72	20
8174294	Dissolved Iron (Fe)	2016/01/26	100	80 - 120	110	80 - 120	<0.0010	mg/L	NC	20
8174294	Dissolved Lead (Pb)	2016/01/26	102	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8174294	Dissolved Lithium (Li)	2016/01/26	92	80 - 120	90	80 - 120	<0.00050	mg/L	NC	20
8174294	Dissolved Manganese (Mn)	2016/01/26	101	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8174294	Dissolved Molybdenum (Mo)	2016/01/26	NC	80 - 120	99	80 - 120	<0.000050	mg/L	0.54	20
8174294	Dissolved Nickel (Ni)	2016/01/26	97	80 - 120	103	80 - 120	<0.000020	mg/L	2.8	20
8174294	Dissolved Phosphorus (P)	2016/01/26					<0.0020	mg/L	NC	20
8174294	Dissolved Selenium (Se)	2016/01/26	103	80 - 120	99	80 - 120	<0.000040	mg/L	2.6	20
8174294	Dissolved Silicon (Si)	2016/01/26					<0.050	mg/L	0.11	20
8174294	Dissolved Silver (Ag)	2016/01/26	94	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8174294	Dissolved Strontium (Sr)	2016/01/26	NC	80 - 120	104	80 - 120	<0.000050	mg/L	0.010	20
8174294	Dissolved Thallium (Tl)	2016/01/26	100	80 - 120	106	80 - 120	<0.0000020	mg/L	NC	20
8174294	Dissolved Tin (Sn)	2016/01/26	101	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8174294	Dissolved Titanium (Ti)	2016/01/26	99	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
8174294	Dissolved Uranium (U)	2016/01/26	115	80 - 120	111	80 - 120	<0.0000020	mg/L	3.3	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8174294	Dissolved Vanadium (V)	2016/01/26	102	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8174294	Dissolved Zinc (Zn)	2016/01/26	NC	80 - 120	107	80 - 120	<0.00010	mg/L	2.0	20
8174294	Dissolved Zirconium (Zr)	2016/01/26					<0.00010	mg/L	NC	20
8174317	Total Suspended Solids	2016/01/26			101	80 - 120	<1.0	mg/L		
8174322	Weak Acid Dissoc. Cyanide (CN)	2016/01/25	108	80 - 120	105	80 - 120	0.00053, RDL=0.00050	mg/L	NC	20
8174445	Alkalinity (PP as CaCO3)	2016/01/25					<0.50	mg/L		
8174445	Alkalinity (Total as CaCO3)	2016/01/25	95	80 - 120	97	80 - 120	<0.50	mg/L		
8174445	Bicarbonate (HCO3)	2016/01/25					<0.50	mg/L		
8174445	Carbonate (CO3)	2016/01/25					<0.50	mg/L		
8174445	Hydroxide (OH)	2016/01/25					<0.50	mg/L		
8174446	pH	2016/01/25			101	97 - 103				
8174447	Conductivity	2016/01/25			101	80 - 120	<1.0	uS/cm		
8174453	Alkalinity (PP as CaCO3)	2016/01/25					<0.50	mg/L	NC	20
8174453	Alkalinity (Total as CaCO3)	2016/01/25	NC	80 - 120	101	80 - 120	0.55, RDL=0.50	mg/L	0.075	20
8174453	Bicarbonate (HCO3)	2016/01/25					0.67, RDL=0.50	mg/L	0.17	20
8174453	Carbonate (CO3)	2016/01/25					<0.50	mg/L	NC	20
8174453	Hydroxide (OH)	2016/01/25					<0.50	mg/L	NC	20
8174454	pH	2016/01/25			101	97 - 103				
8174455	Conductivity	2016/01/25			101	80 - 120	<1.0	uS/cm		
8174509	Dissolved Chloride (Cl)	2016/01/25	107	80 - 120	100	80 - 120	<0.50	mg/L	NC	20
8174512	Dissolved Sulphate (SO4)	2016/01/25	NC	80 - 120	90	80 - 120	0.81, RDL=0.50	mg/L	0.55	20
8174513	Dissolved Chloride (Cl)	2016/01/25			100	80 - 120	<0.50	mg/L	NC	20
8174515	Dissolved Sulphate (SO4)	2016/01/25			92	80 - 120	<0.50	mg/L	1.6	20
8174601	Total Ammonia (N)	2016/01/25	100	80 - 120	106	80 - 120	<0.0050	mg/L	2.0	20
8174940	Fluoride (F)	2016/01/25	96	80 - 120	94	80 - 120	<0.010	mg/L	NC	20
8174942	Fluoride (F)	2016/01/25	96	80 - 120	96	80 - 120	<0.010	mg/L	0	20
8175081	Total Mercury (Hg)	2016/01/26	109	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8175082	Dissolved Mercury (Hg)	2016/01/26	85	80 - 120	84	80 - 120	<0.0000020	mg/L	NC	20
8175668	True Colour	2016/01/23			103	80 - 120	<5.0	Col. Unit	NC	20
8175678	Dissolved Organic Carbon (C)	2016/01/26	96	80 - 120	102	80 - 120	<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8175679	Dissolved Organic Carbon (C)	2016/01/26	97	80 - 120	108	80 - 120	<0.50	mg/L	NC	20
8175680	Dissolved Phosphorus (P)	2016/01/26			96	80 - 120	<0.0020	mg/L		
8175682	Total Phosphorus (P)	2016/01/26			101	80 - 120	<0.0020	mg/L		
8176397	Dissolved Aluminum (Al)	2016/01/27			101	80 - 120	<0.00050	mg/L		
8176397	Dissolved Barium (Ba)	2016/01/27			104	80 - 120	<0.000020	mg/L		
8176397	Dissolved Copper (Cu)	2016/01/27			102	80 - 120	<0.000050	mg/L		
8176397	Dissolved Uranium (U)	2016/01/27			99	80 - 120	<0.0000020	mg/L		
8270237	Total Barium (Ba)	2016/05/16	NC	80 - 120	103	80 - 120	<0.000020	mg/L	0.19	20
8270237	Total Strontium (Sr)	2016/05/16	NC	80 - 120	97	80 - 120	<0.000050	mg/L	0.90	20
8270237	Total Uranium (U)	2016/05/16	102	80 - 120	100	80 - 120	<0.0000020	mg/L	2.5	20

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B605186
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Andy Lu, Ph.D., P.Chem., Scientific Specialist

Signature Redacted

Rob Reinert, B.Sc., Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08417751

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	LABORATORY USE ONLY
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	CUSTODY SEAL Present / Intact: NA / NA; COOLER TEMPERATURES: 3,6,5 / 4,4,4 / 5,7,5
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	COOLING MEDIA PRESENT: Y / N

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested: TOTAL LOW LEVEL METALS INCL. MERCURY; DISSOLVED LOW LEVEL METALS INCL. MERCURY; LOW LEVEL TSS; ANIONS (Cl, F, SO4, NO2, NO3); AMMONIA; CYANIDE (SAD & WAD); CONDUCTIVITY; pH; ALKALINITY & ACIDITY; TRUE COLOR; DOC; TOTAL PHOSPHORUS - LOW LEVEL; DISSOLVED PHOSPHORUS - LOW LEVEL; # OF CONTAINERS SUBMITTED; HOLD - DO NOT ANALYZE

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	# OF CONTAINERS SUBMITTED	COMMENTS
1	KZ-2	NZ7218	20/01/2016	15:00	Water	12	
2	KZ-6	NZ7219	20/01/2016	13:34	Water	12	
3	KZ-7	NZ7220	20/01/2016	12:15	Water	12	
4	KZ-9	NZ7221	20/01/2016	11:15	Water	12	
5	KZ-13	NZ7222	21/01/2016	10:30	Water	12	
6	KZ-15	NZ7223	20/01/2016	8:30	Water	12	
7	KZ-16	NZ7224	20/01/2016	9:15	Water	12	
8	KZ-17	NZ7225	20/01/2016	9:50	Water	12	
9	KZ-19	NZ7226	21/01/2016	11:00	Water	12	
10	KZ-21	NZ7227	19/01/2016	14:55	Water	12	

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM
Signature Redacted	2016/01/21	18:00	Signature Redacted	2016/01/22	12:50	B605186

B605186_COC

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08417753

BBY FCD-

Page

Invoice Information

Company Name: BMC MINERALS LTD.
Contact Name:
Address: 530-1130 WEST PENDER ST
Vancouver, BC PC: V6E 4A4
Phone:
Email:

Report Information (if differs from invoice)

Company Name: ALEXCO ENVIRONMENTAL
Contact Name: KAI WOLOSHYN
Address: UNIT 3 151 INDUSTRIAL RD
Whitehorse, YK PC: Y1A 2V3
Phone: (867) 668-6483
Email: kwoloshyn@alexcoresource.com

Project Information (where app...)

Quotation #: BS0743
P.O. #/ AFE#:
Project #: BMC-15-01
Site Location: Kudz Ze Kayah
Site #:
Sampled By:

Turnaround Time (TAT) Requi

[X] Regular TAT 5 days (Most
PLEASE PROVIDE ADVANCE NOTICE FOR RU
Rush TAT (Surcharges will be ap
[ ] Same Day [ ] 2
[ ] 1 Day [ ] 3
Date Required:
Rush Confirmation #:

Regulatory Criteria

[ ] BC CSR Soil [ ] BC CSR Water
[ ] CCME (Specify) [ ] Other (Specify)
[ ] Drinking Water [ ] RL Water Quality

Special Instructions

[ ] Return Cooler
[ ] Ship Sample Bottles (Please Specify)
USE SCENARIO # 12685

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (CL, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (CAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-22	NZ7229	19/01/2016	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
3	KZ-28	NZ7230	20/01/2016	10:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
4	Trip Blank	NZ7231			Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
5																				
6																				
7																				
8																				
9																				
10																				

LABORATORY USE ONL

CUSTODY SEAL Y / N

Present	Intact	COC TEMPE
NA		36.5
NA		4.4
NA		5.5

COOLING MEDIA PRESENT Y

COMMENTS

B605186_COC

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	2016/01/21	18:05	Signature Redacted	2016/01/22	12:50

MAXXAM JOB #: B605186

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08418210, 08418211

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/06/09
Report #: R2193598
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B610526
Received: 2016/02/10, 16:00

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	13	N/A	2016/02/12	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	13	2016/02/12	2016/02/12	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	13	N/A	2016/02/12	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	13	N/A	2016/02/12	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	13	N/A	2016/02/12	BBY6SOP-00004	SM 22 4500-CN O m
Colour (True) by Kone Lab	13	N/A	2016/02/13	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	12	N/A	2016/02/12	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2016/02/12	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	13	N/A	2016/02/12	BBY6SOP-00026	SM 22 2510 B m
Fluoride	13	N/A	2016/02/12	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	13	N/A	2016/02/15	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	13	N/A	2016/02/15	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	13	N/A	2016/02/15	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	13	2016/02/15	2016/02/15	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	13	N/A	2016/02/15	BBY WI-00033	SM 22 1030E
Sum of cations, anions	13	N/A	2016/02/15	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	13	N/A	2016/02/15	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	13	N/A	2016/02/12	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	13	N/A	2016/02/15	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	13	N/A	2016/02/12	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Unpreserved)	13	N/A	2016/02/15	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	13	N/A	2016/02/12	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	13	N/A	2016/02/12	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	13	N/A	2016/02/13	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	12	N/A	2016/02/12	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	1	N/A	2016/02/15	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	13	N/A	2016/02/12	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	13	N/A	2016/02/12	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	13	2016/02/13	2016/02/13	BBY6SOP-00013	SM 22 4500-P E m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08418210, 08418211

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/06/09
Report #: R2193598
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B610526
Received: 2016/02/10, 16:00

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Phosphorus - unpreserved	13	N/A	2016/02/13	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	4	2016/02/12	2016/02/12	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	9	2016/02/12	2016/02/13	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone and Fax Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OC5496		OC5497		OC5498		
Sampling Date		2016/02/09 15:15		2016/02/08 14:00		2016/02/09 14:20		
COC Number		08418210		08418210		08418210		
	UNITS	KZ-2	QC Batch	KZ-26	QC Batch	KZ-7	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.8	8189915	6.3	8189915	3.9	N/A	8189915
Cation Sum	meq/L	2.7	8189915	6.1	8189915	3.7	N/A	8189915
Filter and HNO3 Preservation	N/A	LAB	8190240	LAB	8190240	LAB	N/A	8190240
Ion Balance	N/A	0.96	8189413	0.97	8189413	0.95	0.010	8189413
Nitrate (N)	mg/L	0.165	8188852	0.252	8188852	0.131	0.0020	8188852
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8190751	<0.00050	8190751	<0.00050	0.00050	8190751
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8190763	<0.00050	8190763	<0.00050	0.00050	8190763
Fluoride (F)	mg/L	0.042	8191399	0.110	8191399	0.067	0.010	8191399
Dissolved Organic Carbon (C)	mg/L	<0.50	8191020	1.48	8191020	<0.50	0.50	8191020
Acidity (pH 4.5)	mg/L	<0.50	8190702	<0.50	8190702	<0.50	0.50	8190702
Alkalinity (Total as CaCO3)	mg/L	84.6	8190257	267	8190257	156	0.50	8190257
Acidity (pH 8.3)	mg/L	<0.50	8190702	<0.50	8190702	<0.50	0.50	8190702
Alkalinity (PP as CaCO3)	mg/L	<0.50	8190257	3.50	8190257	<0.50	0.50	8190257
Bicarbonate (HCO3)	mg/L	103	8190257	317	8190257	190	0.50	8190257
Carbonate (CO3)	mg/L	<0.50	8190257	4.20	8190257	<0.50	0.50	8190257
Hydroxide (OH)	mg/L	<0.50	8190257	<0.50	8190257	<0.50	0.50	8190257
Anions								
Dissolved Sulphate (SO4)	mg/L	52.8	8190866	46.1	8190847	34.9	0.50	8190866
Dissolved Chloride (Cl)	mg/L	<0.50	8190859	0.75	8190844	0.63	0.50	8190859
MISCELLANEOUS								
True Colour	Col. Unit	<5.0 (1)	8191817	6.7 (1)	8191817	10.7 (1)	5.0	8191817
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0021	8191832	0.0032	8191832	0.0031	0.0020	8191832
Total Ammonia (N)	mg/L	0.0064 (2)	8191866	0.0099 (3)	8191866	0.018 (2)	0.0050	8191866
Nitrate plus Nitrite (N)	mg/L	0.165	8191035	0.252 (1)	8191035	0.131	0.0020	8191035
Nitrite (N)	mg/L	<0.0020	8191036	<0.0020 (1)	8191036	<0.0020	0.0020	8191036
Total Phosphorus (P)	mg/L	<0.0020	8191836	0.0031	8191836	0.0030	0.0020	8191836

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.
(2) Sample preserved to extend hold time.
(3) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OC5496		OC5497		OC5498		
Sampling Date		2016/02/09 15:15		2016/02/08 14:00		2016/02/09 14:20		
COC Number		08418210		08418210		08418210		
	UNITS	KZ-2	QC Batch	KZ-26	QC Batch	KZ-7	RDL	QC Batch
Physical Properties								
Conductivity	uS/cm	275	8190262	547	8190262	360	1.0	8190262
pH	pH	8.00	8190263	8.35	8190263	8.19		8190263
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8190481	3.3	8190006	1.0	1.0	8190481
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OC5499		OC5500		OC5501		
Sampling Date		2016/02/09 12:45		2016/02/08 12:45		2016/02/09 10:00		
COC Number		08418210		08418210		08418210		
	UNITS	KZ-9	QC Batch	KZ-13	QC Batch	KZ-15	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	4.6	8189915	1.9	8189915	5.7	N/A	8189915
Cation Sum	meq/L	4.2	8189915	1.9	8189915	5.3	N/A	8189915
Filter and HNO3 Preservation	N/A	LAB	8190240	LAB	8190240	LAB	N/A	8190240
Ion Balance	N/A	0.90	8189413	1.0	8189413	0.94	0.010	8189413
Nitrate (N)	mg/L	0.191	8188852	0.159	8188852	0.216	0.0020	8188852
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8190751	<0.00050	8190751	<0.00050	0.00050	8190751
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8190763	0.00065	8190763	<0.00050	0.00050	8190763
Fluoride (F)	mg/L	0.086	8191399	0.047	8191399	0.100	0.010	8191399
Dissolved Organic Carbon (C)	mg/L	<0.50	8191020	<0.50	8191020	<0.50	0.50	8191020
Acidity (pH 4.5)	mg/L	<0.50	8190709	<0.50	8190709	<0.50	0.50	8190709
Alkalinity (Total as CaCO3)	mg/L	193	8190269	77.9	8190269	242	0.50	8190269
Acidity (pH 8.3)	mg/L	3.76	8190709	<0.50	8190709	<0.50	0.50	8190709
Alkalinity (PP as CaCO3)	mg/L	<0.50	8190269	<0.50	8190269	<0.50	0.50	8190269
Bicarbonate (HCO3)	mg/L	235	8190269	95.0	8190269	295	0.50	8190269
Carbonate (CO3)	mg/L	<0.50	8190269	<0.50	8190269	<0.50	0.50	8190269
Hydroxide (OH)	mg/L	<0.50	8190269	<0.50	8190269	<0.50	0.50	8190269
Anions								
Dissolved Sulphate (SO4)	mg/L	34.1	8190866	13.5	8190866	37.3	0.50	8190866
Dissolved Chloride (Cl)	mg/L	0.87	8190859	<0.50	8190859	0.55	0.50	8190859
MISCELLANEOUS								
True Colour	Col. Unit	28.3 (1)	8191817	17.2 (1)	8191817	7.8 (1)	5.0	8191817
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0031	8191832	0.0047	8191832	0.0027	0.0020	8191832
Total Ammonia (N)	mg/L	0.017 (2)	8191866	0.0066 (3)	8191866	0.012 (2)	0.0050	8191866
Nitrate plus Nitrite (N)	mg/L	0.191	8191035	0.159 (1)	8191035	0.216	0.0020	8191035
Nitrite (N)	mg/L	<0.0020	8191036	<0.0020 (1)	8191036	<0.0020	0.0020	8191036
Total Phosphorus (P)	mg/L	0.0021	8191836	0.0037	8191836	0.0028	0.0020	8191836

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.
(2) Sample preserved to extend hold time.
(3) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OC5499		OC5500		OC5501		
Sampling Date		2016/02/09 12:45		2016/02/08 12:45		2016/02/09 10:00		
COC Number		08418210		08418210		08418210		
	UNITS	KZ-9	QC Batch	KZ-13	QC Batch	KZ-15	RDL	QC Batch
Physical Properties								
Conductivity	uS/cm	421	8190271	179	8190271	504	1.0	8190271
pH	pH	7.90	8190272	7.99	8190272	8.16		8190272
Physical Properties								
Total Suspended Solids	mg/L	1.4	8190481	<1.0	8190006	<1.0	1.0	8190481
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OC5502		OC5503		OC5504		
Sampling Date		2016/02/09 10:40		2016/02/09 11:20		2016/02/08 13:30		
COC Number		08418210		08418210		08418210		
	UNITS	KZ-16	QC Batch	KZ-17	QC Batch	KZ-19	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	6.1	8189915	5.7	8189915	0.00090	N/A	8189915
Cation Sum	meq/L	5.9	8189915	5.3	8189915	0.0023	N/A	8189915
Filter and HNO3 Preservation	N/A	LAB	8190240	LAB	8190240	LAB	N/A	8190240
Ion Balance	N/A	0.97	8189413	0.94	8189413	NC	0.010	8189413
Nitrate (N)	mg/L	0.248	8188852	0.228	8188852	<0.0020	0.0020	8188852
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8190751	<0.00050	8190751	0.00062	0.00050	8190757
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8190763	<0.00050	8190763	0.00072	0.00050	8190763
Fluoride (F)	mg/L	0.073	8191399	0.090	8191399	0.018	0.010	8191399
Dissolved Organic Carbon (C)	mg/L	<0.50	8191020	0.91	8191020	<0.50	0.50	8191020
Acidity (pH 4.5)	mg/L	<0.50	8190702	<0.50	8190702	<0.50	0.50	8190709
Alkalinity (Total as CaCO3)	mg/L	259	8190269	241	8190257	<0.50	0.50	8190269
Acidity (pH 8.3)	mg/L	3.49	8190702	1.09	8190702	<0.50	0.50	8190709
Alkalinity (PP as CaCO3)	mg/L	<0.50	8190269	<0.50	8190257	<0.50	0.50	8190269
Bicarbonate (HCO3)	mg/L	316	8190269	294	8190257	<0.50	0.50	8190269
Carbonate (CO3)	mg/L	<0.50	8190269	<0.50	8190257	<0.50	0.50	8190269
Hydroxide (OH)	mg/L	<0.50	8190269	<0.50	8190257	<0.50	0.50	8190269
Anions								
Dissolved Sulphate (SO4)	mg/L	41.5	8190847	38.6	8190866	<0.50	0.50	8190866
Dissolved Chloride (Cl)	mg/L	0.64	8190844	0.85	8190859	<0.50	0.50	8190859
MISCELLANEOUS								
True Colour	Col. Unit	9.5 (1)	8191817	8.0 (1)	8191817	7.8 (1)	5.0	8191817
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0027	8191832	0.0028	8191832	<0.0020	0.0020	8191832
Total Ammonia (N)	mg/L	0.0094 (2)	8191866	<0.0050 (2)	8191866	0.0056 (3)	0.0050	8191866
Nitrate plus Nitrite (N)	mg/L	0.248	8191035	0.228	8191035	<0.0020 (1)	0.0020	8191035
Nitrite (N)	mg/L	<0.0020	8191036	<0.0020	8191036	<0.0020 (1)	0.0020	8191036
Total Phosphorus (P)	mg/L	<0.0020	8191836	0.0028	8191836	<0.0020	0.0020	8191836

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.
(2) Sample preserved to extend hold time.
(3) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OC5502		OC5503		OC5504		
Sampling Date		2016/02/09 10:40		2016/02/09 11:20		2016/02/08 13:30		
COC Number		08418210		08418210		08418210		
	UNITS	KZ-16	QC Batch	KZ-17	QC Batch	KZ-19	RDL	QC Batch
Physical Properties								
Conductivity	uS/cm	544	8190271	501	8190262	1.4	1.0	8190271
pH	pH	7.99	8190272	8.11	8190263	5.73		8190272
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8190481	<1.0	8190481	<1.0	1.0	8190006
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OC5505		OC5508		OC5509		
Sampling Date		2016/02/09 08:45		2016/02/08 15:30		2016/02/09 14:50		
COC Number		08418210		08418211		08418211		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-28	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	7.1	8189915	6.9	8189915	3.8	N/A	8189915
Cation Sum	meq/L	6.8	8189915	6.7	8189915	3.7	N/A	8189915
Filter and HNO3 Preservation	N/A	LAB	8190240	LAB	8190240	LAB	N/A	8190240
Ion Balance	N/A	0.95	8189413	0.97	8189413	0.97	0.010	8189413
Nitrate (N)	mg/L	0.189	8188852	0.205	8188852	0.130	0.0020	8188852
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8190757	<0.00050	8190757	<0.00050	0.00050	8190757
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8190763	0.00055	8190763	<0.00050	0.00050	8190768
Fluoride (F)	mg/L	0.200	8191399	0.170	8191399	0.066	0.010	8191399
Dissolved Organic Carbon (C)	mg/L	1.43	8191020	0.77	8191020	<0.50	0.50	8191020
Acidity (pH 4.5)	mg/L	<0.50	8190702	<0.50	8190702	<0.50	0.50	8190702
Alkalinity (Total as CaCO3)	mg/L	312	8190269	300	8190257	155	0.50	8190257
Acidity (pH 8.3)	mg/L	4.41	8190702	2.80	8190702	<0.50	0.50	8190702
Alkalinity (PP as CaCO3)	mg/L	<0.50	8190269	<0.50	8190257	<0.50	0.50	8190257
Bicarbonate (HCO3)	mg/L	380	8190269	366	8190257	189	0.50	8190257
Carbonate (CO3)	mg/L	<0.50	8190269	<0.50	8190257	<0.50	0.50	8190257
Hydroxide (OH)	mg/L	<0.50	8190269	<0.50	8190257	<0.50	0.50	8190257
Anions								
Dissolved Sulphate (SO4)	mg/L	40.9	8190866	41.1	8190866	33.2	0.50	8190866
Dissolved Chloride (Cl)	mg/L	1.2	8190859	1.2	8190859	0.64	0.50	8190859
MISCELLANEOUS								
True Colour	Col. Unit	28.6 (1)	8191817	17.3 (1)	8191817	26.6 (1)	5.0	8191817
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0070	8191832	0.0062	8191832	0.0028	0.0020	8191832
Total Ammonia (N)	mg/L	0.071 (2)	8191866	0.057 (3)	8191866	0.016 (2)	0.0050	8191866
Nitrate plus Nitrite (N)	mg/L	0.189	8191035	0.207 (1)	8191035	0.130	0.0020	8191035
Nitrite (N)	mg/L	<0.0020	8191036	0.0020 (1)	8191036	<0.0020	0.0020	8191036
Total Phosphorus (P)	mg/L	0.0065	8191836	0.0057	8191836	0.0027	0.0020	8191836

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.
(2) Sample preserved to extend hold time.
(3) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OC5505		OC5508		OC5509		
Sampling Date		2016/02/09 08:45		2016/02/08 15:30		2016/02/09 14:50		
COC Number		08418210		08418211		08418211		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-28	RDL	QC Batch
Physical Properties								
Conductivity	uS/cm	624	8190271	602	8190262	360	1.0	8190262
pH	pH	8.01	8190272	8.09	8190263	8.21		8190263
Physical Properties								
Total Suspended Solids	mg/L	1.2	8190481	1.1	8190006	1.2	1.0	8190481
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OC5510		
Sampling Date		2016/02/10 16:00		
COC Number		08418211		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Anion Sum	meq/L	0.00090	N/A	8189915
Cation Sum	meq/L	0.010	N/A	8189915
Filter and HNO3 Preservation	N/A	FIELD	N/A	ONSITE
Ion Balance	N/A	NC	0.010	8189413
Nitrate (N)	mg/L	<0.0020	0.0020	8188852
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8190757
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8190768
Fluoride (F)	mg/L	0.018	0.010	8191399
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8191015
Acidity (pH 4.5)	mg/L	<0.50	0.50	8190702
Alkalinity (Total as CaCO3)	mg/L	<0.50	0.50	8190257
Acidity (pH 8.3)	mg/L	<0.50	0.50	8190702
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8190257
Bicarbonate (HCO3)	mg/L	<0.50	0.50	8190257
Carbonate (CO3)	mg/L	<0.50	0.50	8190257
Hydroxide (OH)	mg/L	<0.50	0.50	8190257
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8190866
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8190859
MISCELLANEOUS				
True Colour	Col. Unit	<5.0	5.0	8191817
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8191832
Total Ammonia (N)	mg/L	0.0051 (1)	0.0050	8191866
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	8191035
Nitrite (N)	mg/L	<0.0020	0.0020	8191036
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8191836
Physical Properties				
Conductivity	uS/cm	1.4	1.0	8190262

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OC5510		
Sampling Date		2016/02/10 16:00		
COC Number		08418211		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
pH	pH	5.00		8190263
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8190481
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OC5496		OC5497	OC5498	OC5499		
Sampling Date		2016/02/09 15:15		2016/02/08 14:00	2016/02/09 14:20	2016/02/09 12:45		
COC Number		08418210		08418210	08418210	08418210		
	UNITS	KZ-2	QC Batch	KZ-26	KZ-7	KZ-9	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	130	8188994	300	178	203	0.50	8188994
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8191772	<0.0000020	<0.0000020	<0.0000020	0.0000020	8191772
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00199	8190538	0.00072	0.00106	0.00080	0.00050	8190538
Dissolved Antimony (Sb)	mg/L	0.000030	8190538	0.000048	0.000027	0.000024	0.000020	8190538
Dissolved Arsenic (As)	mg/L	0.000080	8190538	0.000426	0.000114	0.000171	0.000020	8190538
Dissolved Barium (Ba)	mg/L	0.0736	8190538	0.0914	0.108	0.108	0.000020	8190538
Dissolved Beryllium (Be)	mg/L	<0.000010	8190538	<0.000010	<0.000010	<0.000010	0.000010	8190538
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8190538	<0.0000050	<0.0000050	<0.0000050	0.0000050	8190538
Dissolved Boron (B)	mg/L	<0.010	8190538	<0.010	<0.010	<0.010	0.010	8190538
Dissolved Cadmium (Cd)	mg/L	0.000235	8190538	0.0000090	0.0000240	0.0000520	0.0000050	8190538
Dissolved Chromium (Cr)	mg/L	<0.00010	8190538	<0.00010	<0.00010	<0.00010	0.00010	8190538
Dissolved Cobalt (Co)	mg/L	0.0000050	8190538	0.0000090	0.0000580	0.000144	0.0000050	8190538
Dissolved Copper (Cu)	mg/L	0.000949	8190538	0.000331	0.000143	0.000170	0.000050	8190538
Dissolved Iron (Fe)	mg/L	<0.0010	8190538	0.0034	0.0061	0.0153	0.0010	8190538
Dissolved Lead (Pb)	mg/L	0.0000590	8190538	<0.0000050	<0.0000050	<0.0000050	0.0000050	8190538
Dissolved Lithium (Li)	mg/L	0.00174	8190538	0.00689	0.00348	0.00470	0.00050	8190538
Dissolved Manganese (Mn)	mg/L	0.000086	8190538	0.00190	0.0877	0.119	0.000050	8190538
Dissolved Molybdenum (Mo)	mg/L	0.000749	8190538	0.00105	0.000709	0.000706	0.000050	8190538
Dissolved Nickel (Ni)	mg/L	0.000267	8190538	0.000688	0.000420	0.000501	0.000020	8190538
Dissolved Phosphorus (P)	mg/L	<0.0020	8192370	0.0045	0.0031	<0.0020	0.0020	8190538
Dissolved Selenium (Se)	mg/L	0.00189	8190538	0.000891	0.000862	0.00104	0.000040	8190538
Dissolved Silicon (Si)	mg/L	2.40	8190538	5.00	3.68	4.09	0.050	8190538
Dissolved Silver (Ag)	mg/L	<0.0000050	8190538	<0.0000050	<0.0000050	<0.0000050	0.0000050	8190538
Dissolved Strontium (Sr)	mg/L	0.142	8190538	0.266	0.206	0.247	0.000050	8190538
Dissolved Thallium (Tl)	mg/L	0.0000020	8190538	<0.0000020	<0.0000020	<0.0000020	0.0000020	8190538
Dissolved Tin (Sn)	mg/L	<0.00020	8190538	<0.00020	<0.00020	<0.00020	0.00020	8190538
Dissolved Titanium (Ti)	mg/L	<0.00050	8190538	<0.00050	<0.00050	<0.00050	0.00050	8190538
Dissolved Uranium (U)	mg/L	0.00442	8190538	0.00363	0.00146	0.00168	0.0000020	8190538
Dissolved Vanadium (V)	mg/L	<0.00020	8190538	<0.00020	<0.00020	<0.00020	0.00020	8190538
Dissolved Zinc (Zn)	mg/L	0.0257	8190538	0.00062	0.0382	0.0122	0.00010	8190538

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OC5496		OC5497	OC5498	OC5499		
Sampling Date		2016/02/09 15:15		2016/02/08 14:00	2016/02/09 14:20	2016/02/09 12:45		
COC Number		08418210		08418210	08418210	08418210		
	UNITS	KZ-2	QC Batch	KZ-26	KZ-7	KZ-9	RDL	QC Batch
Dissolved Zirconium (Zr)	mg/L	<0.00010	8190538	<0.00010	<0.00010	<0.00010	0.00010	8190538
Dissolved Calcium (Ca)	mg/L	41.8	8189158	80.2	58.6	67.4	0.050	8189158
Dissolved Magnesium (Mg)	mg/L	6.10	8189158	24.2	7.70	8.30	0.050	8189158
Dissolved Potassium (K)	mg/L	2.31	8189158	1.71	1.87	1.89	0.050	8189158
Dissolved Sodium (Na)	mg/L	0.915	8189158	2.05	1.30	1.53	0.050	8189158
Dissolved Sulphur (S)	mg/L	17.5	8189158	15.0	12.0	11.5	3.0	8189158

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OC5500	OC5501	OC5502	OC5503	OC5504		
Sampling Date		2016/02/08 12:45	2016/02/09 10:00	2016/02/09 10:40	2016/02/09 11:20	2016/02/08 13:30		
COC Number		08418210	08418210	08418210	08418210	08418210		
	UNITS	KZ-13	KZ-15	KZ-16	KZ-17	KZ-19	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	87.0	259	291	262	<0.50	0.50	8188994
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8191772
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00279	0.00083	0.00176	0.00088	<0.00050	0.00050	8190538
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000027	0.000020	0.000029	<0.000020	0.000020	8190538
Dissolved Arsenic (As)	mg/L	0.000132	0.000308	0.000160	0.000307	<0.000020	0.000020	8190538
Dissolved Barium (Ba)	mg/L	0.145	0.0985	0.106	0.0992	<0.000020	0.000020	8190538
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8190538
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8190538
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8190538
Dissolved Cadmium (Cd)	mg/L	0.0000260	0.0000350	0.0000300	0.0000320	<0.0000050	0.0000050	8190538
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8190538
Dissolved Cobalt (Co)	mg/L	0.0000310	0.0000220	0.0000180	0.0000110	<0.0000050	0.0000050	8190538
Dissolved Copper (Cu)	mg/L	0.000282	0.000186	0.000290	0.000245	<0.000050	0.000050	8190538
Dissolved Iron (Fe)	mg/L	0.0373	0.0031	0.0028	0.0026	<0.0010	0.0010	8190538
Dissolved Lead (Pb)	mg/L	0.0000120	<0.0000050	0.0000060	<0.0000050	<0.0000050	0.0000050	8190538
Dissolved Lithium (Li)	mg/L	0.00118	0.00437	0.00459	0.00394	<0.00050	0.00050	8190538
Dissolved Manganese (Mn)	mg/L	0.0636	0.0301	0.00731	0.0195	<0.000050	0.000050	8190538
Dissolved Molybdenum (Mo)	mg/L	0.000765	0.00141	0.000369	0.00135	<0.000050	0.000050	8190538
Dissolved Nickel (Ni)	mg/L	0.000308	0.000859	0.000695	0.000733	<0.000020	0.000020	8190538
Dissolved Phosphorus (P)	mg/L	0.0033	0.0054	0.0037	0.0033	<0.0020	0.0020	8190538
Dissolved Selenium (Se)	mg/L	0.000311	0.00134	0.00148	0.00132	<0.000040	0.000040	8190538
Dissolved Silicon (Si)	mg/L	3.71	4.08	4.34	4.04	<0.050	0.050	8190538
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8190538
Dissolved Strontium (Sr)	mg/L	0.0863	0.259	0.288	0.257	<0.000050	0.000050	8190538
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8190538
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8190538
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8190538
Dissolved Uranium (U)	mg/L	0.000684	0.00476	0.00289	0.00501	<0.0000020	0.0000020	8190538
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8190538
Dissolved Zinc (Zn)	mg/L	0.00298	0.00518	0.00177	0.00405	<0.00010	0.00010	8190538

RDL = Reportable Detection Limit

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OC5500	OC5501	OC5502	OC5503	OC5504		
Sampling Date		2016/02/08 12:45	2016/02/09 10:00	2016/02/09 10:40	2016/02/09 11:20	2016/02/08 13:30		
COC Number		08418210	08418210	08418210	08418210	08418210		
	UNITS	KZ-13	KZ-15	KZ-16	KZ-17	KZ-19	RDL	QC Batch
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8190538
Dissolved Calcium (Ca)	mg/L	29.9	75.8	86.7	77.0	<0.050	0.050	8189158
Dissolved Magnesium (Mg)	mg/L	3.01	17.0	18.1	17.0	<0.050	0.050	8189158
Dissolved Potassium (K)	mg/L	2.27	1.48	1.57	1.50	<0.050	0.050	8189158
Dissolved Sodium (Na)	mg/L	1.13	1.43	1.58	1.46	<0.050	0.050	8189158
Dissolved Sulphur (S)	mg/L	4.4	12.7	14.2	12.7	<3.0	3.0	8189158
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OC5505		OC5508		OC5509		
Sampling Date		2016/02/09 08:45		2016/02/08 15:30		2016/02/09 14:50		
COC Number		08418210		08418211		08418211		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-28	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	331	8188994	326	8188994	181	0.50	8188994
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8191772	<0.0000020	8191772	<0.0000020	0.0000020	8191772
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00071	8190538	0.00158	8190538	0.00107	0.00050	8190538
Dissolved Antimony (Sb)	mg/L	0.000029	8190538	0.000026	8190538	0.000031	0.000020	8190538
Dissolved Arsenic (As)	mg/L	0.000694	8190538	0.000685	8190538	0.000156	0.000020	8190538
Dissolved Barium (Ba)	mg/L	0.0849	8190538	0.0865	8190538	0.104	0.000020	8190538
Dissolved Beryllium (Be)	mg/L	<0.000010	8190538	<0.000010	8190538	<0.000010	0.000010	8190538
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8190538	<0.0000050	8190538	<0.0000050	0.0000050	8190538
Dissolved Boron (B)	mg/L	<0.010	8190538	<0.010	8190538	<0.010	0.010	8190538
Dissolved Cadmium (Cd)	mg/L	0.0000100	8190538	0.0000110	8190538	0.0000610	0.0000050	8190538
Dissolved Chromium (Cr)	mg/L	<0.00010	8190538	<0.00010	8190538	<0.00010	0.00010	8190538
Dissolved Cobalt (Co)	mg/L	0.000143	8190538	0.000105	8190538	0.0000590	0.0000050	8190538
Dissolved Copper (Cu)	mg/L	0.000194	8190538	0.000269	8192370	0.000137	0.000050	8190538
Dissolved Iron (Fe)	mg/L	0.0840	8190538	0.0734	8190538	0.0484	0.0010	8190538
Dissolved Lead (Pb)	mg/L	<0.0000050	8190538	<0.0000050	8190538	0.0000050	0.0000050	8190538
Dissolved Lithium (Li)	mg/L	0.00941	8190538	0.00842	8190538	0.00389	0.00050	8190538
Dissolved Manganese (Mn)	mg/L	0.153	8190538	0.113	8190538	0.0870	0.000050	8190538
Dissolved Molybdenum (Mo)	mg/L	0.00170	8190538	0.00155	8190538	0.000744	0.000050	8190538
Dissolved Nickel (Ni)	mg/L	0.00213	8190538	0.00177	8190538	0.000390	0.000020	8190538
Dissolved Phosphorus (P)	mg/L	0.0095	8190538	0.0041	8190538	0.0033	0.0020	8190538
Dissolved Selenium (Se)	mg/L	0.000567	8190538	0.000772	8190538	0.000963	0.000040	8190538
Dissolved Silicon (Si)	mg/L	7.23	8190538	6.59	8190538	3.94	0.050	8190538
Dissolved Silver (Ag)	mg/L	<0.0000050	8190538	<0.0000050	8190538	<0.0000050	0.0000050	8190538
Dissolved Strontium (Sr)	mg/L	0.276	8190538	0.277	8190538	0.214	0.000050	8190538
Dissolved Thallium (Tl)	mg/L	<0.0000020	8190538	<0.0000020	8190538	<0.0000020	0.0000020	8190538
Dissolved Tin (Sn)	mg/L	<0.00020	8190538	<0.00020	8190538	<0.00020	0.00020	8190538
Dissolved Titanium (Ti)	mg/L	<0.00050	8190538	<0.00050	8190538	<0.00050	0.00050	8190538
Dissolved Uranium (U)	mg/L	0.00329	8190538	0.00351	8190538	0.00154	0.0000020	8190538
Dissolved Vanadium (V)	mg/L	<0.00020	8190538	<0.00020	8190538	<0.00020	0.00020	8190538
Dissolved Zinc (Zn)	mg/L	0.00080	8190538	0.00060	8190538	0.0288	0.00010	8190538

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OC5505		OC5508		OC5509		
Sampling Date		2016/02/09 08:45		2016/02/08 15:30		2016/02/09 14:50		
COC Number		08418210		08418211		08418211		
	UNITS	**KZ-21**	**QC Batch**	**KZ-22**	**QC Batch**	**KZ-28**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	0.00026	8190538	0.00020	8190538	<0.00010	0.00010	8190538
Dissolved Calcium (Ca)	mg/L	82.1	8189158	83.3	8189158	59.5	0.050	8189158
Dissolved Magnesium (Mg)	mg/L	30.5	8189158	28.6	8189158	7.88	0.050	8189158
Dissolved Potassium (K)	mg/L	2.39	8189158	2.20	8189158	1.85	0.050	8189158
Dissolved Sodium (Na)	mg/L	2.41	8189158	2.42	8189158	1.30	0.050	8189158
Dissolved Sulphur (S)	mg/L	14.5	8189158	15.1	8189158	12.7	3.0	8189158
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OC5510		
Sampling Date		2016/02/10 16:00		
COC Number		08418211		
	UNITS	TRIP BLANK	RDL	QC Batch
Misc. Inorganics				
Dissolved Hardness (CaCO3)	mg/L	<0.50	0.50	8188994
Elements				
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000020	8191772
Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	mg/L	<0.00050	0.00050	8190538
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000020	8190538
Dissolved Arsenic (As)	mg/L	<0.000020	0.000020	8190538
Dissolved Barium (Ba)	mg/L	<0.000020	0.000020	8190538
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000010	8190538
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8190538
Dissolved Boron (B)	mg/L	<0.010	0.010	8190538
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.0000050	8190538
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00010	8190538
Dissolved Cobalt (Co)	mg/L	<0.0000050	0.0000050	8190538
Dissolved Copper (Cu)	mg/L	<0.000050	0.000050	8190538
Dissolved Iron (Fe)	mg/L	<0.0010	0.0010	8190538
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000050	8190538
Dissolved Lithium (Li)	mg/L	<0.00050	0.00050	8190538
Dissolved Manganese (Mn)	mg/L	<0.000050	0.000050	8190538
Dissolved Molybdenum (Mo)	mg/L	<0.000050	0.000050	8190538
Dissolved Nickel (Ni)	mg/L	<0.000020	0.000020	8190538
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8190538
Dissolved Selenium (Se)	mg/L	<0.000040	0.000040	8190538
Dissolved Silicon (Si)	mg/L	<0.050	0.050	8190538
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	8190538
Dissolved Strontium (Sr)	mg/L	<0.000050	0.000050	8190538
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000020	8190538
Dissolved Tin (Sn)	mg/L	<0.00020	0.00020	8190538
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00050	8190538
Dissolved Uranium (U)	mg/L	<0.0000020	0.0000020	8190538
Dissolved Vanadium (V)	mg/L	<0.00020	0.00020	8190538
Dissolved Zinc (Zn)	mg/L	<0.00010	0.00010	8190538
RDL = Reportable Detection Limit				

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OC5510		
Sampling Date		2016/02/10 16:00		
COC Number		08418211		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00010	8190538
Dissolved Calcium (Ca)	mg/L	<0.050	0.050	8189158
Dissolved Magnesium (Mg)	mg/L	<0.050	0.050	8189158
Dissolved Potassium (K)	mg/L	<0.050	0.050	8189158
Dissolved Sodium (Na)	mg/L	<0.050	0.050	8189158
Dissolved Sulphur (S)	mg/L	<3.0	3.0	8189158
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OC5496	OC5497	OC5498	OC5499	OC5500		
Sampling Date		2016/02/09 15:15	2016/02/08 14:00	2016/02/09 14:20	2016/02/09 12:45	2016/02/08 12:45		
COC Number		08418210	08418210	08418210	08418210	08418210		
	UNITS	KZ-2	KZ-26	KZ-7	KZ-9	KZ-13	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	127	294	176	214	84.9	0.50	8188939
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8191774
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0194	0.0420	0.0187	0.0193	0.0228	0.00050	8190243
Total Antimony (Sb)	mg/L	0.000033	0.000074	0.000035	0.000032	<0.000020	0.000020	8190243
Total Arsenic (As)	mg/L	0.000105	0.00193	0.000645	0.000682	0.000307	0.000020	8190243
Total Barium (Ba)	mg/L	0.0752	0.0993	0.112	0.115	0.149	0.000020	8190243
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8190243
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8190243
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8190243
Total Cadmium (Cd)	mg/L	0.000240	0.0000490	0.000204	0.0000850	0.0000430	0.0000050	8190243
Total Chromium (Cr)	mg/L	<0.00010	0.00018	<0.00010	0.00015	<0.00010	0.00010	8190243
Total Cobalt (Co)	mg/L	0.0000310	0.000243	0.000143	0.000192	0.0000720	0.0000050	8190243
Total Copper (Cu)	mg/L	0.000869	0.00107	0.000492	0.000381	0.00633	0.000050	8190243
Total Iron (Fe)	mg/L	0.0518	0.570	0.893	2.81	0.357	0.0010	8190243
Total Lead (Pb)	mg/L	0.000552	0.000443	0.000324	0.000196	0.000101	0.0000050	8190243
Total Lithium (Li)	mg/L	0.00148	0.00677	0.00344	0.00438	0.00148	0.00050	8190243
Total Manganese (Mn)	mg/L	0.00207	0.104	0.135	0.135	0.115	0.000050	8190243
Total Molybdenum (Mo)	mg/L	0.000760	0.000963	0.000720	0.000739	0.000696	0.000050	8190243
Total Nickel (Ni)	mg/L	0.000307	0.00157	0.000555	0.000552	0.000408	0.000020	8190243
Total Phosphorus (P)	mg/L	0.0063	0.0274	0.0092	0.0154	0.0048	0.0020	8190243
Total Selenium (Se)	mg/L	0.00206	0.000874	0.000916	0.00116	0.000304	0.000040	8190243
Total Silicon (Si)	mg/L	2.43	4.89	3.75	4.08	3.62	0.050	8190243
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8190243
Total Strontium (Sr)	mg/L	0.138	0.276	0.210	0.247	0.0862	0.000050	8190243
Total Thallium (Tl)	mg/L	0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8190243
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8190243
Total Titanium (Ti)	mg/L	0.00078	0.00223	0.00087	0.00056	0.00104	0.00050	8190243
Total Uranium (U)	mg/L	0.00452	0.00355	0.00150	0.00183	0.000733	0.0000020	8190243
Total Vanadium (V)	mg/L	<0.00020	0.00033	<0.00020	<0.00020	0.00021	0.00020	8190243
Total Zinc (Zn)	mg/L	0.0288	0.00421	0.0638	0.0170	0.00509	0.00010	8190243

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OC5496	OC5497	OC5498	OC5499	OC5500		
Sampling Date		2016/02/09 15:15	2016/02/08 14:00	2016/02/09 14:20	2016/02/09 12:45	2016/02/08 12:45		
COC Number		08418210	08418210	08418210	08418210	08418210		
	UNITS	KZ-2	KZ-26	KZ-7	KZ-9	KZ-13	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	0.00012	0.00017	<0.00010	<0.00010	0.00010	8190243
Total Calcium (Ca)	mg/L	41.0	78.2	57.4	72.0	29.0	0.050	8189159
Total Magnesium (Mg)	mg/L	6.04	24.0	7.87	8.37	3.07	0.050	8189159
Total Potassium (K)	mg/L	2.23	1.73	1.86	1.92	2.32	0.050	8189159
Total Sodium (Na)	mg/L	0.881	2.17	1.30	1.55	1.13	0.050	8189159
Total Sulphur (S)	mg/L	18.1	15.4	12.9	11.5	4.8	3.0	8189159

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OC5501	OC5502	OC5503		OC5504		
Sampling Date		2016/02/09 10:00	2016/02/09 10:40	2016/02/09 11:20		2016/02/08 13:30		
COC Number		08418210	08418210	08418210		08418210		
	UNITS	KZ-15	KZ-16	KZ-17	QC Batch	KZ-19	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	259	289	263	8188939	<0.50	0.50	8188939
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8191774	<0.0000020	0.0000020	8191774
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00964	0.00470	0.00838	8190243	0.00138	0.00050	8190243
Total Antimony (Sb)	mg/L	0.000030	0.000024	0.000037	8190243	<0.000020	0.000020	8190243
Total Arsenic (As)	mg/L	0.000793	0.000209	0.000850	8190243	<0.000020	0.000020	8190243
Total Barium (Ba)	mg/L	0.102	0.104	0.0978	8190243	<0.000020	0.000020	8270237
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8190243	<0.000010	0.000010	8190243
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8190243	<0.0000050	0.0000050	8190243
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	8190243	<0.010	0.010	8190243
Total Cadmium (Cd)	mg/L	0.0000540	0.0000340	0.0000560	8190243	<0.0000050	0.0000050	8190243
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8190243	<0.00010	0.00010	8190243
Total Cobalt (Co)	mg/L	0.0000530	0.0000380	0.0000590	8190243	<0.0000050	0.0000050	8190243
Total Copper (Cu)	mg/L	0.000355	0.000324	0.000352	8190243	<0.000050	0.000050	8190243
Total Iron (Fe)	mg/L	0.175	0.0305	0.185	8190243	<0.0010	0.0010	8270237
Total Lead (Pb)	mg/L	0.0000910	0.0000440	0.0000640	8190243	0.0000060	0.0000050	8190243
Total Lithium (Li)	mg/L	0.00373	0.00398	0.00369	8190243	<0.00050	0.00050	8190243
Total Manganese (Mn)	mg/L	0.0559	0.0141	0.0576	8190243	<0.000050	0.000050	8190243
Total Molybdenum (Mo)	mg/L	0.00134	0.000358	0.00127	8190243	<0.000050	0.000050	8190243
Total Nickel (Ni)	mg/L	0.00100	0.000733	0.000905	8190243	<0.000020	0.000020	8190243
Total Phosphorus (P)	mg/L	0.0087	0.0029	0.0103	8190243	<0.0020	0.0020	8190243
Total Selenium (Se)	mg/L	0.00135	0.00149	0.00136	8190243	<0.000040	0.000040	8190243
Total Silicon (Si)	mg/L	4.02	4.11	4.07	8190243	<0.050	0.050	8190243
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8190243	<0.0000050	0.0000050	8190243
Total Strontium (Sr)	mg/L	0.259	0.286	0.265	8190243	<0.000050	0.000050	8270237
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8190243	<0.0000020	0.0000020	8190243
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8190243	<0.00020	0.00020	8190243
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8190243	<0.00050	0.00050	8190243
Total Uranium (U)	mg/L	0.00495	0.00298	0.00507	8190243	<0.0000020	0.0000020	8270237
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8190243	<0.00020	0.00020	8190243
Total Zinc (Zn)	mg/L	0.00755	0.00176	0.00602	8190243	0.00012	0.00010	8190243
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OC5501	OC5502	OC5503		OC5504		
Sampling Date		2016/02/09 10:00	2016/02/09 10:40	2016/02/09 11:20		2016/02/08 13:30		
COC Number		08418210	08418210	08418210		08418210		
	UNITS	KZ-15	KZ-16	KZ-17	QC Batch	KZ-19	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8190243	<0.00010	0.00010	8190243
Total Calcium (Ca)	mg/L	74.5	86.1	76.8	8189159	<0.050	0.050	8189159
Total Magnesium (Mg)	mg/L	17.8	17.9	17.2	8189159	<0.050	0.050	8189159
Total Potassium (K)	mg/L	1.53	1.56	1.49	8189159	<0.050	0.050	8189159
Total Sodium (Na)	mg/L	1.50	1.58	1.46	8189159	<0.050	0.050	8189159
Total Sulphur (S)	mg/L	12.8	14.0	12.8	8189159	<3.0	3.0	8189159

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OC5505	OC5508	OC5509	OC5510		
Sampling Date		2016/02/09 08:45	2016/02/08 15:30	2016/02/09 14:50	2016/02/10 16:00		
COC Number		08418210	08418211	08418211	08418211		
	UNITS	KZ-21	KZ-22	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	338	325	182	<0.50	0.50	8188939
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8191774
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0136	0.0150	0.0268	<0.00050	0.00050	8190243
Total Antimony (Sb)	mg/L	0.000035	0.000034	0.000041	<0.000020	0.000020	8190243
Total Arsenic (As)	mg/L	0.00751	0.00472	0.000901	<0.000020	0.000020	8190243
Total Barium (Ba)	mg/L	0.0929	0.0970	0.116	<0.000020	0.000020	8190243
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8190243
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8190243
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8190243
Total Cadmium (Cd)	mg/L	0.0000230	0.0000210	0.000300	<0.0000050	0.0000050	8190243
Total Chromium (Cr)	mg/L	0.00013	<0.00010	0.00013	<0.00010	0.00010	8190243
Total Cobalt (Co)	mg/L	0.000316	0.000235	0.000204	<0.0000050	0.0000050	8190243
Total Copper (Cu)	mg/L	0.000299	0.000287	0.000668	<0.000050	0.000050	8190243
Total Iron (Fe)	mg/L	2.07	1.27	1.27	<0.0010	0.0010	8190243
Total Lead (Pb)	mg/L	0.0000690	0.0000590	0.000473	<0.0000050	0.0000050	8190243
Total Lithium (Li)	mg/L	0.00924	0.00857	0.00385	<0.00050	0.00050	8190243
Total Manganese (Mn)	mg/L	0.261	0.178	0.174	<0.000050	0.000050	8190243
Total Molybdenum (Mo)	mg/L	0.00156	0.00137	0.000728	<0.000050	0.000050	8190243
Total Nickel (Ni)	mg/L	0.00264	0.00204	0.000656	<0.000020	0.000020	8190243
Total Phosphorus (P)	mg/L	0.0497	0.0335	0.0090	<0.0020	0.0020	8190243
Total Selenium (Se)	mg/L	0.000544	0.000730	0.000890	<0.000040	0.000040	8190243
Total Silicon (Si)	mg/L	6.89	6.32	3.81	<0.050	0.050	8190243
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8190243
Total Strontium (Sr)	mg/L	0.271	0.271	0.211	<0.000050	0.000050	8190243
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8190243
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8190243
Total Titanium (Ti)	mg/L	0.00072	0.00086	0.00143	<0.00050	0.00050	8190243
Total Uranium (U)	mg/L	0.00307	0.00346	0.00159	<0.0000020	0.0000020	8190243
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8190243
Total Zinc (Zn)	mg/L	0.00246	0.00216	0.0745	<0.00010	0.00010	8190243

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OC5505	OC5508	OC5509	OC5510		
Sampling Date		2016/02/09 08:45	2016/02/08 15:30	2016/02/09 14:50	2016/02/10 16:00		
COC Number		08418210	08418211	08418211	08418211		
	UNITS	KZ-21	KZ-22	KZ-28	TRIP BLANK	RDL	QC Batch
Total Zirconium (Zr)	mg/L	0.00039	0.00028	0.00020	<0.00010	0.00010	8190243
Total Calcium (Ca)	mg/L	84.3	83.1	59.8	<0.050	0.050	8189159
Total Magnesium (Mg)	mg/L	30.9	28.6	7.91	<0.050	0.050	8189159
Total Potassium (K)	mg/L	2.44	2.20	1.85	<0.050	0.050	8189159
Total Sodium (Na)	mg/L	2.50	2.40	1.31	<0.050	0.050	8189159
Total Sulphur (S)	mg/L	14.0	14.6	12.5	<3.0	3.0	8189159
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5496
Sample ID: KZ-2
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190702	N/A	2016/02/12	Name Redacted
Alkalinity - Water	AT/ALK	8190257	2016/02/12	2016/02/12	
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8190751	N/A	2016/02/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	
Conductance - water	AT/ALK	8190262	N/A	2016/02/12	
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	
Ion Balance	CALC	8189413	N/A	2016/02/15	
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	
pH Water	AT/ALK	8190263	N/A	2016/02/12	
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	
Total Suspended Solids-Low Level	BAL/BAL	8190481	2016/02/12	2016/02/13	

Maxxam ID: OC5496 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8190751	N/A	2016/02/12	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	

Maxxam ID: OC5497
Sample ID: KZ-26
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190702	N/A	2016/02/12	Name

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5497
Sample ID: KZ-26
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8190257	2016/02/12	2016/02/12	Name Redacted
Chloride by Automated Colourimetry	KONE/COL	8190844	N/A	2016/02/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8190751	N/A	2016/02/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	
Conductance - water	AT/ALK	8190262	N/A	2016/02/12	
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	
Ion Balance	CALC	8189413	N/A	2016/02/15	
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	
pH Water	AT/ALK	8190263	N/A	2016/02/12	
Sulphate by Automated Colourimetry	KONE/COL	8190847	N/A	2016/02/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	
Total Suspended Solids-Low Level	BAL/BAL	8190006	2016/02/12	2016/02/12	

Maxxam ID: OC5497 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	Name
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	Redacted

Maxxam ID: OC5498
Sample ID: KZ-7
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190702	N/A	2016/02/12	Name Redacted
Alkalinity - Water	AT/ALK	8190257	2016/02/12	2016/02/12	
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5498
Sample ID: KZ-7
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8190751	N/A	2016/02/12	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	
Conductance - water	AT/ALK	8190262	N/A	2016/02/12	
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	
Ion Balance	CALC	8189413	N/A	2016/02/15	
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	
pH Water	AT/ALK	8190263	N/A	2016/02/12	
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	
Total Suspended Solids-Low Level	BAL/BAL	8190481	2016/02/12	2016/02/13	

Maxxam ID: OC5499
Sample ID: KZ-9
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190709	N/A	2016/02/12	Name Redacted
Alkalinity - Water	AT/ALK	8190269	2016/02/12	2016/02/12	
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8190751	N/A	2016/02/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	
Conductance - water	AT/ALK	8190271	N/A	2016/02/12	
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5499
Sample ID: KZ-9
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance	CALC	8189413	N/A	2016/02/15	Name Redacted
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	
pH Water	AT/ALK	8190272	N/A	2016/02/12	
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	
Total Suspended Solids-Low Level	BAL/BAL	8190481	2016/02/12	2016/02/13	

Maxxam ID: OC5500
Sample ID: KZ-13
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190709	N/A	2016/02/12	Name Redacted
Alkalinity - Water	AT/ALK	8190269	2016/02/12	2016/02/12	
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8190751	N/A	2016/02/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	
Conductance - water	AT/ALK	8190271	N/A	2016/02/12	
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	
Ion Balance	CALC	8189413	N/A	2016/02/15	
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5500
Sample ID: KZ-13
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	Name Redacted
pH Water	AT/ALK	8190272	N/A	2016/02/12	
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	
Total Suspended Solids-Low Level	BAL/BAL	8190006	2016/02/12	2016/02/12	

Maxxam ID: OC5501
Sample ID: KZ-15
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190709	N/A	2016/02/12	Name Redacted
Alkalinity - Water	AT/ALK	8190269	2016/02/12	2016/02/12	
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8190751	N/A	2016/02/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	
Conductance - water	AT/ALK	8190271	N/A	2016/02/12	
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	
Ion Balance	CALC	8189413	N/A	2016/02/15	
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	
pH Water	AT/ALK	8190272	N/A	2016/02/12	
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	
Total Suspended Solids-Low Level	BAL/BAL	8190481	2016/02/12	2016/02/13	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5501 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190709	N/A	2016/02/12	Name

Maxxam ID: OC5502
Sample ID: KZ-16
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190702	N/A	2016/02/12	Name Redacted
Alkalinity - Water	AT/ALK	8190269	2016/02/12	2016/02/12	
Chloride by Automated Colourimetry	KONE/COL	8190844	N/A	2016/02/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8190751	N/A	2016/02/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	
Conductance - water	AT/ALK	8190271	N/A	2016/02/12	
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	
Ion Balance	CALC	8189413	N/A	2016/02/15	
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	
pH Water	AT/ALK	8190272	N/A	2016/02/12	
Sulphate by Automated Colourimetry	KONE/COL	8190847	N/A	2016/02/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	
Total Suspended Solids-Low Level	BAL/BAL	8190481	2016/02/12	2016/02/13	

Maxxam ID: OC5503
Sample ID: KZ-17
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190702	N/A	2016/02/12	Name
Alkalinity - Water	AT/ALK	8190257	2016/02/12	2016/02/12	Redacted
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5503
Sample ID: KZ-17
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8190751	N/A	2016/02/12	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	
Conductance - water	AT/ALK	8190262	N/A	2016/02/12	
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	
Ion Balance	CALC	8189413	N/A	2016/02/15	
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	
pH Water	AT/ALK	8190263	N/A	2016/02/12	
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	
Total Suspended Solids-Low Level	BAL/BAL	8190481	2016/02/12	2016/02/13	

Maxxam ID: OC5503 Dup
Sample ID: KZ-17
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8190257	2016/02/12	2016/02/12	Name Redacted
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	
Conductance - water	AT/ALK	8190262	N/A	2016/02/12	
pH Water	AT/ALK	8190263	N/A	2016/02/12	
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	

Maxxam ID: OC5504
Sample ID: KZ-19
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190709	N/A	2016/02/12	Name Redacted
Alkalinity - Water	AT/ALK	8190269	2016/02/12	2016/02/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5504
Sample ID: KZ-19
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8190757	N/A	2016/02/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	
Conductance - water	AT/ALK	8190271	N/A	2016/02/12	
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	
Ion Balance	CALC	8189413	N/A	2016/02/15	
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	
pH Water	AT/ALK	8190272	N/A	2016/02/12	
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	
Total Suspended Solids-Low Level	BAL/BAL	8190006	2016/02/12	2016/02/12	

Maxxam ID: OC5505
Sample ID: KZ-21
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190702	N/A	2016/02/12	Name Redacted
Alkalinity - Water	AT/ALK	8190269	2016/02/12	2016/02/12	
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8190757	N/A	2016/02/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	
Conductance - water	AT/ALK	8190271	N/A	2016/02/12	
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5505
Sample ID: KZ-21
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	Name Redacted
Ion Balance	CALC	8189413	N/A	2016/02/15	
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	
pH Water	AT/ALK	8190272	N/A	2016/02/12	
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	
Total Suspended Solids-Low Level	BAL/BAL	8190481	2016/02/12	2016/02/13	

Maxxam ID: OC5508
Sample ID: KZ-22
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190702	N/A	2016/02/12	Name Redacted
Alkalinity - Water	AT/ALK	8190257	2016/02/12	2016/02/12	
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8190757	N/A	2016/02/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8190763	N/A	2016/02/12	
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	
Conductance - water	AT/ALK	8190262	N/A	2016/02/12	
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	
Ion Balance	CALC	8189413	N/A	2016/02/15	
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5508
Sample ID: KZ-22
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	Name
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	Redacted
pH Water	AT/ALK	8190263	N/A	2016/02/12	
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	
Total Suspended Solids-Low Level	BAL/BAL	8190006	2016/02/12	2016/02/12	

Maxxam ID: OC5508 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2016/02/08
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	Name

Maxxam ID: OC5509
Sample ID: KZ-28
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190702	N/A	2016/02/12	Name Redacted
Alkalinity - Water	AT/ALK	8190257	2016/02/12	2016/02/12	
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8190757	N/A	2016/02/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8190768	N/A	2016/02/12	
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8191020	N/A	2016/02/12	
Conductance - water	AT/ALK	8190262	N/A	2016/02/12	
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	
Ion Balance	CALC	8189413	N/A	2016/02/15	
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	
Filter and HNO3 Preserve for Metals	ICP	8190240	N/A	2016/02/12	
pH Water	AT/ALK	8190263	N/A	2016/02/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5509
Sample ID: KZ-28
Matrix: Water

Collected: 2016/02/09
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	Name Redacted
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	
Total Suspended Solids-Low Level	BAL/BAL	8190481	2016/02/12	2016/02/13	

Maxxam ID: OC5510
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/02/10
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8190702	N/A	2016/02/12	Name Redacted
Alkalinity - Water	AT/ALK	8190257	2016/02/12	2016/02/12	
Chloride by Automated Colourimetry	KONE/COL	8190859	N/A	2016/02/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8190757	N/A	2016/02/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8190768	N/A	2016/02/12	
Colour (True) by Kone Lab	KONE	8191817	N/A	2016/02/13	
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8191015	N/A	2016/02/12	
Conductance - water	AT/ALK	8190262	N/A	2016/02/12	
Fluoride	ISE/ISE	8191399	N/A	2016/02/12	
Hardness Total (calculated as CaCO3)	CALC	8188939	N/A	2016/02/15	
Hardness (calculated as CaCO3)	CALC	8188994	N/A	2016/02/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	
Ion Balance	CALC	8189413	N/A	2016/02/15	
Sum of cations, anions	CALC	8189915	N/A	2016/02/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8189158	N/A	2016/02/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8190538	N/A	2016/02/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8189159	N/A	2016/02/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8190243	N/A	2016/02/12	
Ammonia-N (Unpreserved)	KONE/COL	8191866	N/A	2016/02/15	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8191035	N/A	2016/02/12	
Nitrite (N) (low level)	TRAA/COL	8191036	N/A	2016/02/12	
Nitrogen - Nitrate (as N)	CALC	8188852	N/A	2016/02/13	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2016/02/12	
pH Water	AT/ALK	8190263	N/A	2016/02/12	
Sulphate by Automated Colourimetry	KONE/COL	8190866	N/A	2016/02/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8191832	2016/02/13	2016/02/13	
Total Phosphorus - unpreserved	KONE/COL	8191836	N/A	2016/02/13	
Total Suspended Solids-Low Level	BAL/BAL	8190481	2016/02/12	2016/02/13	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OC5510 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/02/10
Shipped:
Received: 2016/02/10

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8190757	N/A	2016/02/12	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8190768	N/A	2016/02/12	
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8191015	N/A	2016/02/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8191772	N/A	2016/02/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8191774	2016/02/15	2016/02/15	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.3°C
Package 2	5.7°C

Revised report V2 (2016/05/19): Due to client request, samples were reanalyzed for Total Barium. Corrected values for sample OC5504 are included in this report (MM4).

Revised report V3 (2016/05/30): Report issued with no changes to metals analysis, in error (MM4).

Revised report V (2016/06/08): Corrected values for OC5504 are included in this report for Total Iron, Strontium and Uranium, after review of all metals data greater than 3 times the RDL (MM4).

Sample OC5504-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Sample OC5510-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].
Sample OC5496, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample OC5508, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample OC5504, Elements by ICPMS Low Level (total): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8190006	Total Suspended Solids	2016/02/12			98	80 - 120	<1.0	mg/L		
8190243	Total Aluminum (Al)	2016/02/12	98	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8190243	Total Antimony (Sb)	2016/02/12	96	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8190243	Total Arsenic (As)	2016/02/12	99	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8190243	Total Barium (Ba)	2016/02/12	94	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8190243	Total Beryllium (Be)	2016/02/12	96	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
8190243	Total Bismuth (Bi)	2016/02/12	92	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8190243	Total Boron (B)	2016/02/12	97	80 - 120	102	80 - 120	<0.010	mg/L	NC	20
8190243	Total Cadmium (Cd)	2016/02/12	99	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8190243	Total Chromium (Cr)	2016/02/12	91	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8190243	Total Cobalt (Co)	2016/02/12	94	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8190243	Total Copper (Cu)	2016/02/12	94	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8190243	Total Iron (Fe)	2016/02/12	93	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20
8190243	Total Lead (Pb)	2016/02/12	91	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8190243	Total Lithium (Li)	2016/02/12	92	80 - 120	92	80 - 120	<0.00050	mg/L	NC	20
8190243	Total Manganese (Mn)	2016/02/12	94	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8190243	Total Molybdenum (Mo)	2016/02/12	95	80 - 120	96	80 - 120	<0.000050	mg/L	NC	20
8190243	Total Nickel (Ni)	2016/02/12	94	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8190243	Total Phosphorus (P)	2016/02/12					<0.0020	mg/L		
8190243	Total Selenium (Se)	2016/02/12	94	80 - 120	95	80 - 120	<0.000040	mg/L	NC	20
8190243	Total Silicon (Si)	2016/02/12					<0.050	mg/L	NC	20
8190243	Total Silver (Ag)	2016/02/12	72 (1)	80 - 120	86	80 - 120	<0.0000050	mg/L	NC	20
8190243	Total Strontium (Sr)	2016/02/12	90	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8190243	Total Thallium (Tl)	2016/02/12	95	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8190243	Total Tin (Sn)	2016/02/12	91	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20
8190243	Total Titanium (Ti)	2016/02/12	95	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8190243	Total Uranium (U)	2016/02/12	95	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8190243	Total Vanadium (V)	2016/02/12	94	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8190243	Total Zinc (Zn)	2016/02/12	105	80 - 120	106	80 - 120	<0.00010	mg/L	NC	20
8190243	Total Zirconium (Zr)	2016/02/12					<0.00010	mg/L	NC	20
8190257	Alkalinity (PP as CaCO3)	2016/02/12					<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8190257	Alkalinity (Total as CaCO3)	2016/02/12	NC	80 - 120	101	80 - 120	<0.50	mg/L	0.78	20
8190257	Bicarbonate (HCO3)	2016/02/12					<0.50	mg/L	0.78	20
8190257	Carbonate (CO3)	2016/02/12					<0.50	mg/L	NC	20
8190257	Hydroxide (OH)	2016/02/12					<0.50	mg/L	NC	20
8190262	Conductivity	2016/02/12			101	80 - 120	<1.0	uS/cm	0.20	20
8190263	pH	2016/02/12			102	97 - 103			0.25	N/A
8190269	Alkalinity (PP as CaCO3)	2016/02/12					<0.50	mg/L		
8190269	Alkalinity (Total as CaCO3)	2016/02/12	NC	80 - 120	101	80 - 120	0.71, RDL=0.50	mg/L		
8190269	Bicarbonate (HCO3)	2016/02/12					0.87, RDL=0.50	mg/L		
8190269	Carbonate (CO3)	2016/02/12					<0.50	mg/L		
8190269	Hydroxide (OH)	2016/02/12					<0.50	mg/L		
8190271	Conductivity	2016/02/12			101	80 - 120	1.0, RDL=1.0	uS/cm		
8190272	pH	2016/02/12			102	97 - 103				
8190481	Total Suspended Solids	2016/02/13			101	80 - 120	<1.0	mg/L		
8190538	Dissolved Aluminum (Al)	2016/02/12	98	80 - 120	107	80 - 120	<0.00050	mg/L	5.1	20
8190538	Dissolved Antimony (Sb)	2016/02/12	95	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8190538	Dissolved Arsenic (As)	2016/02/12	98	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8190538	Dissolved Barium (Ba)	2016/02/12	103	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8190538	Dissolved Beryllium (Be)	2016/02/12	96	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8190538	Dissolved Bismuth (Bi)	2016/02/12	99	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8190538	Dissolved Boron (B)	2016/02/12	96	80 - 120	107	80 - 120	<0.010	mg/L	NC	20
8190538	Dissolved Cadmium (Cd)	2016/02/12	98	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8190538	Dissolved Chromium (Cr)	2016/02/12	99	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
8190538	Dissolved Cobalt (Co)	2016/02/12	100	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8190538	Dissolved Copper (Cu)	2016/02/12	99	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8190538	Dissolved Iron (Fe)	2016/02/12	102	80 - 120	116	80 - 120	<0.0010	mg/L	NC	20
8190538	Dissolved Lead (Pb)	2016/02/12	101	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8190538	Dissolved Lithium (Li)	2016/02/12	97	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8190538	Dissolved Manganese (Mn)	2016/02/12	100	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8190538	Dissolved Molybdenum (Mo)	2016/02/12	96	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8190538	Dissolved Nickel (Ni)	2016/02/12	98	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8190538	Dissolved Phosphorus (P)	2016/02/12					<0.0020	mg/L	NC	20
8190538	Dissolved Selenium (Se)	2016/02/12	93	80 - 120	95	80 - 120	<0.000040	mg/L	NC	20
8190538	Dissolved Silicon (Si)	2016/02/12					<0.050	mg/L	NC	20
8190538	Dissolved Silver (Ag)	2016/02/12	82	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8190538	Dissolved Strontium (Sr)	2016/02/12	92	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8190538	Dissolved Thallium (Tl)	2016/02/12	98	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8190538	Dissolved Tin (Sn)	2016/02/12	98	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8190538	Dissolved Titanium (Ti)	2016/02/12	103	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8190538	Dissolved Uranium (U)	2016/02/12	99	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8190538	Dissolved Vanadium (V)	2016/02/12	97	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8190538	Dissolved Zinc (Zn)	2016/02/12	97	80 - 120	100	80 - 120	<0.00010	mg/L	6.2	20
8190538	Dissolved Zirconium (Zr)	2016/02/12					<0.00010	mg/L	NC	20
8190702	Acidity (pH 4.5)	2016/02/12					<0.50	mg/L	NC	20
8190702	Acidity (pH 8.3)	2016/02/12			100	80 - 120	<0.50	mg/L	15	20
8190709	Acidity (pH 4.5)	2016/02/12					<0.50	mg/L	NC	20
8190709	Acidity (pH 8.3)	2016/02/12			100	80 - 120	<0.50	mg/L	NC	20
8190751	Strong Acid Dissoc. Cyanide (CN)	2016/02/12	97	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8190757	Strong Acid Dissoc. Cyanide (CN)	2016/02/12	100	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8190763	Weak Acid Dissoc. Cyanide (CN)	2016/02/12	99	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8190768	Weak Acid Dissoc. Cyanide (CN)	2016/02/12	101	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8190844	Dissolved Chloride (Cl)	2016/02/12			100	80 - 120	<0.50	mg/L		
8190847	Dissolved Sulphate (SO4)	2016/02/12			96	80 - 120	0.82, RDL=0.50	mg/L		
8190859	Dissolved Chloride (Cl)	2016/02/12	NC	80 - 120	97	80 - 120	<0.50	mg/L	NC	20
8190866	Dissolved Sulphate (SO4)	2016/02/12			92	80 - 120	0.82, RDL=0.50	mg/L	6.6	20
8191015	Dissolved Organic Carbon (C)	2016/02/12	119	80 - 120	112	80 - 120	<0.50	mg/L	NC	20
8191020	Dissolved Organic Carbon (C)	2016/02/12	NC	80 - 120	103	80 - 120	<0.50	mg/L	NC	20
8191035	Nitrate plus Nitrite (N)	2016/02/12	NC	80 - 120	105	80 - 120	<0.0020	mg/L		
8191036	Nitrite (N)	2016/02/12	NC	80 - 120	102	80 - 120	<0.0020	mg/L	1.7	25
8191399	Fluoride (F)	2016/02/12	100	80 - 120	98	80 - 120	0.016, RDL=0.010	mg/L	0	20
8191772	Dissolved Mercury (Hg)	2016/02/15	90	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20

Maxxam Job #: B610526
Report Date: 2016/06/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8191774	Total Mercury (Hg)	2016/02/15	99	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8191817	True Colour	2016/02/13			112	80 - 120	<5.0	Col. Unit	NC	20
8191832	Dissolved Phosphorus (P)	2016/02/13	82	80 - 120	108	80 - 120	<0.0020	mg/L	NC	20
8191836	Total Phosphorus (P)	2016/02/13	105	80 - 120	94	80 - 120	<0.0020	mg/L	NC	20
8191866	Total Ammonia (N)	2016/02/15	96	80 - 120	102	80 - 120	<0.0050	mg/L	NC	20
8192370	Dissolved Copper (Cu)	2016/02/16			108	80 - 120	<0.000050	mg/L		
8192370	Dissolved Phosphorus (P)	2016/02/16					<0.0020	mg/L		
8270237	Total Barium (Ba)	2016/05/16	NC	80 - 120	103	80 - 120	<0.000020	mg/L	0.19	20
8270237	Total Iron (Fe)	2016/05/16	NC	80 - 120	110	80 - 120	<0.0010	mg/L	2.5	20
8270237	Total Strontium (Sr)	2016/05/16	NC	80 - 120	97	80 - 120	<0.000050	mg/L	0.90	20
8270237	Total Uranium (U)	2016/05/16	102	80 - 120	100	80 - 120	<0.0000020	mg/L	2.5	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B610526
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

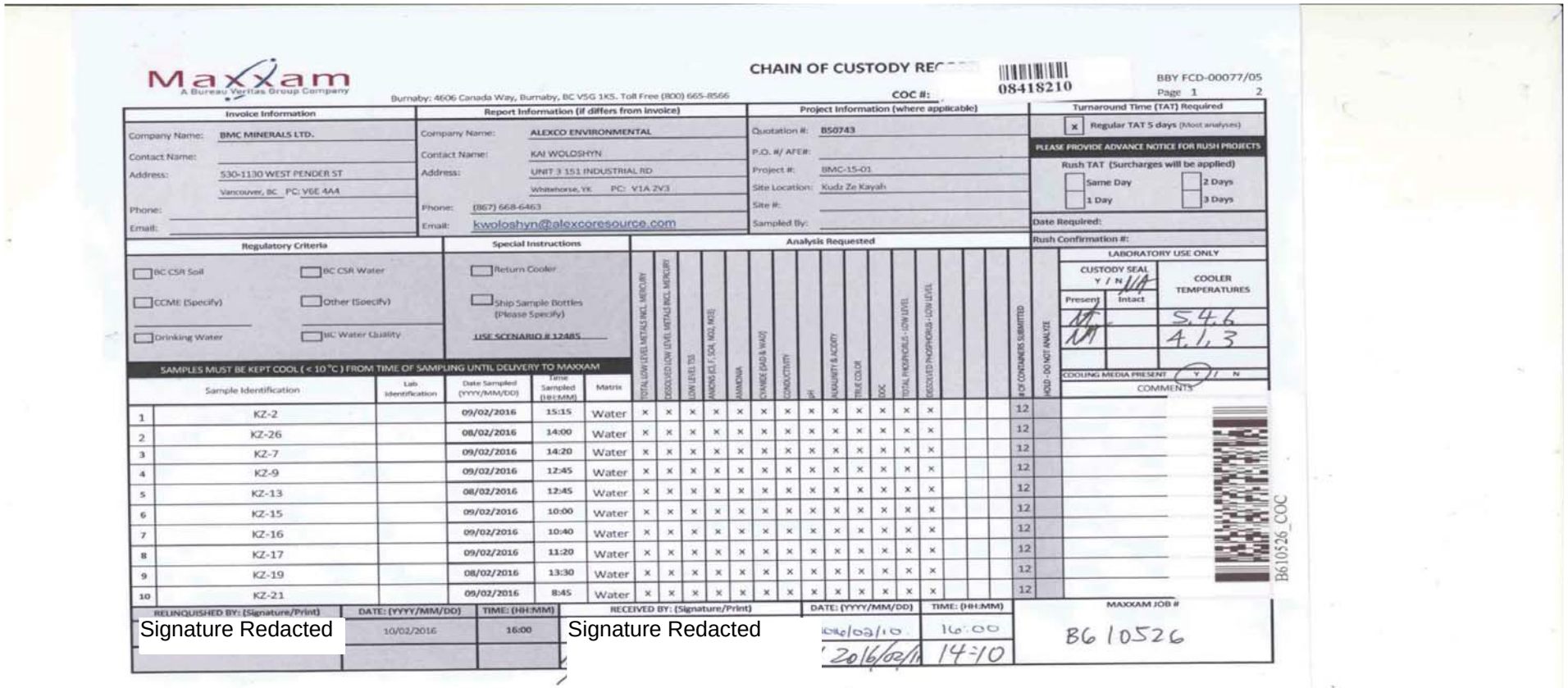
VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386



Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RE[illegible]

COC #: 08418210

BBY FCD-00077/05
Page 1 2

Invoice Information
Company Name: BMC MINERALS LTD.
Contact Name:
Address: 530-1130 WEST PENDER ST
Vancouver, BC PC: V6E 4A4
Phone:
Email:

Report Information (if differs from invoice)
Company Name: ALEXCO ENVIRONMENTAL
Contact Name: KAI WOLOSHYN
Address: UNIT 3 151 INDUSTRIAL RD
Whitehorse, YK PC: V1A 2V3
Phone: (867) 668-6463
Email: kwoloshyn@alexcoresource.com

Project Information (where applicable)
Quotation #: B50743
P.O. #/ AFE#:
Project #: BMC-15-01
Site Location: Kudz Ze Kayah
Site #:
Sampled By:

Turnaround Time (TAT) Required
[x] Regular TAT 5 days (Most analyses)
PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Rush TAT (Surcharges will be applied)
[ ] Same Day [ ] 2 Days
[ ] 1 Day [ ] 3 Days
Date Required:
Rush Confirmation #:

Regulatory Criteria
[ ] BC CSR Soil [ ] BC CSR Water
[ ] CCME (Specify) [ ] Other (Specify)
[ ] Drinking Water [ ] WC Water Quality

Special Instructions
[ ] Return Cooler
[ ] Ship Sample Bottles (Please Specify)
USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (CL-, SO4, NO2, NO3)	AMMONIA	CYANIDE (EAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		09/02/2016	15:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
2	KZ-26		08/02/2016	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
3	KZ-7		09/02/2016	14:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
4	KZ-9		09/02/2016	12:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
5	KZ-13		08/02/2016	12:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
6	KZ-15		09/02/2016	10:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
7	KZ-16		09/02/2016	10:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
8	KZ-17		09/02/2016	11:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
9	KZ-19		08/02/2016	13:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
10	KZ-21		09/02/2016	8:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	

LABORATORY USE ONLY

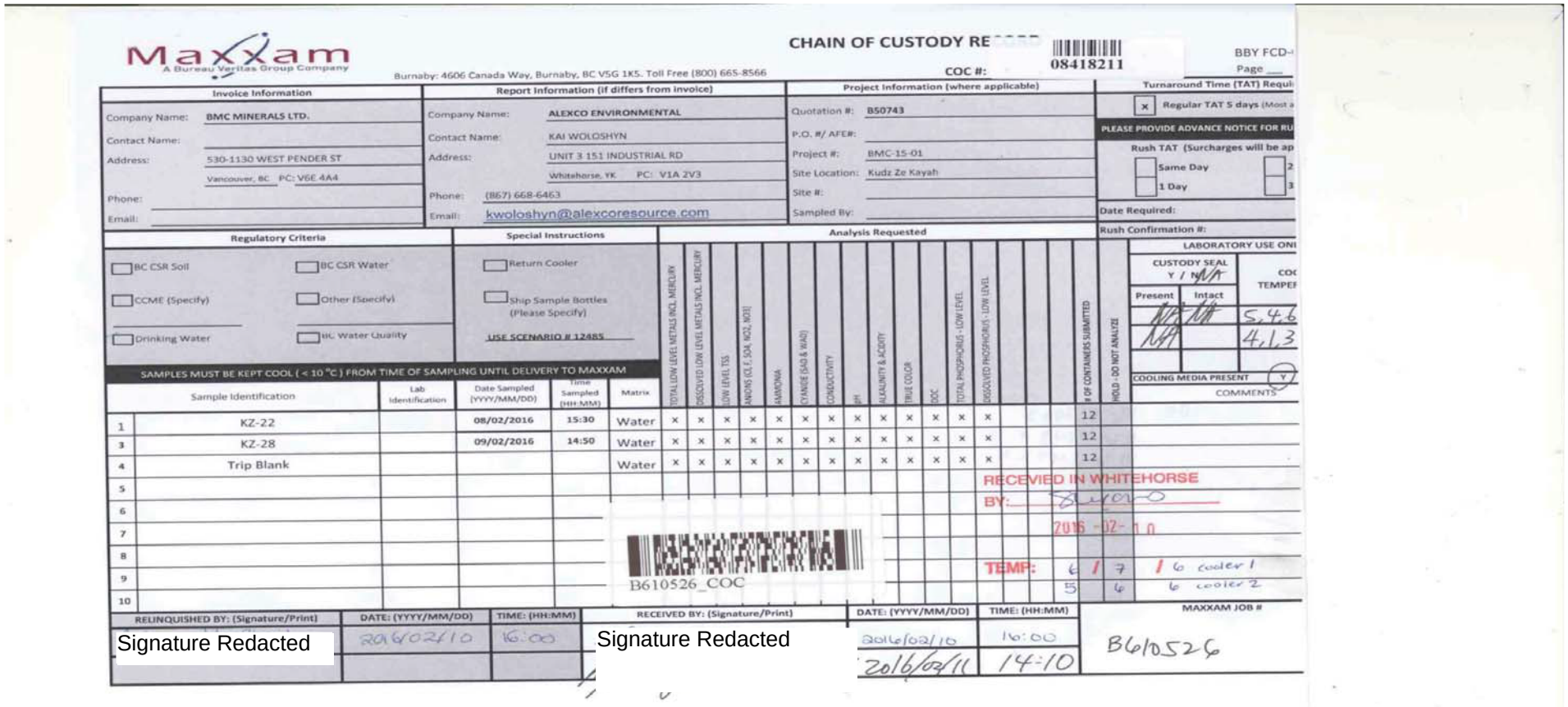
CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
N/A		5.4.6
N/A		4.1.3

COOLING MEDIA PRESENT Y / N
COMMENTS

MAXXAM JOB #: B610526

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	10/02/2016	16:00	Signature Redacted	2016/02/10	16:00
				2016/02/10	14:10

B610526_COC



Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RE

COC #: 08418211

BBY FCD-

Page ___

Invoice Information

Company Name: BMC MINERALS LTD.
Contact Name:
Address: 530-1130 WEST PENDER ST
Vancouver, BC PC: V6E 4A4
Phone:
Email:

Report Information (if differs from invoice)

Company Name: ALEXCO ENVIRONMENTAL
Contact Name: KAI WOLOSHYN
Address: UNIT 3 151 INDUSTRIAL RD
Whitehorse, YK PC: V1A 2V3
Phone: (867) 668-6463
Email: kwoloshyn@alexcoresource.com

Project Information (where applicable)

Quotation #: B50743
P.O. #/ AFE#:
Project #: BMC-15-01
Site Location: Kudz Ze Kayah
Site #:
Sampled By:

Turnaround Time (TAT) Requi

[x] Regular TAT 5 days (Most a

PLEASE PROVIDE ADVANCE NOTICE FOR RU

Rush TAT (Surcharges will be ap

[ ] Same Day [ ] 2
[ ] 1 Day [ ] 3

Date Required:

Rush Confirmation #:

Regulatory Criteria

[ ] BC CSR Soil [ ] BC CSR Water
[ ] CCME (Specify) [ ] Other (Specify)
[ ] Drinking Water [ ] BC Water Quality

Special Instructions

[ ] Return Cooler
[ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (CL, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-22		08/02/2016	15:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
3	KZ-28		09/02/2016	14:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
4	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
5																				
6																				
7																				
8																				
9																				
10																				

RECEIVED IN WHITEHORSE
BY: [illegible]
2016 -02- 10

TEMP: 6 / 7 / 6 cooler 1
5 6 6 cooler 2

B610526_COC

LABORATORY USE ONI

CUSTODY SEAL Y / N N/A
Present: N/A Intact: N/A
COC TEMPE: 5.4.6
4.1.3

COOLING MEDIA PRESENT (Y)

COMMENTS

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2016/02/10	16:00	Signature Redacted	2016/02/10	16:00	B610526
				2016/02/11	14:10	

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08419480, 08419481

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2016/05/19
Report #: R2184349
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B621867
Received: 2016/03/22, 13:20

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	13	N/A	2016/03/24	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	13	2016/03/24	2016/03/24	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	13	N/A	2016/03/24	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	13	N/A	2016/03/28	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	13	N/A	2016/03/28	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	13	N/A	2016/03/24	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	11	N/A	2016/03/28	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - field filtered/preserved (1)	1	N/A	2016/03/29	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2016/03/28	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	13	N/A	2016/03/24	BBY6SOP-00026	SM 22 2510 B m
Fluoride	13	N/A	2016/03/24	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	13	N/A	2016/03/29	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	13	N/A	2016/03/29	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	13	N/A	2016/03/28	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	13	2016/03/28	2016/03/28	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	13	N/A	2016/03/29	BBY WI-00033	SM 22 1030E
Sum of cations, anions	13	N/A	2016/03/29	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	13	N/A	2016/03/29	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	12	N/A	2016/03/25	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	1	N/A	2016/03/28	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	13	N/A	2016/03/29	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	12	N/A	2016/03/25	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	1	N/A	2016/03/28	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	11	N/A	2016/03/28	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Unpreserved)	2	N/A	2016/03/31	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	13	N/A	2016/03/24	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	13	N/A	2016/03/24	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	13	N/A	2016/03/29	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	12	N/A	2016/03/24	BBY7 WI-00004	BCMOE Reqs 08/14

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08419480, 08419481

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2016/05/19
Report #: R2184349
Version: 4 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B621867
Received: 2016/03/22, 13:20

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
pH Water (2)	13	N/A	2016/03/24	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	13	N/A	2016/03/24	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	12	2016/03/26	2016/03/26	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2016/03/30	2016/03/30	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	11	N/A	2016/03/26	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	1	N/A	2016/03/30	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	1	N/A	2016/03/31	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	13	2016/03/24	2016/03/28	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OI3665	OI3666	OI3667		OI3668		
Sampling Date		2016/03/20 18:36	2016/03/20 17:20	2016/03/20 15:45		2016/03/21 08:15		
COC Number		08419480	08419480	08419480		08419480		
	UNITS	KZ-2	KZ-7	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.9	3.8	5.3	8224540	2.0	N/A	8224540
Cation Sum	meq/L	2.8	3.8	5.1	8224540	1.9	N/A	8224540
Filter and HNO3 Preservation	N/A	LAB	LAB	LAB	8224944	LAB	N/A	8224944
Ion Balance	N/A	0.99	1.0	0.96	8224539	0.95	0.010	8224539
Nitrate (N)	mg/L	0.163	0.126	0.507	8224034	0.151	0.0020	8224034
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	8226581	<0.00050	0.00050	8226581
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	8226583	0.00054	0.00050	8226583
Fluoride (F)	mg/L	0.041	0.063	0.061	8225545	0.045	0.010	8225583
Dissolved Organic Carbon (C)	mg/L	1.00	<0.50	<0.50	8227122	1.29	0.50	8227122
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	8225498	<0.50	0.50	8225498
Alkalinity (Total as CaCO3)	mg/L	87.7	154	220	8224988	83.8	0.50	8224988
Acidity (pH 8.3)	mg/L	<0.50	<0.50	<0.50	8225498	1.96	0.50	8225498
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	8224988	<0.50	0.50	8224988
Bicarbonate (HCO3)	mg/L	107	188	268	8224988	102	0.50	8224988
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	8224988	<0.50	0.50	8224988
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	8224988	<0.50	0.50	8224988
Anions								
Dissolved Sulphate (SO4)	mg/L	51.3	33.5	41.7	8226476	14.6	0.50	8226516
Dissolved Chloride (Cl)	mg/L	0.68	<0.50	0.55	8226475	<0.50	0.50	8226478
MISCELLANEOUS								
True Colour	Col. Unit	<5.0 (1)	<5.0 (1)	<5.0 (1)	8226019	5.5	5.0	8226019
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0025 (1)	0.0032 (1)	0.0022 (1)	8226199	<0.0020 (2)	0.0020	8229431
Total Ammonia (N)	mg/L	0.0079 (1)	0.0083 (1)	<0.0050 (1)	8227234	0.0510 (3)	0.0050	8227234
Nitrate plus Nitrite (N)	mg/L	0.163 (1)	0.126 (1)	0.507 (1)	8226051	0.151	0.0020	8226051

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(2) Sample was originally analysed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.

(3) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OI3665	OI3666	OI3667		OI3668		
Sampling Date		2016/03/20 18:36	2016/03/20 17:20	2016/03/20 15:45		2016/03/21 08:15		
COC Number		08419480	08419480	08419480		08419480		
	UNITS	KZ-2	KZ-7	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Nitrite (N)	mg/L	<0.0020 (1)	<0.0020 (1)	<0.0020 (1)	8226052	<0.0020	0.0020	8226052
Total Phosphorus (P)	mg/L	<0.0020 (1)	0.0030 (1)	<0.0020 (1)	8226203	<0.0020 (2)	0.0020	8229432
Physical Properties								
Conductivity	uS/cm	280	357	480	8224989	187	1.0	8224989
pH	pH	7.96	8.05	8.14	8224990	7.83		8224990
Physical Properties								
Total Suspended Solids	mg/L	<1.0	1.0	<1.0	8225029	<1.0	1.0	8225029

RDL = Reportable Detection Limit

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(2) Sample was originally analysed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OI3669		OI3670		OI3671		
Sampling Date		2016/03/20 11:45		2016/03/20 13:00		2016/03/20 14:25		
COC Number		08419480		08419480		08419480		
	UNITS	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	5.6	8224540	5.8	8224540	5.5	N/A	8224540
Cation Sum	meq/L	5.4	8224540	5.9	8224540	5.3	N/A	8224540
Filter and HNO3 Preservation	N/A	LAB	8224944	LAB	8224944	LAB	N/A	8224944
Ion Balance	N/A	0.95	8224539	1.0	8224539	0.97	0.010	8224539
Nitrate (N)	mg/L	0.217	8224034	0.259	8224034	0.225	0.0020	8224034
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8226581	<0.00050	8226581	<0.00050	0.00050	8226581
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00050	8226583	0.00066	8226583	0.00053	0.00050	8226583
Fluoride (F)	mg/L	0.100	8225545	0.075	8225545	0.092	0.010	8225545
Dissolved Organic Carbon (C)	mg/L	0.89	8228331	0.89	8227122	0.52	0.50	8227122
Acidity (pH 4.5)	mg/L	<0.50	8225498	<0.50	8225498	<0.50	0.50	8225498
Alkalinity (Total as CaCO3)	mg/L	242	8224988	247	8224988	237	0.50	8224998
Acidity (pH 8.3)	mg/L	2.13	8225498	7.14	8225498	5.07	0.50	8225498
Alkalinity (PP as CaCO3)	mg/L	<0.50	8224988	<0.50	8224988	<0.50	0.50	8224998
Bicarbonate (HCO3)	mg/L	295	8224988	302	8224988	289	0.50	8224998
Carbonate (CO3)	mg/L	<0.50	8224988	<0.50	8224988	<0.50	0.50	8224998
Hydroxide (OH)	mg/L	<0.50	8224988	<0.50	8224988	<0.50	0.50	8224998
Anions								
Dissolved Sulphate (SO4)	mg/L	36.5	8226476	36.8	8226476	35.0	0.50	8226476
Dissolved Chloride (Cl)	mg/L	0.52	8226475	0.72	8226475	0.71	0.50	8226475
MISCELLANEOUS								
True Colour	Col. Unit	<5.0 (1)	8226020	<5.0 (1)	8226019	<5.0 (1)	5.0	8226020
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0029 (1)	8226199	0.0027 (1)	8226199	0.0027 (1)	0.0020	8226199
Total Ammonia (N)	mg/L	0.0058 (1)	8227234	0.0129 (1)	8227234	0.0100 (1)	0.0050	8227234
Nitrate plus Nitrite (N)	mg/L	0.217 (1)	8226051	0.259 (1)	8226051	0.225 (1)	0.0020	8226051
Nitrite (N)	mg/L	<0.0020 (1)	8226052	<0.0020 (1)	8226052	<0.0020 (1)	0.0020	8226052
Total Phosphorus (P)	mg/L	0.0056 (1)	8226203	<0.0020 (1)	8226203	0.0023 (1)	0.0020	8226203

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OI3669		OI3670		OI3671		
Sampling Date		2016/03/20 11:45		2016/03/20 13:00		2016/03/20 14:25		
COC Number		08419480		08419480		08419480		
	UNITS	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Physical Properties								
Conductivity	uS/cm	501	8224989	519	8224989	499	1.0	8224997
pH	pH	8.02	8224990	7.77	8224990	7.95		8224996
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8225029	<1.0	8225029	<1.0	1.0	8225029
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OI3672		OI3673		OI3674		
Sampling Date		2016/03/21 10:25		2016/03/20 10:25		2016/03/20 09:30		
COC Number		08419480		08419480		08419481		
	UNITS	KZ-19	QC Batch	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	0.011	8224540	7.3	8224540	6.7	N/A	8224540
Cation Sum	meq/L	0.0031	8224540	7.0	8224540	6.6	N/A	8224540
Filter and HNO3 Preservation	N/A	LAB	8224944	LAB	8224944	LAB	N/A	8224944
Ion Balance	N/A	0.28	8224539	0.96	8224539	0.99	0.010	8224539
Nitrate (N)	mg/L	<0.0020	8224034	0.230	8224034	0.247	0.0020	8224034
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8226581	0.00059	8226581	0.00057	0.00050	8226581
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8226583	0.00080	8226583	0.00070	0.00050	8226583
Fluoride (F)	mg/L	<0.010	8225545	0.210	8225545	0.150	0.010	8225583
Dissolved Organic Carbon (C)	mg/L	0.53	8227122	1.86	8227122	1.39	0.50	8227122
Acidity (pH 4.5)	mg/L	<0.50 (1)	8225498	<0.50	8225498	<0.50	0.50	8225498
Alkalinity (Total as CaCO3)	mg/L	0.55	8224988	320	8224988	286	0.50	8224988
Acidity (pH 8.3)	mg/L	<0.50	8225498	8.85	8225498	3.85	0.50	8225498
Alkalinity (PP as CaCO3)	mg/L	<0.50	8224988	<0.50	8224988	<0.50	0.50	8224988
Bicarbonate (HCO3)	mg/L	0.67	8224988	391	8224988	349	0.50	8224988
Carbonate (CO3)	mg/L	<0.50	8224988	<0.50	8224988	<0.50	0.50	8224988
Hydroxide (OH)	mg/L	<0.50	8224988	<0.50	8224988	<0.50	0.50	8224988
Anions								
Dissolved Sulphate (SO4)	mg/L	<0.50	8226476	40.2	8226476	45.3	0.50	8226516
Dissolved Chloride (Cl)	mg/L	<0.50	8226475	0.77	8226475	0.73	0.50	8226478
MISCELLANEOUS								
True Colour	Col. Unit	<5.0	8226019	<5.0 (2)	8226019	<5.0 (2)	5.0	8226019
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020 (3)	8226199	0.0063 (2)	8226199	0.0039 (2)	0.0020	8226199
Total Ammonia (N)	mg/L	<0.0050 (4)	8230249	0.0592 (2)	8227234	0.0550 (2)	0.0050	8227234

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(3) Sample preserved to extend hold time.

(4) Sample was originally analysed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OI3672		OI3673		OI3674		
Sampling Date		2016/03/21 10:25		2016/03/20 10:25		2016/03/20 09:30		
COC Number		08419480		08419480		08419481		
	UNITS	KZ-19	QC Batch	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Nitrate plus Nitrite (N)	mg/L	<0.0020	8226051	0.230 (1)	8226051	0.247 (1)	0.0020	8226051
Nitrite (N)	mg/L	<0.0020	8226052	<0.0020 (1)	8226052	<0.0020 (1)	0.0020	8226052
Total Phosphorus (P)	mg/L	0.0022 (2)	8226203	0.0058 (1)	8226203	0.0036 (1)	0.0020	8226203
Physical Properties								
Conductivity	uS/cm	1.5	8224989	639	8224989	588	1.0	8224989
pH	pH	5.94	8224990	7.85	8224990	8.00		8224990
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8225029	1.2	8225029	<1.0	1.0	8225029

RDL = Reportable Detection Limit

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(2) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OI3675		OI3676		OI3677		
Sampling Date		2016/03/19 14:30		2016/03/19 15:30		2016/03/22 13:20		
COC Number		08419481		08419481		08419481		
	UNITS	KZ-26	QC Batch	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	6.4	8224540	6.3	8224540	0.0000	N/A	8224540
Cation Sum	meq/L	6.3	8224540	6.2	8224540	0.0030	N/A	8224540
Filter and HNO3 Preservation	N/A	LAB	8224944	LAB	8224944		N/A	8224944
Ion Balance	N/A	0.98	8224539	0.98	8224539	NC	0.010	8224539
Nitrate (N)	mg/L	0.272	8224034	0.274	8224034	<0.0020	0.0020	8224034
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8226581	<0.00050	8226581	<0.00050	0.00050	8226581
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00060	8226583	0.00057	8226583	<0.00050	0.00050	8226583
Fluoride (F)	mg/L	0.110	8225545	0.110	8225545	<0.010	0.010	8225545
Dissolved Organic Carbon (C)	mg/L	1.23	8227122	1.49	8227122	<0.50 (1)	0.50	8227119
Acidity (pH 4.5)	mg/L	<0.50	8225498	<0.50	8225498	<0.50	0.50	8225498
Alkalinity (Total as CaCO3)	mg/L	271	8224988	267	8224988	<0.50	0.50	8224998
Acidity (pH 8.3)	mg/L	<0.50	8225498	<0.50	8225498	<0.50	0.50	8225498
Alkalinity (PP as CaCO3)	mg/L	<0.50	8224988	<0.50	8224988	<0.50	0.50	8224998
Bicarbonate (HCO3)	mg/L	330	8224988	325	8224988	<0.50	0.50	8224998
Carbonate (CO3)	mg/L	<0.50	8224988	<0.50	8224988	<0.50	0.50	8224998
Hydroxide (OH)	mg/L	<0.50	8224988	<0.50	8224988	<0.50	0.50	8224998
Anions								
Dissolved Sulphate (SO4)	mg/L	44.5	8226476	44.4	8226476	<0.50	0.50	8226476
Dissolved Chloride (Cl)	mg/L	0.55	8226475	0.63	8226475	<0.50	0.50	8226475
MISCELLANEOUS								
True Colour	Col. Unit	<5.0 (2)	8226020	<5.0 (3)	8226019	<5.0	5.0	8226020
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0021 (3)	8226199	0.0031 (3)	8226199	<0.0020 (4)	0.0020	8226199
Total Ammonia (N)	mg/L	0.0394 (3)	8227234	0.0054 (3)	8227234	<0.0050 (5)	0.0050	8230249

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Sample analysed past recommended hold time.

(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(3) Sample arrived to laboratory past recommended hold time.

(4) Sample preserved to extend hold time.

(5) Sample was originally analysed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OI3675		OI3676		OI3677		
Sampling Date		2016/03/19 14:30		2016/03/19 15:30		2016/03/22 13:20		
COC Number		08419481		08419481		08419481		
	UNITS	KZ-26	QC Batch	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Nitrate plus Nitrite (N)	mg/L	0.272 (1)	8226051	0.274 (1)	8226051	<0.0020	0.0020	8226051
Nitrite (N)	mg/L	<0.0020 (1)	8226052	<0.0020 (1)	8226052	<0.0020	0.0020	8226052
Total Phosphorus (P)	mg/L	0.0030 (1)	8226203	0.0030 (1)	8226203	<0.0020 (2)	0.0020	8230309
Physical Properties								
Conductivity	uS/cm	554	8224989	557	8224989	1.4	1.0	8224997
pH	pH	8.29	8224990	8.23	8224990	5.68		8224996
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8225029	<1.0	8225029	<1.0	1.0	8225029

RDL = Reportable Detection Limit

(1) Sample arrived to laboratory past recommended hold time.

(2) Sample was originally analysed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OI3665	OI3666	OI3667	OI3668	OI3669		
Sampling Date		2016/03/20 18:36	2016/03/20 17:20	2016/03/20 15:45	2016/03/21 08:15	2016/03/20 11:45		
COC Number		08419480	08419480	08419480	08419480	08419480		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	136	185	250	88.4	263	0.50	8223812
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8226582
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00596	0.00542	0.00315	0.00485	0.00261	0.00050	8225433
Dissolved Antimony (Sb)	mg/L	0.000029	0.000034	0.000020	<0.000020	0.000031	0.000020	8225433
Dissolved Arsenic (As)	mg/L	0.000079	0.000124	0.000109	0.000122	0.000341	0.000020	8225433
Dissolved Barium (Ba)	mg/L	0.0769	0.107	0.179	0.151	0.104	0.000020	8225433
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8225433
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8225433
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8225433
Dissolved Cadmium (Cd)	mg/L	0.000204	0.0000250	0.0000330	0.0000200	0.0000340	0.0000050	8225433
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00017	<0.00010	<0.00010	0.00010	8225433
Dissolved Cobalt (Co)	mg/L	0.0000070	0.0000520	0.0000050	0.0000410	0.0000250	0.0000050	8225433
Dissolved Copper (Cu)	mg/L	0.000388	0.000125	0.000068	0.000238	0.000241	0.000050	8225433
Dissolved Iron (Fe)	mg/L	<0.0010	0.0072	<0.0010	0.0411	0.0028	0.0010	8225433
Dissolved Lead (Pb)	mg/L	0.0000160	0.0000060	0.0000060	0.0000060	0.0000060	0.0000050	8225433
Dissolved Lithium (Li)	mg/L	0.00172	0.00449	0.00220	0.00196	0.00436	0.00050	8225433
Dissolved Manganese (Mn)	mg/L	<0.000050	0.0716	0.00146	0.0800	0.0280	0.000050	8225433
Dissolved Molybdenum (Mo)	mg/L	0.000751	0.000731	0.00149	0.000763	0.00145	0.000050	8225433
Dissolved Nickel (Ni)	mg/L	0.000254	0.000413	0.000081	0.000318	0.000863	0.000020	8225433
Dissolved Phosphorus (P)	mg/L	0.0021	<0.0020	0.0026	0.0024	0.0029	0.0020	8225433
Dissolved Selenium (Se)	mg/L	0.00218	0.000901	0.00326	0.000308	0.00143	0.000040	8225433
Dissolved Silicon (Si)	mg/L	2.39	3.68	3.44	3.57	4.05	0.050	8225433
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8225433
Dissolved Strontium (Sr)	mg/L	0.154	0.211	0.254	0.0954	0.257	0.000050	8225433
Dissolved Thallium (Tl)	mg/L	0.0000020	0.0000020	<0.0000020	0.0000020	<0.0000020	0.0000020	8225433
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8225433
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8225433
Dissolved Uranium (U)	mg/L	0.00494	0.00157	0.00303	0.000784	0.00510	0.0000020	8225433
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8225433

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OI3665	OI3666	OI3667	OI3668	OI3669		
Sampling Date		2016/03/20 18:36	2016/03/20 17:20	2016/03/20 15:45	2016/03/21 08:15	2016/03/20 11:45		
COC Number		08419480	08419480	08419480	08419480	08419480		
	UNITS	KZ-2	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0241	0.0342	0.00086	0.00197	0.00423	0.00010	8225433
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8225433
Dissolved Calcium (Ca)	mg/L	43.5	61.2	83.8	30.0	76.0	0.050	8224367
Dissolved Magnesium (Mg)	mg/L	6.69	7.76	9.98	3.30	17.8	0.050	8224367
Dissolved Potassium (K)	mg/L	2.34	1.93	1.28	2.48	1.57	0.050	8224367
Dissolved Sodium (Na)	mg/L	0.907	1.34	1.04	1.18	1.48	0.050	8224367
Dissolved Sulphur (S)	mg/L	16.9	11.5	13.5	4.6	11.9	3.0	8224367

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OI3670	OI3671	OI3672	OI3673	OI3674		
Sampling Date		2016/03/20 13:00	2016/03/20 14:25	2016/03/21 10:25	2016/03/20 10:25	2016/03/20 09:30		
COC Number		08419480	08419480	08419480	08419480	08419481		
	UNITS	KZ-16	KZ-17	KZ-19	KZ-21	KZ-22	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	292	262	<0.50	341	322	0.50	8223812
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8226582
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00263	0.00315	<0.00050	0.00200	0.00195	0.00050	8225433
Dissolved Antimony (Sb)	mg/L	0.000022	0.000029	<0.000020	0.000029	0.000031	0.000020	8225433
Dissolved Arsenic (As)	mg/L	0.000173	0.000333	<0.000020	0.000374	0.000553	0.000020	8225433
Dissolved Barium (Ba)	mg/L	0.102	0.102	0.000026	0.0842	0.0918	0.000020	8225433
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8225433
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8225433
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8225433
Dissolved Cadmium (Cd)	mg/L	0.0000330	0.0000370	<0.0000050	0.0000090	0.0000130	0.0000050	8225433
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8225433
Dissolved Cobalt (Co)	mg/L	0.0000480	0.0000200	<0.0000050	0.000189	0.0000940	0.0000050	8225433
Dissolved Copper (Cu)	mg/L	0.000188	0.000216	<0.000050	0.000163	0.000202	0.000050	8225433
Dissolved Iron (Fe)	mg/L	0.0034	0.0032	<0.0010	0.0068	0.0066	0.0010	8225433
Dissolved Lead (Pb)	mg/L	0.0000100	0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8225433
Dissolved Lithium (Li)	mg/L	0.00413	0.00393	<0.00050	0.0109	0.00754	0.00050	8225433
Dissolved Manganese (Mn)	mg/L	0.0207	0.0249	<0.000050	0.143	0.0631	0.000050	8225433
Dissolved Molybdenum (Mo)	mg/L	0.000410	0.00141	<0.000050	0.00167	0.00140	0.000050	8225433
Dissolved Nickel (Ni)	mg/L	0.000923	0.000826	<0.000020	0.00233	0.00134	0.000020	8225433
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0024	<0.0020	0.0033	0.0023	0.0020	8225433
Dissolved Selenium (Se)	mg/L	0.00161	0.00130	<0.000040	0.000493	0.00104	0.000040	8225433
Dissolved Silicon (Si)	mg/L	4.57	3.79	<0.050	6.76	4.98	0.050	8225433
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8225433
Dissolved Strontium (Sr)	mg/L	0.277	0.272	<0.000050	0.278	0.296	0.000050	8225433
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8225433
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8225433
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8225433
Dissolved Uranium (U)	mg/L	0.00264	0.00509	<0.0000020	0.00306	0.00406	0.0000020	8225433
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8225433

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OI3670	OI3671	OI3672	OI3673	OI3674		
Sampling Date		2016/03/20 13:00	2016/03/20 14:25	2016/03/21 10:25	2016/03/20 10:25	2016/03/20 09:30		
COC Number		08419480	08419480	08419480	08419480	08419481		
	UNITS	KZ-16	KZ-17	KZ-19	KZ-21	KZ-22	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00092	0.00393	0.00019	0.00084	0.00098	0.00010	8225433
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00018	<0.00010	0.00010	8225433
Dissolved Calcium (Ca)	mg/L	88.5	75.6	<0.050	84.6	84.3	0.050	8224367
Dissolved Magnesium (Mg)	mg/L	17.1	17.8	<0.050	31.4	27.2	0.050	8224367
Dissolved Potassium (K)	mg/L	1.50	1.63	<0.050	2.34	1.99	0.050	8224367
Dissolved Sodium (Na)	mg/L	1.47	1.52	<0.050	2.43	2.26	0.050	8224367
Dissolved Sulphur (S)	mg/L	12.4	11.6	<3.0	13.3	15.3	3.0	8224367
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OI3675	OI3676	OI3677		
Sampling Date		2016/03/19 14:30	2016/03/19 15:30	2016/03/22 13:20		
COC Number		08419481	08419481	08419481		
	UNITS	KZ-26	KZ-28	TRIP BLANK	RDL	QC Batch
Misc. Inorganics						
Dissolved Hardness (CaCO3)	mg/L	306	303	<0.50	0.50	8223812
Elements						
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8226582
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	0.00260	0.00168	<0.00050	0.00050	8225433
Dissolved Antimony (Sb)	mg/L	0.000066	0.000060	<0.000020	0.000020	8225433
Dissolved Arsenic (As)	mg/L	0.000411	0.000405	<0.000020	0.000020	8225433
Dissolved Barium (Ba)	mg/L	0.109	0.0964	<0.000020	0.000020	8225433
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8225433
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000050	<0.0000050	0.0000050	8225433
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	8225433
Dissolved Cadmium (Cd)	mg/L	0.0000080	0.0000090	<0.0000050	0.0000050	8225433
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8225433
Dissolved Cobalt (Co)	mg/L	0.0000100	0.0000110	<0.0000050	0.0000050	8225433
Dissolved Copper (Cu)	mg/L	0.000332	0.000299	<0.000050	0.000050	8225433
Dissolved Iron (Fe)	mg/L	0.0027	0.0025	<0.0010	0.0010	8225433
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000050	<0.0000050	0.0000050	8225433
Dissolved Lithium (Li)	mg/L	0.00832	0.00694	0.00053	0.00050	8225433
Dissolved Manganese (Mn)	mg/L	0.00130	0.00133	<0.000050	0.000050	8225433
Dissolved Molybdenum (Mo)	mg/L	0.00115	0.00101	<0.000050	0.000050	8225433
Dissolved Nickel (Ni)	mg/L	0.000621	0.000612	<0.000020	0.000020	8225433
Dissolved Phosphorus (P)	mg/L	0.0032	0.0028	<0.0020	0.0020	8225433
Dissolved Selenium (Se)	mg/L	0.000957	0.000940	<0.000040	0.000040	8225433
Dissolved Silicon (Si)	mg/L	4.69	4.75	<0.050	0.050	8225433
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8225433
Dissolved Strontium (Sr)	mg/L	0.279	0.277	<0.000050	0.000050	8225433
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8225433
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8225433
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8225433
Dissolved Uranium (U)	mg/L	0.00404	0.00374	<0.0000020	0.0000020	8225433
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8225433
RDL = Reportable Detection Limit						

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OI3675	OI3676	OI3677		
Sampling Date		2016/03/19 14:30	2016/03/19 15:30	2016/03/22 13:20		
COC Number		08419481	08419481	08419481		
	UNITS	KZ-26	KZ-28	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00033	0.00031	<0.00010	0.00010	8225433
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8225433
Dissolved Calcium (Ca)	mg/L	81.5	80.5	<0.050	0.050	8224367
Dissolved Magnesium (Mg)	mg/L	24.9	24.8	<0.050	0.050	8224367
Dissolved Potassium (K)	mg/L	1.74	1.70	<0.050	0.050	8224367
Dissolved Sodium (Na)	mg/L	2.15	2.18	<0.050	0.050	8224367
Dissolved Sulphur (S)	mg/L	14.4	14.6	<3.0	3.0	8224367
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OI3665	OI3666		OI3667		
Sampling Date		2016/03/20 18:36	2016/03/20 17:20		2016/03/20 15:45		
COC Number		08419480	08419480		08419480		
	UNITS	KZ-2	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	133	181	8223872	239	0.50	8223872
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8226970	<0.0000020	0.0000020	8226970
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00300	0.0198	8225448	0.00272	0.00050	8234133
Total Antimony (Sb)	mg/L	0.000025	0.000042	8225448	0.000020	0.000020	8225448
Total Arsenic (As)	mg/L	0.000076	0.000416	8225448	0.000117	0.000020	8225448
Total Barium (Ba)	mg/L	0.0774	0.115	8225448	0.180	0.000020	8225448
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	8225448	<0.000010	0.000010	8225448
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8225448	<0.0000050	0.0000050	8225448
Total Boron (B)	mg/L	<0.010	<0.010	8225448	<0.010	0.010	8225448
Total Cadmium (Cd)	mg/L	0.000198	0.000158	8225448	0.0000420	0.0000050	8225448
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	8225448	0.00021	0.00010	8225448
Total Cobalt (Co)	mg/L	0.0000080	0.000121	8225448	0.0000060	0.0000050	8225448
Total Copper (Cu)	mg/L	0.000427	0.000340	8225448	0.000069	0.000050	8225448
Total Iron (Fe)	mg/L	0.0018	0.678	8225448	0.0028	0.0010	8234133
Total Lead (Pb)	mg/L	0.0000210	0.000160	8225448	0.0000330	0.0000050	8225448
Total Lithium (Li)	mg/L	0.00191	0.00431	8225448	0.00197	0.00050	8225448
Total Manganese (Mn)	mg/L	<0.000050	0.0987	8225448	0.00198	0.000050	8225448
Total Molybdenum (Mo)	mg/L	0.000760	0.000749	8225448	0.00145	0.000050	8225448
Total Nickel (Ni)	mg/L	0.000254	0.000498	8225448	0.000102	0.000020	8225448
Total Phosphorus (P)	mg/L	0.0021	0.0063	8225448	<0.0020	0.0020	8225448
Total Selenium (Se)	mg/L	0.00219	0.000868	8225448	0.00307	0.000040	8225448
Total Silicon (Si)	mg/L	2.28	3.63	8225448	3.36	0.050	8225448
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	8225448	<0.0000050	0.0000050	8225448
Total Strontium (Sr)	mg/L	0.148	0.210	8225448	0.261	0.000050	8225448
Total Thallium (Tl)	mg/L	0.0000030	0.0000020	8225448	<0.0000020	0.0000020	8225448
Total Tin (Sn)	mg/L	<0.00020	<0.00020	8225448	<0.00020	0.00020	8225448
Total Titanium (Ti)	mg/L	<0.00050	0.00111	8225448	<0.00050	0.00050	8225448
Total Uranium (U)	mg/L	0.00493	0.00158	8225448	0.00313	0.0000020	8225448
Total Vanadium (V)	mg/L	<0.00020	<0.00020	8225448	<0.00020	0.00020	8225448
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OI3665	OI3666		OI3667		
Sampling Date		2016/03/20 18:36	2016/03/20 17:20		2016/03/20 15:45		
COC Number		08419480	08419480		08419480		
	UNITS	KZ-2	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0232	0.0497	8225448	0.00171	0.00010	8225448
Total Zirconium (Zr)	mg/L	<0.00010	0.00013	8225448	<0.00010	0.00010	8225448
Total Calcium (Ca)	mg/L	42.4	59.3	8224061	88.1	0.050	8224061
Total Magnesium (Mg)	mg/L	6.60	7.88	8224061	11.2	0.050	8224061
Total Potassium (K)	mg/L	2.33	1.89	8224061	1.40	0.050	8224061
Total Sodium (Na)	mg/L	0.929	1.36	8224061	1.20	0.050	8224061
Total Sulphur (S)	mg/L	17.0	11.9	8224061	16.6	3.0	8224061
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OI3668	OI3669	OI3670	OI3671		
Sampling Date		2016/03/21 08:15	2016/03/20 11:45	2016/03/20 13:00	2016/03/20 14:25		
COC Number		08419480	08419480	08419480	08419480		
	UNITS	KZ-13	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	91.8	266	273	273	0.50	8223872
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8226970
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0136	0.00909	0.00199	0.00829	0.00050	8225448
Total Antimony (Sb)	mg/L	<0.000020	0.000032	<0.000020	0.000032	0.000020	8225448
Total Arsenic (As)	mg/L	0.000193	0.000563	0.000180	0.000628	0.000020	8225448
Total Barium (Ba)	mg/L	0.153	0.0996	0.103	0.101	0.000020	8225448
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8225448
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8225448
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8225448
Total Cadmium (Cd)	mg/L	0.0000270	0.0000440	0.0000300	0.0000440	0.0000050	8225448
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8225448
Total Cobalt (Co)	mg/L	0.0000580	0.0000510	0.0000510	0.0000480	0.0000050	8225448
Total Copper (Cu)	mg/L	0.000269	0.000246	0.000184	0.000284	0.000050	8225448
Total Iron (Fe)	mg/L	0.221	0.105	0.0159	0.126	0.0010	8225448
Total Lead (Pb)	mg/L	0.0000230	0.0000330	<0.0000050	0.0000410	0.0000050	8225448
Total Lithium (Li)	mg/L	0.00157	0.00397	0.00419	0.00411	0.00050	8225448
Total Manganese (Mn)	mg/L	0.0945	0.0434	0.0213	0.0478	0.000050	8225448
Total Molybdenum (Mo)	mg/L	0.000755	0.00140	0.000422	0.00131	0.000050	8225448
Total Nickel (Ni)	mg/L	0.000345	0.000942	0.000928	0.000920	0.000020	8225448
Total Phosphorus (P)	mg/L	0.0034	0.0057	<0.0020	0.0075	0.0020	8225448
Total Selenium (Se)	mg/L	0.000328	0.00142	0.00151	0.00141	0.000040	8225448
Total Silicon (Si)	mg/L	3.57	3.72	3.74	3.75	0.050	8225448
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8225448
Total Strontium (Sr)	mg/L	0.0913	0.260	0.263	0.260	0.000050	8225448
Total Thallium (Tl)	mg/L	0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8225448
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8225448
Total Titanium (Ti)	mg/L	<0.00050	0.00051	<0.00050	0.00051	0.00050	8225448
Total Uranium (U)	mg/L	0.000783	0.00514	0.00283	0.00517	0.0000020	8225448
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8225448

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OI3668	OI3669	OI3670	OI3671		
Sampling Date		2016/03/21 08:15	2016/03/20 11:45	2016/03/20 13:00	2016/03/20 14:25		
COC Number		08419480	08419480	08419480	08419480		
	UNITS	KZ-13	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00255	0.00485	0.00080	0.00512	0.00010	8225448
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8225448
Total Calcium (Ca)	mg/L	31.4	77.6	80.5	80.3	0.050	8224061
Total Magnesium (Mg)	mg/L	3.23	17.5	17.5	17.6	0.050	8224061
Total Potassium (K)	mg/L	2.34	1.54	1.52	1.59	0.050	8224061
Total Sodium (Na)	mg/L	1.14	1.46	1.53	1.54	0.050	8224061
Total Sulphur (S)	mg/L	4.5	12.0	12.4	12.1	3.0	8224061
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OI3672		OI3673	OI3674	OI3675		
Sampling Date		2016/03/21 10:25		2016/03/20 10:25	2016/03/20 09:30	2016/03/19 14:30		
COC Number		08419480		08419480	08419481	08419481		
	UNITS	KZ-19	QC Batch	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	<0.50	8223872	340	316	376	0.50	8223872
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	8226970	<0.0000020	<0.0000020	<0.0000020	0.0000020	8226970
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	<0.00050	8225448	0.00784	0.00939	0.00821	0.00050	8225448
Total Antimony (Sb)	mg/L	<0.000020	8225448	0.000030	0.000036	0.000060	0.000020	8225448
Total Arsenic (As)	mg/L	<0.000020	8225448	0.00434	0.00364	0.000498	0.000020	8225448
Total Barium (Ba)	mg/L	<0.000020	8270237	0.0888	0.0940	0.0964	0.000020	8225448
Total Beryllium (Be)	mg/L	<0.000010	8225448	<0.000010	<0.000010	<0.000010	0.000010	8225448
Total Bismuth (Bi)	mg/L	<0.0000050	8225448	<0.0000050	<0.0000050	<0.0000050	0.0000050	8225448
Total Boron (B)	mg/L	<0.010	8225448	<0.010	<0.010	<0.010	0.010	8225448
Total Cadmium (Cd)	mg/L	<0.0000050	8225448	0.0000140	0.0000210	0.0000110	0.0000050	8225448
Total Chromium (Cr)	mg/L	<0.00010	8225448	<0.00010	<0.00010	<0.00010	0.00010	8225448
Total Cobalt (Co)	mg/L	<0.0000050	8225448	0.000276	0.000201	0.0000240	0.0000050	8225448
Total Copper (Cu)	mg/L	<0.000050	8225448	0.000204	0.000263	0.000339	0.000050	8225448
Total Iron (Fe)	mg/L	<0.0010	8225448	1.47	1.07	0.0694	0.0010	8225448
Total Lead (Pb)	mg/L	<0.0000050	8225448	0.0000240	0.0000360	0.0000210	0.0000050	8225448
Total Lithium (Li)	mg/L	<0.00050	8225448	0.0107	0.00756	0.00747	0.00050	8225448
Total Manganese (Mn)	mg/L	<0.000050	8225448	0.185	0.117	0.00710	0.000050	8225448
Total Molybdenum (Mo)	mg/L	<0.000050	8225448	0.00166	0.00132	0.00104	0.000050	8225448
Total Nickel (Ni)	mg/L	<0.000020	8225448	0.00256	0.00154	0.000698	0.000020	8225448
Total Phosphorus (P)	mg/L	0.0029	8225448	0.0291	0.0244	0.0030	0.0020	8225448
Total Selenium (Se)	mg/L	<0.000040	8225448	0.000512	0.00106	0.00133	0.000040	8225448
Total Silicon (Si)	mg/L	<0.050	8225448	6.71	5.20	4.43	0.050	8225448
Total Silver (Ag)	mg/L	<0.0000050	8225448	<0.0000050	<0.0000050	<0.0000050	0.0000050	8225448
Total Strontium (Sr)	mg/L	<0.000050	8225448	0.280	0.273	0.270	0.000050	8225448
Total Thallium (Tl)	mg/L	<0.0000020	8225448	<0.0000020	<0.0000020	<0.0000020	0.0000020	8225448
Total Tin (Sn)	mg/L	<0.00020	8225448	<0.00020	<0.00020	<0.00020	0.00020	8225448
Total Titanium (Ti)	mg/L	<0.00050	8225448	0.00057	0.00052	<0.00050	0.00050	8225448
Total Uranium (U)	mg/L	<0.0000020	8225448	0.00316	0.00435	0.00376	0.0000020	8225448
Total Vanadium (V)	mg/L	<0.00020	8225448	<0.00020	<0.00020	<0.00020	0.00020	8225448
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OI3672		OI3673	OI3674	OI3675		
Sampling Date		2016/03/21 10:25		2016/03/20 10:25	2016/03/20 09:30	2016/03/19 14:30		
COC Number		08419480		08419480	08419481	08419481		
	UNITS	KZ-19	QC Batch	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00020	8225448	0.00137	0.00175	0.00053	0.00010	8225448
Total Zirconium (Zr)	mg/L	<0.00010	8225448	0.00036	0.00019	<0.00010	0.00010	8225448
Total Calcium (Ca)	mg/L	<0.050	8224061	84.4	83.7	109	0.050	8224061
Total Magnesium (Mg)	mg/L	<0.050	8224061	31.4	26.0	25.3	0.050	8224061
Total Potassium (K)	mg/L	<0.050	8224061	2.34	1.94	1.73	0.050	8224061
Total Sodium (Na)	mg/L	<0.050	8224061	2.59	2.16	2.23	0.050	8224061
Total Sulphur (S)	mg/L	<3.0	8224061	13.3	15.4	15.6	3.0	8224061
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OI3676	OI3677		
Sampling Date		2016/03/19 15:30	2016/03/22 13:20		
COC Number		08419481	08419481		
	UNITS	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters					
Total Hardness (CaCO3)	mg/L	300	<0.50	0.50	8223872
Elements					
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8226970
Total Metals by ICPMS					
Total Aluminum (Al)	mg/L	0.00478	<0.00050	0.00050	8225448
Total Antimony (Sb)	mg/L	0.000062	<0.000020	0.000020	8225448
Total Arsenic (As)	mg/L	0.000469	<0.000020	0.000020	8225448
Total Barium (Ba)	mg/L	0.0929	<0.000020	0.000020	8225448
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	8225448
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	0.0000050	8225448
Total Boron (B)	mg/L	<0.010	<0.010	0.010	8225448
Total Cadmium (Cd)	mg/L	0.0000090	<0.0000050	0.0000050	8225448
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00010	8225448
Total Cobalt (Co)	mg/L	0.0000180	<0.0000050	0.0000050	8225448
Total Copper (Cu)	mg/L	0.000303	<0.000050	0.000050	8225448
Total Iron (Fe)	mg/L	0.0527	<0.0010	0.0010	8225448
Total Lead (Pb)	mg/L	0.0000260	<0.0000050	0.0000050	8225448
Total Lithium (Li)	mg/L	0.00737	<0.00050	0.00050	8225448
Total Manganese (Mn)	mg/L	0.00795	<0.000050	0.000050	8225448
Total Molybdenum (Mo)	mg/L	0.00101	<0.000050	0.000050	8225448
Total Nickel (Ni)	mg/L	0.000648	<0.000020	0.000020	8225448
Total Phosphorus (P)	mg/L	0.0037	<0.0020	0.0020	8225448
Total Selenium (Se)	mg/L	0.00101	<0.000040	0.000040	8225448
Total Silicon (Si)	mg/L	4.51	<0.050	0.050	8225448
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	0.0000050	8225448
Total Strontium (Sr)	mg/L	0.257	<0.000050	0.000050	8225448
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	8225448
Total Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8225448
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00050	8225448
Total Uranium (U)	mg/L	0.00372	<0.0000020	0.0000020	8225448
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00020	8225448
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OI3676	OI3677		
Sampling Date		2016/03/19 15:30	2016/03/22 13:20		
COC Number		08419481	08419481		
	UNITS	KZ-28	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00042	<0.00010	0.00010	8225448
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8225448
Total Calcium (Ca)	mg/L	80.9	<0.050	0.050	8224061
Total Magnesium (Mg)	mg/L	23.9	<0.050	0.050	8224061
Total Potassium (K)	mg/L	1.62	<0.050	0.050	8224061
Total Sodium (Na)	mg/L	2.13	<0.050	0.050	8224061
Total Sulphur (S)	mg/L	14.8	<3.0	3.0	8224061
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3665
Sample ID: KZ-2
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Name Redacted
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	
Colour (True) by Kone Lab	KONE	8226019	N/A	2016/03/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	
Ion Balance	CALC	8224539	N/A	2016/03/29	
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	
pH Water	AT/ALK	8224990	N/A	2016/03/24	
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	

Maxxam ID: OI3665 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3666
Sample ID: KZ-7
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Name Redacted
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	
Colour (True) by Kone Lab	KONE	8226019	N/A	2016/03/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	
Ion Balance	CALC	8224539	N/A	2016/03/29	
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	
pH Water	AT/ALK	8224990	N/A	2016/03/24	
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	

Maxxam ID: OI3667
Sample ID: KZ-9
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Name Redacted
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	
Colour (True) by Kone Lab	KONE	8226019	N/A	2016/03/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3667
Sample ID: KZ-9
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	Name Redacted
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	
Ion Balance	CALC	8224539	N/A	2016/03/29	
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8234133	N/A	2016/04/06	
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	
pH Water	AT/ALK	8224990	N/A	2016/03/24	
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	

Maxxam ID: OI3668
Sample ID: KZ-13
Matrix: Water

Collected: 2016/03/21
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Name Redacted
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	
Chloride by Automated Colourimetry	KONE/COL	8226478	N/A	2016/03/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	
Colour (True) by Kone Lab	KONE	8226019	N/A	2016/03/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	
Fluoride	ISE/ISE	8225583	N/A	2016/03/24	
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	
Ion Balance	CALC	8224539	N/A	2016/03/29	
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3668
Sample ID: KZ-13
Matrix: Water

Collected: 2016/03/21
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	Name Redacted
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	
pH Water	AT/ALK	8224990	N/A	2016/03/24	
Sulphate by Automated Colourimetry	KONE/COL	8226516	N/A	2016/03/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8229431	2016/03/30	2016/03/30	
Total Phosphorus - unpreserved	KONE/COL	8229432	N/A	2016/03/30	
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	

Maxxam ID: OI3668 Dup
Sample ID: KZ-13
Matrix: Water

Collected: 2016/03/21
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8226478	N/A	2016/03/24	Name Redacted
Sulphate by Automated Colourimetry	KONE/COL	8226516	N/A	2016/03/24	

Maxxam ID: OI3669
Sample ID: KZ-15
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Name Redacted
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	
Colour (True) by Kone Lab	KONE	8226020	N/A	2016/03/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8228331	N/A	2016/03/29	
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	
Ion Balance	CALC	8224539	N/A	2016/03/29	
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3669
Sample ID: KZ-15
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	
pH Water	AT/ALK	8224990	N/A	2016/03/24	
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	

Maxxam ID: OI3669 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Colour (True) by Kone Lab	KONE	8226020	N/A	2016/03/24	Name

Maxxam ID: OI3670
Sample ID: KZ-16
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Name Redacted
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	
Colour (True) by Kone Lab	KONE	8226019	N/A	2016/03/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	
Ion Balance	CALC	8224539	N/A	2016/03/29	
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3670
Sample ID: KZ-16
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	Name Redacted
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	
pH Water	AT/ALK	8224990	N/A	2016/03/24	
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	

Maxxam ID: OI3671
Sample ID: KZ-17
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Name Redacted
Alkalinity - Water	AT/ALK	8224998	2016/03/24	2016/03/24	
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	
Colour (True) by Kone Lab	KONE	8226020	N/A	2016/03/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	
Conductance - water	AT/ALK	8224997	N/A	2016/03/24	
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	
Ion Balance	CALC	8224539	N/A	2016/03/29	
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	
pH Water	AT/ALK	8224996	N/A	2016/03/24	
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3672 **Collected:** 2016/03/21
Sample ID: KZ-19 **Shipped:**
Matrix: Water **Received:** 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Name Redacted
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	
Colour (True) by Kone Lab	KONE	8226019	N/A	2016/03/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	
Ion Balance	CALC	8224539	N/A	2016/03/29	
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/28	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/28	
Ammonia-N (Unpreserved)	KONE/COL	8230249	N/A	2016/03/31	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	
pH Water	AT/ALK	8224990	N/A	2016/03/24	
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	

Maxxam ID: OI3672 Dup **Collected:** 2016/03/21
Sample ID: KZ-19 **Shipped:**
Matrix: Water **Received:** 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	Name
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	Redacted

Maxxam ID: OI3673 **Collected:** 2016/03/20
Sample ID: KZ-21 **Shipped:**
Matrix: Water **Received:** 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3673
Sample ID: KZ-21
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	Name Redacted
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	
Colour (True) by Kone Lab	KONE	8226019	N/A	2016/03/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	
Ion Balance	CALC	8224539	N/A	2016/03/29	
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	
pH Water	AT/ALK	8224990	N/A	2016/03/24	
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	

Maxxam ID: OI3673 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	Name Redacted

Maxxam ID: OI3674
Sample ID: KZ-22
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Name Redacted
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	
Chloride by Automated Colourimetry	KONE/COL	8226478	N/A	2016/03/24	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3674
Sample ID: KZ-22
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	
Colour (True) by Kone Lab	KONE	8226019	N/A	2016/03/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	
Fluoride	ISE/ISE	8225583	N/A	2016/03/24	
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	
Ion Balance	CALC	8224539	N/A	2016/03/29	
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	
pH Water	AT/ALK	8224990	N/A	2016/03/24	
Sulphate by Automated Colourimetry	KONE/COL	8226516	N/A	2016/03/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	

Maxxam ID: OI3674 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2016/03/20
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8225583	N/A	2016/03/24	Name Redacted

Maxxam ID: OI3675
Sample ID: KZ-26
Matrix: Water

Collected: 2016/03/19
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Name Redacted
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3675
Sample ID: KZ-26
Matrix: Water

Collected: 2016/03/19
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Colour (True) by Kone Lab	KONE	8226020	N/A	2016/03/24	Name Redacted
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	
Ion Balance	CALC	8224539	N/A	2016/03/29	
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	
pH Water	AT/ALK	8224990	N/A	2016/03/24	
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	

Maxxam ID: OI3676
Sample ID: KZ-28
Matrix: Water

Collected: 2016/03/19
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Name Redacted
Alkalinity - Water	AT/ALK	8224988	2016/03/24	2016/03/24	
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	
Colour (True) by Kone Lab	KONE	8226019	N/A	2016/03/24	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8227122	N/A	2016/03/28	
Conductance - water	AT/ALK	8224989	N/A	2016/03/24	
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	
Ion Balance	CALC	8224539	N/A	2016/03/29	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3676
Sample ID: KZ-28
Matrix: Water

Collected: 2016/03/19
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	Name Redacted
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	
Ammonia-N (Unpreserved)	KONE/COL	8227234	N/A	2016/03/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	
Filter and HNO3 Preserve for Metals	ICP	8224944	N/A	2016/03/24	
pH Water	AT/ALK	8224990	N/A	2016/03/24	
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	
Total Phosphorus - unpreserved	KONE/COL	8226203	N/A	2016/03/26	
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	

Maxxam ID: OI3677
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/03/22
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8225498	N/A	2016/03/24	Name Redacted
Alkalinity - Water	AT/ALK	8224998	2016/03/24	2016/03/24	
Chloride by Automated Colourimetry	KONE/COL	8226475	N/A	2016/03/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8226581	N/A	2016/03/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8226583	N/A	2016/03/28	
Colour (True) by Kone Lab	KONE	8226020	N/A	2016/03/24	
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8227119	N/A	2016/03/28	
Conductance - water	AT/ALK	8224997	N/A	2016/03/24	
Fluoride	ISE/ISE	8225545	N/A	2016/03/24	
Hardness Total (calculated as CaCO3)	CALC	8223872	N/A	2016/03/29	
Hardness (calculated as CaCO3)	CALC	8223812	N/A	2016/03/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	
Mercury (Total-LowLevel) by CVAF	CV/AF	8226970	2016/03/28	2016/03/28	
Ion Balance	CALC	8224539	N/A	2016/03/29	
Sum of cations, anions	CALC	8224540	N/A	2016/03/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8224367	N/A	2016/03/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8225433	N/A	2016/03/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8224061	N/A	2016/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8225448	N/A	2016/03/25	
Ammonia-N (Unpreserved)	KONE/COL	8230249	N/A	2016/03/31	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8226051	N/A	2016/03/24	
Nitrite (N) (low level)	TRAA/COL	8226052	N/A	2016/03/24	
Nitrogen - Nitrate (as N)	CALC	8224034	N/A	2016/03/29	

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

TEST SUMMARY

Maxxam ID: OI3677
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/03/22
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH Water	AT/ALK	8224996	N/A	2016/03/24	Name Redacted
Sulphate by Automated Colourimetry	KONE/COL	8226476	N/A	2016/03/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8226199	2016/03/26	2016/03/26	
Total Phosphorus - unpreserved	KONE/COL	8230309	N/A	2016/03/31	
Total Suspended Solids-Low Level	BAL/BAL	8225029	2016/03/24	2016/03/28	

Maxxam ID: OI3677 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/03/22
Shipped:
Received: 2016/03/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8226582	N/A	2016/03/28	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.0°C
Package 2	1.0°C
Package 3	1.0°C

Revised report V2 (2016/04/06): Due to client request, samples were reanalyzed for Total Iron. Corrected values for sample OI3667 are included in this report (MM4).

Revised report V3 (2016/04/06): Due to client request, samples were reanalyzed for Total Aluminum. Corrected values for sample OI3667 are included in this report (MM4).

Revised report V4 (2016/05/19): Due to client request, samples were reanalyzed for Total Barium. Corrected values for sample OI3672 are included in this report (MM4).

Sample OI3677-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].
Sample OI3667, Elements by ICPMS Low Level (total): Test repeated.
Sample OI3672, Elements by ICPMS Low Level (total): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8224988	Alkalinity (PP as CaCO3)	2016/03/24					<0.50	mg/L	NC	20
8224988	Alkalinity (Total as CaCO3)	2016/03/24	100	80 - 120	95	80 - 120	0.84, RDL=0.50	mg/L	NC	20
8224988	Bicarbonate (HCO3)	2016/03/24					1.02, RDL=0.50	mg/L	NC	20
8224988	Carbonate (CO3)	2016/03/24					<0.50	mg/L	NC	20
8224988	Hydroxide (OH)	2016/03/24					<0.50	mg/L	NC	20
8224989	Conductivity	2016/03/24			100	80 - 120	1.5, RDL=1.0	uS/cm	NC	20
8224990	pH	2016/03/24			101	97 - 103			2.0	N/A
8224996	pH	2016/03/24			101	97 - 103			0.38	N/A
8224997	Conductivity	2016/03/24			100	80 - 120	<1.0	uS/cm	1.6	20
8224998	Alkalinity (PP as CaCO3)	2016/03/24					<0.50	mg/L	NC	20
8224998	Alkalinity (Total as CaCO3)	2016/03/24	NC	80 - 120	108	80 - 120	0.62, RDL=0.50	mg/L	2.0	20
8224998	Bicarbonate (HCO3)	2016/03/24					0.76, RDL=0.50	mg/L	2.0	20
8224998	Carbonate (CO3)	2016/03/24					<0.50	mg/L	NC	20
8224998	Hydroxide (OH)	2016/03/24					<0.50	mg/L	NC	20
8225029	Total Suspended Solids	2016/03/28			98	80 - 120	<1.0	mg/L		
8225433	Dissolved Aluminum (Al)	2016/03/25	96	80 - 120	96	80 - 120	<0.00050	mg/L	0.85	20
8225433	Dissolved Antimony (Sb)	2016/03/25	102	80 - 120	94	80 - 120	<0.000020	mg/L	NC	20
8225433	Dissolved Arsenic (As)	2016/03/25	101	80 - 120	96	80 - 120	<0.000020	mg/L	NC	20
8225433	Dissolved Barium (Ba)	2016/03/25	NC	80 - 120	111	80 - 120	<0.000020	mg/L	2.0	20
8225433	Dissolved Beryllium (Be)	2016/03/25	99	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
8225433	Dissolved Bismuth (Bi)	2016/03/25	94	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8225433	Dissolved Boron (B)	2016/03/25	98	80 - 120	98	80 - 120	<0.010	mg/L	NC	20
8225433	Dissolved Cadmium (Cd)	2016/03/25	97	80 - 120	101	80 - 120	<0.0000050	mg/L	2.0	20
8225433	Dissolved Chromium (Cr)	2016/03/25	97	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8225433	Dissolved Cobalt (Co)	2016/03/25	95	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8225433	Dissolved Copper (Cu)	2016/03/25	93	80 - 120	98	80 - 120	<0.000050	mg/L	1.5	20
8225433	Dissolved Iron (Fe)	2016/03/25	95	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
8225433	Dissolved Lead (Pb)	2016/03/25	100	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8225433	Dissolved Lithium (Li)	2016/03/25	96	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8225433	Dissolved Manganese (Mn)	2016/03/25	96	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8225433	Dissolved Molybdenum (Mo)	2016/03/25	NC	80 - 120	96	80 - 120	<0.000050	mg/L	0	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8225433	Dissolved Nickel (Ni)	2016/03/25	94	80 - 120	98	80 - 120	<0.000020	mg/L	1.2	20
8225433	Dissolved Phosphorus (P)	2016/03/25					0.0023, RDL=0.0020	mg/L	NC	20
8225433	Dissolved Selenium (Se)	2016/03/25	99	80 - 120	93	80 - 120	<0.000040	mg/L	0.37	20
8225433	Dissolved Silicon (Si)	2016/03/25					<0.050	mg/L	2.3	20
8225433	Dissolved Silver (Ag)	2016/03/25	86	80 - 120	94	80 - 120	<0.0000050	mg/L	NC	20
8225433	Dissolved Strontium (Sr)	2016/03/25	NC	80 - 120	97	80 - 120	<0.000050	mg/L	0.038	20
8225433	Dissolved Thallium (Tl)	2016/03/25	103	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8225433	Dissolved Tin (Sn)	2016/03/25	99	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
8225433	Dissolved Titanium (Ti)	2016/03/25	92	80 - 120	91	80 - 120	<0.00050	mg/L	NC	20
8225433	Dissolved Uranium (U)	2016/03/25	97	80 - 120	96	80 - 120	<0.0000020	mg/L	0.77	20
8225433	Dissolved Vanadium (V)	2016/03/25	97	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
8225433	Dissolved Zinc (Zn)	2016/03/25	NC	80 - 120	96	80 - 120	<0.00010	mg/L	0.48	20
8225433	Dissolved Zirconium (Zr)	2016/03/25					<0.00010	mg/L	NC	20
8225448	Total Aluminum (Al)	2016/03/25	94	80 - 120	103	80 - 120	<0.00050	mg/L	2.4	20
8225448	Total Antimony (Sb)	2016/03/25	96	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8225448	Total Arsenic (As)	2016/03/25	96	80 - 120	96	80 - 120	<0.000020	mg/L	NC	20
8225448	Total Barium (Ba)	2016/03/25	NC	80 - 120	102	80 - 120	<0.000020	mg/L	0.28	20
8225448	Total Beryllium (Be)	2016/03/25	93	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8225448	Total Bismuth (Bi)	2016/03/25	93	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8225448	Total Boron (B)	2016/03/25	94	80 - 120	97	80 - 120	<0.010	mg/L	NC	20
8225448	Total Cadmium (Cd)	2016/03/25	94	80 - 120	98	80 - 120	<0.0000050	mg/L	5.2	20
8225448	Total Chromium (Cr)	2016/03/25	94	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8225448	Total Cobalt (Co)	2016/03/25	94	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8225448	Total Copper (Cu)	2016/03/25	89	80 - 120	100	80 - 120	<0.000050	mg/L	0.23	20
8225448	Total Iron (Fe)	2016/03/25	93	80 - 120	98	80 - 120	<0.0010	mg/L	NC	20
8225448	Total Lead (Pb)	2016/03/25	98	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8225448	Total Lithium (Li)	2016/03/25	85	80 - 120	94	80 - 120	<0.00050	mg/L	NC	20
8225448	Total Manganese (Mn)	2016/03/25	93	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8225448	Total Molybdenum (Mo)	2016/03/25	NC	80 - 120	95	80 - 120	<0.000050	mg/L	0	20
8225448	Total Nickel (Ni)	2016/03/25	91	80 - 120	99	80 - 120	<0.000020	mg/L	5.0	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8225448	Total Phosphorus (P)	2016/03/25					<0.0020	mg/L	NC	20
8225448	Total Selenium (Se)	2016/03/25	91	80 - 120	90	80 - 120	<0.000040	mg/L	0.23	20
8225448	Total Silicon (Si)	2016/03/25					<0.050	mg/L	2.2	20
8225448	Total Silver (Ag)	2016/03/25	91	80 - 120	85	80 - 120	<0.0000050	mg/L	NC	20
8225448	Total Strontium (Sr)	2016/03/25	NC	80 - 120	99	80 - 120	<0.000050	mg/L	2.2	20
8225448	Total Thallium (Tl)	2016/03/25	93	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8225448	Total Tin (Sn)	2016/03/25	96	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8225448	Total Titanium (Ti)	2016/03/25	94	80 - 120	93	80 - 120	<0.00050	mg/L	NC	20
8225448	Total Uranium (U)	2016/03/25	101	80 - 120	100	80 - 120	<0.0000020	mg/L	4.6	20
8225448	Total Vanadium (V)	2016/03/25	97	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
8225448	Total Zinc (Zn)	2016/03/25	NC	80 - 120	98	80 - 120	<0.00010	mg/L	1.5	20
8225448	Total Zirconium (Zr)	2016/03/25					<0.00010	mg/L	NC	20
8225498	Acidity (pH 4.5)	2016/03/24					<0.50	mg/L	NC	20
8225498	Acidity (pH 8.3)	2016/03/24			98	80 - 120	<0.50	mg/L	NC	20
8225545	Fluoride (F)	2016/03/24	95	80 - 120	96	80 - 120	<0.010	mg/L	NC	20
8225583	Fluoride (F)	2016/03/24	92	80 - 120	94	80 - 120	<0.010	mg/L	0	20
8226019	True Colour	2016/03/24			109	80 - 120	<5.0	Col. Unit	1.6	20
8226020	True Colour	2016/03/24			112	80 - 120	<5.0	Col. Unit	NC	20
8226051	Nitrate plus Nitrite (N)	2016/03/24	105	80 - 120	99	80 - 120	<0.0020	mg/L	NC	25
8226052	Nitrite (N)	2016/03/24	99	80 - 120	97	80 - 120	<0.0020	mg/L	NC	25
8226199	Dissolved Phosphorus (P)	2016/03/26	84	80 - 120	105	80 - 120	<0.0020	mg/L	13	20
8226203	Total Phosphorus (P)	2016/03/26	82	80 - 120	102	80 - 120	0.0020, RDL=0.0020	mg/L	NC	20
8226475	Dissolved Chloride (Cl)	2016/03/24	108	80 - 120	97	80 - 120	<0.50	mg/L	NC	20
8226476	Dissolved Sulphate (SO4)	2016/03/24	102	80 - 120	91	80 - 120	<0.50	mg/L	NC	20
8226478	Dissolved Chloride (Cl)	2016/03/24	104	80 - 120	98	80 - 120	<0.50	mg/L	NC	20
8226516	Dissolved Sulphate (SO4)	2016/03/24	NC	80 - 120	93	80 - 120	<0.50	mg/L	9.6	20
8226581	Strong Acid Dissoc. Cyanide (CN)	2016/03/28	101	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8226582	Dissolved Mercury (Hg)	2016/03/28	105	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8226583	Weak Acid Dissoc. Cyanide (CN)	2016/03/28	99	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8226970	Total Mercury (Hg)	2016/03/28	100	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8227119	Dissolved Organic Carbon (C)	2016/03/28	112	80 - 120	107	80 - 120	<0.50	mg/L	NC	20
8227122	Dissolved Organic Carbon (C)	2016/03/28	103	80 - 120	108	80 - 120	<0.50	mg/L	NC	20
8227234	Total Ammonia (N)	2016/03/28	NC	80 - 120	102	80 - 120	<0.0050	mg/L	0.48	20
8228331	Dissolved Organic Carbon (C)	2016/03/29	NC	80 - 120	110	80 - 120	<0.50	mg/L	1.7	20
8229431	Dissolved Phosphorus (P)	2016/03/30	NC	80 - 120	108	80 - 120	<0.0020	mg/L	0.26	20
8229432	Total Phosphorus (P)	2016/03/30			108	80 - 120	<0.0020	mg/L		
8230249	Total Ammonia (N)	2016/03/31	NC	80 - 120	99	80 - 120	<0.0050	mg/L	1.4	20
8230309	Total Phosphorus (P)	2016/03/31			95	80 - 120	<0.0020	mg/L		
8234133	Total Aluminum (Al)	2016/04/06	96	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8234133	Total Iron (Fe)	2016/04/06	95	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
8270237	Total Barium (Ba)	2016/05/16	NC	80 - 120	103	80 - 120	<0.000020	mg/L	0.19	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B621867
Report Date: 2016/05/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AB

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Andy Lu, Ph.D., P.Chem., Scientific Specialist

Signature Redacted

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Signature Redacted

Rob Reinert, B.Sc., Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC # 08419480

BBY FCD-

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Requi
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most a
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RU
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be ap
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

Rush Confirmation #:

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		20-Mar-16	18:36	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
3	KZ-7		20-Mar-16	17:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
4	KZ-9		20-Mar-16	15:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
5	KZ-13		21-Mar-16	8:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
6	KZ-15		20-Mar-16	11:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
7	KZ-16		20-Mar-16	13:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
8	KZ-17		20-Mar-16	14:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
9	KZ-19		21-Mar-16	10:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
10	KZ-21		20-Mar-16	10:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	

LABORATORY USE ONL

CUSTODY SEAL Present	CUSTODY SEAL Intact	COC TEMPER
Y	Y	
Y	Y	
Y	Y	

COOLING MEDIA PRESENT (Y)

B621867_COC

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	22/03/2016	13:30	Signature Redacted	2016/03/23	12:45	B621867

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC 08419481

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (whe		nd Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Andrew MacPhail	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

Rush Confirmation #:

LABORATORY USE ONLY

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	CUSTODY SEAL Present	CUSTODY SEAL Intact	COOLER TEMPERATURES	COMMENTS
1	KZ-22		20-Mar-16	9:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		Y	Y	1 1 1	
2	KZ-26		19-Mar-16	14:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		Y	Y	1 1 1	
3	KZ-28		19-Mar-16	15:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		Y	Y	1 1 1	
4	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12					
5																											
6																											
7																											
8																											
9																											
10																											

B621867_COC

RECEIVED IN WHITEHORSE
BY: Stevens @1320
2016 -03- 22
TEMP: 0 / 1 / 2→cooler 1
1 / 5 / 2→cooler 2

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	22/03/2016	13:30	Signature Redacted	2016/03/23	12:45	

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08420290, 08420291

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2016/04/27
Report #: R2166370
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B629952
Received: 2016/04/20, 15:00

Sample Matrix: Water
Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	9	N/A	2016/04/22	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	8	2016/04/22	2016/04/22	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	1	2016/04/22	2016/04/23	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	9	N/A	2016/04/22	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	9	N/A	2016/04/25	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	9	N/A	2016/04/25	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	8	N/A	2016/04/22	BBY6SOP-00057	SM 22 2120 C m
Colour (True) by Kone Lab	1	N/A	2016/04/27	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	9	N/A	2016/04/22	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	8	N/A	2016/04/22	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	1	N/A	2016/04/23	BBY6SOP-00026	SM 22 2510 B m
Fluoride	8	N/A	2016/04/22	BBY6SOP-00048	SM 22 4500-F C m
Fluoride	1	N/A	2016/04/27	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	3	N/A	2016/04/26	BBY7SOP-00002	EPA 6020a R1 m
Hardness Total (calculated as CaCO3)	6	N/A	2016/04/27	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	9	N/A	2016/04/26	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	9	N/A	2016/04/25	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	9	2016/04/25	2016/04/25	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	9	N/A	2016/04/26	BBY WI-00033	SM 22 1030E
Sum of cations, anions	9	N/A	2016/04/26	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	9	N/A	2016/04/26	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	9	N/A	2016/04/26	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Digested LL (total)	3	2016/04/22	2016/04/26	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Digested LL (total)	4	2016/04/25	2016/04/26	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	3	N/A	2016/04/26	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	6	N/A	2016/04/27	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	2	N/A	2016/04/26	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	8	N/A	2016/04/25	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Unpreserved)	1	N/A	2016/04/26	BBY6SOP-00009	SM 22 4500-NH3- G m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08420290, 08420291

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2016/04/27
Report #: R2166370
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B629952
Received: 2016/04/20, 15:00

Sample Matrix: Water
Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrate+Nitrite (N) (low level)	8	N/A	2016/04/22	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrate+Nitrite (N) (low level)	1	N/A	2016/04/26	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	8	N/A	2016/04/22	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	1	N/A	2016/04/26	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	8	N/A	2016/04/26	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	1	N/A	2016/04/27	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	9	N/A	2016/04/22	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	8	N/A	2016/04/22	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (2)	1	N/A	2016/04/23	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	9	N/A	2016/04/22	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	9	2016/04/22	2016/04/22	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	9	N/A	2016/04/22	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	9	2016/04/25	2016/04/26	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OM4605	OM4606	OM4607	OM4608	OM4609		
Sampling Date		2016/04/20 08:15	2016/04/20 08:50	2016/04/20 10:30	2016/04/20 11:20	2016/04/20 08:50		
COC Number		08420290	08420290	08420290	08420290	08420290		
	UNITS	KZ-13	KZ-15	KZ-16	KZ-17	KZ-19	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.2	5.1	5.6	5.0	0.020	N/A	8249010
Cation Sum	meq/L	2.5	5.8	6.3	5.4	0.0024	N/A	8249010
Filter and HNO3 Preservation	N/A	LAB	LAB	LAB	LAB	LAB	N/A	8249308
Ion Balance	N/A	1.1	1.1	1.1	1.1	0.12	0.010	8248420
Nitrate (N)	mg/L	0.0808	0.145	0.182	0.148	<0.0020	0.0020	8248315
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8251169
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8251174
Fluoride (F)	mg/L	0.053	0.110	0.086	0.120	0.013	0.010	8250598
Dissolved Organic Carbon (C)	mg/L	3.74	1.50	1.46	1.60	0.60	0.50	8249937
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8249888
Alkalinity (Total as CaCO3)	mg/L	94.5	220	237	215	0.94	0.50	8249660
Acidity (pH 8.3)	mg/L	<0.50	1.18	3.12	1.46	<0.50	0.50	8249888
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8249660
Bicarbonate (HCO3)	mg/L	115	269	289	262	1.15	0.50	8249660
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8249660
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8249660
Anions								
Dissolved Sulphate (SO4)	mg/L	14.5	34.0	36.8	33.2	<0.50	0.50	8249901
Dissolved Chloride (Cl)	mg/L	<0.50	0.62	2.3	0.55	<0.50	0.50	8249894
MISCELLANEOUS								
True Colour	Col. Unit	14.6	<5.0	<5.0	5.7	<5.0	5.0	8250078
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0052	0.0043	0.0035	0.0054	<0.0020	0.0020	8250164
Total Ammonia (N)	mg/L	0.0124 (1)	0.0065 (1)	0.0120 (1)	0.0166 (1)	0.0165 (1)	0.0050	8251506
Nitrate plus Nitrite (N)	mg/L	0.0808	0.145	0.182	0.148	<0.0020	0.0020	8250297
Nitrite (N)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8250298
Total Phosphorus (P)	mg/L	0.0062	0.0044	0.0026	0.0049	<0.0020	0.0020	8250165
Physical Properties								
Conductivity	uS/cm	211	462	494	452	1.2	1.0	8249667

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OM4605	OM4606	OM4607	OM4608	OM4609		
Sampling Date		2016/04/20 08:15	2016/04/20 08:50	2016/04/20 10:30	2016/04/20 11:20	2016/04/20 08:50		
COC Number		08420290	08420290	08420290	08420290	08420290		
	UNITS	**KZ-13**	**KZ-15**	**KZ-16**	**KZ-17**	**KZ-19**	**RDL**	**QC Batch**
pH	pH	8.07	8.17	8.08	8.16	5.92		8249668
Physical Properties								
Total Suspended Solids	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	1.0	8250744
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OM4610		OM4611	OM4612	OM4613		
Sampling Date		2016/04/19 15:30		2016/04/19 14:00	2016/04/19 11:40	2016/04/19 12:30		
COC Number		08420290		08420291	08420291	08420291		
	UNITS	KZ-21	QC Batch	KZ-22	KZ-26	KZ-28	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	4.8	8249010	5.1	5.1	5.1	N/A	8249010
Cation Sum	meq/L	5.5	8249010	5.7	5.9	6.1	N/A	8249010
Filter and HNO3 Preservation	N/A	LAB	8249308	LAB	LAB	LAB	N/A	8249308
Ion Balance	N/A	1.1	8248420	1.1	1.1	1.2	0.010	8248420
Nitrate (N)	mg/L	0.0615	8248315	0.0913	0.115	0.118	0.0020	8248315
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00066	8251169	0.00055	0.00059	<0.00050	0.00050	8251169
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8251174	<0.00050	0.00052	<0.00050	0.00050	8251174
Fluoride (F)	mg/L	0.180	8253852	0.150	0.120	0.120	0.010	8250598
Dissolved Organic Carbon (C)	mg/L	6.21	8249937	4.36	4.79	4.66	0.50	8249937
Acidity (pH 4.5)	mg/L	<0.50	8249917	<0.50	<0.50	<0.50	0.50	8249888
Alkalinity (Total as CaCO3)	mg/L	199	8249683	213	214	216	0.50	8249660
Acidity (pH 8.3)	mg/L	0.53	8249917	0.96	<0.50	<0.50	0.50	8249888
Alkalinity (PP as CaCO3)	mg/L	<0.50	8249683	<0.50	2.89	2.58	0.50	8249660
Bicarbonate (HCO3)	mg/L	243	8249683	260	254	257	0.50	8249660
Carbonate (CO3)	mg/L	<0.50	8249683	<0.50	3.47	3.10	0.50	8249660
Hydroxide (OH)	mg/L	<0.50	8249683	<0.50	<0.50	<0.50	0.50	8249660
Anions								
Dissolved Sulphate (SO4)	mg/L	38.5	8249901	40.1	39.8	38.7	0.50	8249901
Dissolved Chloride (Cl)	mg/L	0.63	8249894	0.68	0.57	0.61	0.50	8249894
MISCELLANEOUS								
True Colour	Col. Unit	31.4 (1)	8254062	21.0	20.4	20.2	5.0	8250078
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0254	8250164	0.0160	0.0082	0.0088	0.0020	8250164
Total Ammonia (N)	mg/L	0.0172 (1)	8252906	0.0105 (2)	<0.0050 (2)	<0.0050 (2)	0.0050	8251506
Nitrate plus Nitrite (N)	mg/L	0.0670 (1)	8253389	0.0913	0.115	0.118	0.0020	8250297
Nitrite (N)	mg/L	0.0055 (1)	8253390	<0.0020	<0.0020	<0.0020	0.0020	8250298
Total Phosphorus (P)	mg/L	0.0245	8250165	0.0163	0.0075	0.0082	0.0020	8250165
Physical Properties								
Conductivity	uS/cm	437	8249686	459	459	456	1.0	8249667

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.
(2) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OM4610		OM4611	OM4612	OM4613		
Sampling Date		2016/04/19 15:30		2016/04/19 14:00	2016/04/19 11:40	2016/04/19 12:30		
COC Number		08420290		08420291	08420291	08420291		
	UNITS	**KZ-21**	**QC Batch**	**KZ-22**	**KZ-26**	**KZ-28**	**RDL**	**QC Batch**
pH	pH	8.14	8249688	8.18	8.35	8.34		8249668
Physical Properties								
Total Suspended Solids	mg/L	3.2	8250744	1.6	1.6	1.3	1.0	8250744
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OM4605	OM4606	OM4607	OM4608	OM4609		
Sampling Date		2016/04/20 08:15	2016/04/20 08:50	2016/04/20 10:30	2016/04/20 11:20	2016/04/20 08:50		
COC Number		08420290	08420290	08420290	08420290	08420290		
	UNITS	KZ-13	KZ-15	KZ-16	KZ-17	KZ-19	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	116	286	308	264	<0.50	0.50	8248339
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8251076
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00688	0.00124	0.00083	0.00120	<0.00050	0.00050	8249542
Dissolved Antimony (Sb)	mg/L	0.000032	0.000033	0.000027	0.000041	<0.000020	0.000020	8249542
Dissolved Arsenic (As)	mg/L	0.000196	0.000500	0.000218	0.000507	<0.000020	0.000020	8249542
Dissolved Barium (Ba)	mg/L	0.126	0.101	0.103	0.0843	0.000217	0.000020	8249542
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8249542
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	0.0000050	8249542
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8249542
Dissolved Cadmium (Cd)	mg/L	0.0000200	0.0000310	0.0000240	0.0000350	<0.0000050	0.0000050	8249542
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8249542
Dissolved Cobalt (Co)	mg/L	0.0000240	0.0000210	0.0000280	0.0000170	<0.0000050	0.0000050	8249542
Dissolved Copper (Cu)	mg/L	0.000439	0.000311	0.000236	0.000287	<0.000050	0.000050	8249542
Dissolved Iron (Fe)	mg/L	0.0677	0.0165	0.0040	0.0216	<0.0010	0.0010	8249542
Dissolved Lead (Pb)	mg/L	0.0000060	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8249542
Dissolved Lithium (Li)	mg/L	0.00233	0.00418	0.00444	0.00418	<0.00050	0.00050	8249542
Dissolved Manganese (Mn)	mg/L	0.0298	0.0185	0.0148	0.0220	<0.000050	0.000050	8249542
Dissolved Molybdenum (Mo)	mg/L	0.000770	0.00157	0.000568	0.00192	<0.000050	0.000050	8249542
Dissolved Nickel (Ni)	mg/L	0.000455	0.000899	0.000951	0.000829	<0.000020	0.000020	8249542
Dissolved Phosphorus (P)	mg/L	0.0069	0.0035	0.0041	0.0100	0.0043	0.0020	8249542
Dissolved Selenium (Se)	mg/L	0.000274	0.00119	0.00127	0.00126	<0.000040	0.000040	8249542
Dissolved Silicon (Si)	mg/L	5.03	4.32	4.54	4.43	<0.050	0.050	8249542
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8249542
Dissolved Strontium (Sr)	mg/L	0.121	0.302	0.320	0.263	0.000134	0.000050	8249542
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8249542
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8249542
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8249542
Dissolved Uranium (U)	mg/L	0.00200	0.00549	0.00336	0.00567	0.0000140	0.0000020	8249542
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8249542
Dissolved Zinc (Zn)	mg/L	0.00183	0.00329	0.00096	0.00364	<0.00010	0.00010	8249542

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OM4605	OM4606	OM4607	OM4608	OM4609		
Sampling Date		2016/04/20 08:15	2016/04/20 08:50	2016/04/20 10:30	2016/04/20 11:20	2016/04/20 08:50		
COC Number		08420290	08420290	08420290	08420290	08420290		
	UNITS	KZ-13	KZ-15	KZ-16	KZ-17	KZ-19	RDL	QC Batch
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8249542
Dissolved Calcium (Ca)	mg/L	39.1	83.4	90.5	76.0	<0.050	0.050	8248340
Dissolved Magnesium (Mg)	mg/L	4.45	18.8	19.8	18.0	<0.050	0.050	8248340
Dissolved Potassium (K)	mg/L	2.92	1.81	1.67	1.63	<0.050	0.050	8248340
Dissolved Sodium (Na)	mg/L	1.37	1.72	1.72	1.55	<0.050	0.050	8248340
Dissolved Sulphur (S)	mg/L	5.0	11.2	12.5	12.1	<3.0	3.0	8248340
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OM4610	OM4611	OM4612	OM4613		
Sampling Date		2016/04/19 15:30	2016/04/19 14:00	2016/04/19 11:40	2016/04/19 12:30		
COC Number		08420290	08420291	08420291	08420291		
	UNITS	KZ-21	KZ-22	KZ-26	KZ-28	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	267	279	288	299	0.50	8248339
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8251076
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00234	0.00186	0.00186	0.00175	0.00050	8249542
Dissolved Antimony (Sb)	mg/L	0.000090	0.000066	0.000064	0.000070	0.000020	8249542
Dissolved Arsenic (As)	mg/L	0.00183	0.00145	0.000860	0.000865	0.000020	8249542
Dissolved Barium (Ba)	mg/L	0.0644	0.0716	0.0823	0.0844	0.000020	8249542
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8249542
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8249542
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8249542
Dissolved Cadmium (Cd)	mg/L	0.0000160	0.0000120	0.0000140	0.0000130	0.0000050	8249542
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8249542
Dissolved Cobalt (Co)	mg/L	0.000158	0.000117	0.0000280	0.0000280	0.0000050	8249542
Dissolved Copper (Cu)	mg/L	0.000391	0.000353	0.000525	0.000527	0.000050	8249542
Dissolved Iron (Fe)	mg/L	0.316	0.194	0.0866	0.0924	0.0010	8249542
Dissolved Lead (Pb)	mg/L	0.0000070	<0.0000050	<0.0000050	<0.0000050	0.0000050	8249542
Dissolved Lithium (Li)	mg/L	0.00560	0.00493	0.00627	0.00629	0.00050	8249542
Dissolved Manganese (Mn)	mg/L	0.113	0.0669	0.00822	0.00819	0.000050	8249542
Dissolved Molybdenum (Mo)	mg/L	0.00176	0.00156	0.00118	0.00118	0.000050	8249542
Dissolved Nickel (Ni)	mg/L	0.00278	0.00178	0.00124	0.00126	0.000020	8249542
Dissolved Phosphorus (P)	mg/L	0.0169	0.0151	0.0091	0.0078	0.0020	8249542
Dissolved Selenium (Se)	mg/L	0.000361	0.000704	0.000664	0.000640	0.000040	8249542
Dissolved Silicon (Si)	mg/L	5.38	5.09	5.07	5.19	0.050	8249542
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8249542
Dissolved Strontium (Sr)	mg/L	0.220	0.239	0.273	0.275	0.000050	8249542
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8249542
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8249542
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8249542
Dissolved Uranium (U)	mg/L	0.00281	0.00357	0.00354	0.00352	0.0000020	8249542
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8249542
Dissolved Zinc (Zn)	mg/L	0.00134	0.00109	0.00059	0.00060	0.00010	8249542
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OM4610	OM4611	OM4612	OM4613		
Sampling Date		2016/04/19 15:30	2016/04/19 14:00	2016/04/19 11:40	2016/04/19 12:30		
COC Number		08420290	08420291	08420291	08420291		
	UNITS	KZ-21	KZ-22	KZ-26	KZ-28	RDL	QC Batch
Dissolved Zirconium (Zr)	mg/L	0.00013	<0.00010	0.00010	<0.00010	0.00010	8249542
Dissolved Calcium (Ca)	mg/L	65.5	73.3	75.2	78.5	0.050	8248340
Dissolved Magnesium (Mg)	mg/L	25.1	23.3	24.3	25.0	0.050	8248340
Dissolved Potassium (K)	mg/L	2.50	2.05	2.02	2.05	0.050	8248340
Dissolved Sodium (Na)	mg/L	1.86	1.81	2.07	2.10	0.050	8248340
Dissolved Sulphur (S)	mg/L	14.3	15.3	13.2	13.8	3.0	8248340
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OM4607	OM4609		
Sampling Date		2016/04/20 10:30	2016/04/20 08:50		
COC Number		08420290	08420290		
	UNITS	KZ-16	KZ-19	RDL	QC Batch
Calculated Parameters					
Total Hardness (CaCO3)	mg/L	249	<0.50	0.50	8248121
Elements					
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8251300
Total Metals by ICPMS					
Total Aluminum (Al)	mg/L	0.00145	<0.00050	0.00050	8248894
Total Antimony (Sb)	mg/L	<0.000020	<0.000020	0.000020	8248894
Total Arsenic (As)	mg/L	0.000253	<0.000020	0.000020	8248894
Total Barium (Ba)	mg/L	0.0838	0.000025	0.000020	8248894
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	8248894
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	0.0000050	8248894
Total Boron (B)	mg/L	<0.010	<0.010	0.010	8248894
Total Cadmium (Cd)	mg/L	0.0000230	<0.0000050	0.0000050	8248894
Total Chromium (Cr)	mg/L	0.00014	<0.00010	0.00010	8248894
Total Cobalt (Co)	mg/L	0.0000350	<0.0000050	0.0000050	8248894
Total Copper (Cu)	mg/L	0.000252	0.000058	0.000050	8248894
Total Iron (Fe)	mg/L	0.0257	<0.0010	0.0010	8248894
Total Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000050	8248894
Total Lithium (Li)	mg/L	0.00359	<0.00050	0.00050	8248894
Total Manganese (Mn)	mg/L	0.0137	<0.000050	0.000050	8248894
Total Molybdenum (Mo)	mg/L	0.000449	<0.000050	0.000050	8248894
Total Nickel (Ni)	mg/L	0.000927	<0.000020	0.000020	8248894
Total Phosphorus (P)	mg/L	<0.0020	<0.0020	0.0020	8248894
Total Selenium (Se)	mg/L	0.00109	<0.000040	0.000040	8248894
Total Silicon (Si)	mg/L	3.68	<0.050	0.050	8248894
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	0.0000050	8248894
Total Strontium (Sr)	mg/L	0.260	<0.000050	0.000050	8248894
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	8248894
Total Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8248894
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00050	8248894
Total Uranium (U)	mg/L	0.00261	0.0000090	0.0000020	8248894
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00020	8248894
Total Zinc (Zn)	mg/L	0.00071	<0.00010	0.00010	8248894
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OM4607	OM4609		
Sampling Date		2016/04/20 10:30	2016/04/20 08:50		
COC Number		08420290	08420290		
	UNITS	KZ-16	KZ-19	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8248894
Total Calcium (Ca)	mg/L	72.8	<0.050	0.050	8248369
Total Magnesium (Mg)	mg/L	16.4	<0.050	0.050	8248369
Total Potassium (K)	mg/L	1.42	<0.050	0.050	8248369
Total Sodium (Na)	mg/L	1.42	<0.050	0.050	8248369
Total Sulphur (S)	mg/L	10.2	<3.0	3.0	8248369
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OM4605	OM4606	OM4608		OM4610		
Sampling Date		2016/04/20 08:15	2016/04/20 08:50	2016/04/20 11:20		2016/04/19 15:30		
COC Number		08420290	08420290	08420290		08420290		
	UNITS	KZ-13	KZ-15	KZ-17	QC Batch	KZ-21	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	91.0	238	255	8248121	205	0.50	8249009
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8251300	<0.0000020	0.0000020	8251300
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0072	0.0050	0.0049	8251717	0.0086	0.0030	8251717
Total Antimony (Sb)	mg/L	<0.000050	<0.000050	<0.000050	8251717	0.000071	0.000050	8251717
Total Arsenic (As)	mg/L	0.000151	0.000554	0.000711	8251717	0.00339	0.000020	8251717
Total Barium (Ba)	mg/L	0.0949	0.0832	0.0820	8251717	0.0544	0.00010	8251717
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8251717	<0.000010	0.000010	8251717
Total Bismuth (Bi)	mg/L	<0.000020	<0.000020	<0.000020	8251717	<0.000020	0.000020	8251717
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	8251717	<0.050	0.050	8251717
Total Cadmium (Cd)	mg/L	0.0000210	0.0000360	0.000112	8251717	0.0000210	0.0000050	8251717
Total Chromium (Cr)	mg/L	<0.00050	<0.00050	<0.00050	8251717	<0.00050	0.00050	8251717
Total Cobalt (Co)	mg/L	0.000024	0.000028	0.000033	8251717	0.000185	0.000010	8251717
Total Copper (Cu)	mg/L	0.00056	0.00043	0.00055	8251717	0.00046	0.00020	8251717
Total Iron (Fe)	mg/L	0.0823	0.0710	0.109	8251717	0.830	0.0050	8251717
Total Lead (Pb)	mg/L	<0.000050	<0.000050	<0.000050	8251717	<0.000050	0.000050	8251717
Total Lithium (Li)	mg/L	0.00214	0.00450	0.00432	8251717	0.00445	0.00050	8251717
Total Manganese (Mn)	mg/L	0.0246	0.0234	0.0336	8251717	0.110	0.00010	8251717
Total Molybdenum (Mo)	mg/L	0.000664	0.00148	0.00183	8251717	0.00158	0.000050	8251717
Total Nickel (Ni)	mg/L	0.00037	0.00086	0.00097	8251717	0.00235	0.00010	8251717
Total Phosphorus (P)	mg/L	<0.010	<0.010	<0.010	8251717	0.028	0.010	8251717
Total Selenium (Se)	mg/L	0.000252	0.00115	0.00122	8251717	0.000307	0.000040	8251717
Total Silicon (Si)	mg/L	4.21	4.05	4.15	8251717	4.63	0.10	8251717
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8251717	<0.0000050	0.0000050	8251717
Total Strontium (Sr)	mg/L	0.0889	0.243	0.239	8251717	0.164	0.000050	8251717
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8251717	<0.0000020	0.0000020	8251717
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8251717	<0.00020	0.00020	8251717
Total Titanium (Ti)	mg/L	<0.0050	<0.0050	<0.0050	8251717	<0.0050	0.0050	8251717
Total Uranium (U)	mg/L	0.00154	0.00477	0.00557	8251717	0.00237	0.0000050	8251717
Total Vanadium (V)	mg/L	<0.00050	<0.00050	<0.00050	8251717	<0.00050	0.00050	8251717
Total Zinc (Zn)	mg/L	0.0018	0.0038	0.0047	8251717	0.0019	0.0010	8251717

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OM4605	OM4606	OM4608		OM4610		
Sampling Date		2016/04/20 08:15	2016/04/20 08:50	2016/04/20 11:20		2016/04/19 15:30		
COC Number		08420290	08420290	08420290		08420290		
	UNITS	KZ-13	KZ-15	KZ-17	QC Batch	KZ-21	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8251717	0.00014	0.00010	8251717
Total Calcium (Ca)	mg/L	30.8	69.2	73.8	8248369	50.7	0.25	8248369
Total Magnesium (Mg)	mg/L	3.43	15.8	17.1	8248369	19.1	0.25	8248369
Total Potassium (K)	mg/L	2.19	1.48	1.57	8248369	1.81	0.25	8248369
Total Sodium (Na)	mg/L	1.02	1.39	1.45	8248369	1.30	0.25	8248369
Total Sulphur (S)	mg/L	<15	<15	<15	8248369	<15	15	8248369

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OM4611	OM4612	OM4613		
Sampling Date		2016/04/19 14:00	2016/04/19 11:40	2016/04/19 12:30		
COC Number		08420291	08420291	08420291		
	UNITS	KZ-22	KZ-26	KZ-28	RDL	QC Batch
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	259	246	245	0.50	8249009
Elements						
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8251300
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.0060	0.0078	0.0053	0.0030	8249850
Total Antimony (Sb)	mg/L	0.000064	0.000067	0.000060	0.000050	8249850
Total Arsenic (As)	mg/L	0.00225	0.00104	0.00101	0.000020	8249850
Total Barium (Ba)	mg/L	0.0679	0.0728	0.0681	0.00010	8249850
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8249850
Total Bismuth (Bi)	mg/L	<0.000020	<0.000020	<0.000020	0.000020	8249850
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	0.050	8249850
Total Cadmium (Cd)	mg/L	0.0000210	0.0000190	0.0000180	0.0000050	8249850
Total Chromium (Cr)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8249850
Total Cobalt (Co)	mg/L	0.000132	0.000038	0.000030	0.000010	8249850
Total Copper (Cu)	mg/L	0.00058	0.00063	0.00066	0.00020	8249850
Total Iron (Fe)	mg/L	0.456	0.198	0.175	0.0050	8249850
Total Lead (Pb)	mg/L	<0.000050	<0.000050	<0.000050	0.000050	8249850
Total Lithium (Li)	mg/L	0.00468	0.00544	0.00505	0.00050	8249850
Total Manganese (Mn)	mg/L	0.0741	0.0125	0.0100	0.00010	8249850
Total Molybdenum (Mo)	mg/L	0.00154	0.00114	0.00110	0.000050	8249850
Total Nickel (Ni)	mg/L	0.00190	0.00114	0.00108	0.00010	8249850
Total Phosphorus (P)	mg/L	0.017	0.012	<0.010	0.010	8249850
Total Selenium (Se)	mg/L	0.000661	0.000649	0.000626	0.000040	8249850
Total Silicon (Si)	mg/L	4.77	4.53	4.31	0.10	8249850
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8249850
Total Strontium (Sr)	mg/L	0.220	0.222	0.214	0.000050	8249850
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8249850
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8249850
Total Titanium (Ti)	mg/L	<0.0050	<0.0050	<0.0050	0.0050	8249850
Total Uranium (U)	mg/L	0.00345	0.00309	0.00306	0.0000050	8249850
Total Vanadium (V)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8249850
Total Zinc (Zn)	mg/L	0.0015	<0.0010	<0.0010	0.0010	8249850
RDL = Reportable Detection Limit						

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OM4611	OM4612	OM4613		
Sampling Date		2016/04/19 14:00	2016/04/19 11:40	2016/04/19 12:30		
COC Number		08420291	08420291	08420291		
	UNITS	KZ-22	KZ-26	KZ-28	RDL	QC Batch
Total Zirconium (Zr)	mg/L	0.00012	<0.00010	0.00013	0.00010	8249850
Total Calcium (Ca)	mg/L	66.6	63.7	63.7	0.25	8248369
Total Magnesium (Mg)	mg/L	22.5	21.1	20.8	0.25	8248369
Total Potassium (K)	mg/L	1.95	1.68	1.61	0.25	8248369
Total Sodium (Na)	mg/L	1.79	1.83	1.79	0.25	8248369
Total Sulphur (S)	mg/L	16	<15	<15	15	8248369
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OM4605
Sample ID: KZ-13
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8249888	N/A	2016/04/22	Name Redacted
Alkalinity - Water	AT/ALK	8249660	2016/04/22	2016/04/22	
Chloride by Automated Colourimetry	KONE/COL	8249894	N/A	2016/04/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	
Colour (True) by Kone Lab	KONE	8250078	N/A	2016/04/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8249937	N/A	2016/04/22	
Conductance - water	AT/ALK	8249667	N/A	2016/04/22	
Fluoride	ISE/ISE	8250598	N/A	2016/04/22	
Hardness Total (calculated as CaCO3)	CALC	8248121	N/A	2016/04/27	
Hardness (calculated as CaCO3)	CALC	8248339	N/A	2016/04/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251076	N/A	2016/04/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8251300	2016/04/25	2016/04/25	
Ion Balance	CALC	8248420	N/A	2016/04/26	
Sum of cations, anions	CALC	8249010	N/A	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8248340	N/A	2016/04/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8249542	N/A	2016/04/26	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8251717	2016/04/25	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8248369	N/A	2016/04/27	
Ammonia-N (Unpreserved)	KONE/COL	8251506	N/A	2016/04/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250297	N/A	2016/04/22	
Nitrite (N) (low level)	TRAA/COL	8250298	N/A	2016/04/22	
Nitrogen - Nitrate (as N)	CALC	8248315	N/A	2016/04/26	
Filter and HNO3 Preserve for Metals	ICP	8249308	N/A	2016/04/22	
pH Water	AT/ALK	8249668	N/A	2016/04/22	
Sulphate by Automated Colourimetry	KONE/COL	8249901	N/A	2016/04/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8250164	2016/04/22	2016/04/22	
Total Phosphorus - unpreserved	KONE/COL	8250165	N/A	2016/04/22	
Total Suspended Solids-Low Level	BAL/BAL	8250744	2016/04/25	2016/04/26	

Maxxam ID: OM4605 Dup
Sample ID: KZ-13
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8249542	N/A	2016/04/26	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8251717	2016/04/25	2016/04/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OM4606
Sample ID: KZ-15
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8249888	N/A	2016/04/22	Name Redacted
Alkalinity - Water	AT/ALK	8249660	2016/04/22	2016/04/22	
Chloride by Automated Colourimetry	KONE/COL	8249894	N/A	2016/04/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	
Colour (True) by Kone Lab	KONE	8250078	N/A	2016/04/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8249937	N/A	2016/04/22	
Conductance - water	AT/ALK	8249667	N/A	2016/04/22	
Fluoride	ISE/ISE	8250598	N/A	2016/04/22	
Hardness Total (calculated as CaCO3)	CALC	8248121	N/A	2016/04/27	
Hardness (calculated as CaCO3)	CALC	8248339	N/A	2016/04/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251076	N/A	2016/04/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8251300	2016/04/25	2016/04/25	
Ion Balance	CALC	8248420	N/A	2016/04/26	
Sum of cations, anions	CALC	8249010	N/A	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8248340	N/A	2016/04/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8249542	N/A	2016/04/26	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8251717	2016/04/25	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8248369	N/A	2016/04/27	
Ammonia-N (Unpreserved)	KONE/COL	8251506	N/A	2016/04/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250297	N/A	2016/04/22	
Nitrite (N) (low level)	TRAA/COL	8250298	N/A	2016/04/22	
Nitrogen - Nitrate (as N)	CALC	8248315	N/A	2016/04/26	
Filter and HNO3 Preserve for Metals	ICP	8249308	N/A	2016/04/22	
pH Water	AT/ALK	8249668	N/A	2016/04/22	
Sulphate by Automated Colourimetry	KONE/COL	8249901	N/A	2016/04/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8250164	2016/04/22	2016/04/22	
Total Phosphorus - unpreserved	KONE/COL	8250165	N/A	2016/04/22	
Total Suspended Solids-Low Level	BAL/BAL	8250744	2016/04/25	2016/04/26	

Maxxam ID: OM4607
Sample ID: KZ-16
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8249888	N/A	2016/04/22	Name Redacted
Alkalinity - Water	AT/ALK	8249660	2016/04/22	2016/04/22	
Chloride by Automated Colourimetry	KONE/COL	8249894	N/A	2016/04/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	
Colour (True) by Kone Lab	KONE	8250078	N/A	2016/04/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8249937	N/A	2016/04/22	
Conductance - water	AT/ALK	8249667	N/A	2016/04/22	
Fluoride	ISE/ISE	8250598	N/A	2016/04/22	
Hardness Total (calculated as CaCO3)	CALC	8248121	N/A	2016/04/27	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OM4607
Sample ID: KZ-16
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8248339	N/A	2016/04/26	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251076	N/A	2016/04/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8251300	2016/04/25	2016/04/25	
Ion Balance	CALC	8248420	N/A	2016/04/26	
Sum of cations, anions	CALC	8249010	N/A	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8248340	N/A	2016/04/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8249542	N/A	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8248369	N/A	2016/04/27	
Elements by ICPMS Low Level (total)	ICP/CRCM	8248894	N/A	2016/04/26	
Ammonia-N (Unpreserved)	KONE/COL	8251506	N/A	2016/04/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250297	N/A	2016/04/22	
Nitrite (N) (low level)	TRAA/COL	8250298	N/A	2016/04/22	
Nitrogen - Nitrate (as N)	CALC	8248315	N/A	2016/04/26	
Filter and HNO3 Preserve for Metals	ICP	8249308	N/A	2016/04/22	
pH Water	AT/ALK	8249668	N/A	2016/04/22	
Sulphate by Automated Colourimetry	KONE/COL	8249901	N/A	2016/04/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8250164	2016/04/22	2016/04/22	
Total Phosphorus - unpreserved	KONE/COL	8250165	N/A	2016/04/22	
Total Suspended Solids-Low Level	BAL/BAL	8250744	2016/04/25	2016/04/26	

Maxxam ID: OM4607 Dup
Sample ID: KZ-16
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8249894	N/A	2016/04/22	Name Redacted
Sulphate by Automated Colourimetry	KONE/COL	8249901	N/A	2016/04/22	

Maxxam ID: OM4608
Sample ID: KZ-17
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8249888	N/A	2016/04/22	Name Redacted
Alkalinity - Water	AT/ALK	8249660	2016/04/22	2016/04/22	
Chloride by Automated Colourimetry	KONE/COL	8249894	N/A	2016/04/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	
Colour (True) by Kone Lab	KONE	8250078	N/A	2016/04/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8249937	N/A	2016/04/22	
Conductance - water	AT/ALK	8249667	N/A	2016/04/22	
Fluoride	ISE/ISE	8250598	N/A	2016/04/22	
Hardness Total (calculated as CaCO3)	CALC	8248121	N/A	2016/04/27	
Hardness (calculated as CaCO3)	CALC	8248339	N/A	2016/04/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251076	N/A	2016/04/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OM4608
Sample ID: KZ-17
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8251300	2016/04/25	2016/04/25	Name Redacted
Ion Balance	CALC	8248420	N/A	2016/04/26	
Sum of cations, anions	CALC	8249010	N/A	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8248340	N/A	2016/04/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8249542	N/A	2016/04/26	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8251717	2016/04/25	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8248369	N/A	2016/04/27	
Ammonia-N (Unpreserved)	KONE/COL	8251506	N/A	2016/04/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250297	N/A	2016/04/22	
Nitrite (N) (low level)	TRAA/COL	8250298	N/A	2016/04/22	
Nitrogen - Nitrate (as N)	CALC	8248315	N/A	2016/04/26	
Filter and HNO3 Preserve for Metals	ICP	8249308	N/A	2016/04/22	
pH Water	AT/ALK	8249668	N/A	2016/04/22	
Sulphate by Automated Colourimetry	KONE/COL	8249901	N/A	2016/04/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8250164	2016/04/22	2016/04/22	
Total Phosphorus - unpreserved	KONE/COL	8250165	N/A	2016/04/22	
Total Suspended Solids-Low Level	BAL/BAL	8250744	2016/04/25	2016/04/26	

Maxxam ID: OM4609
Sample ID: KZ-19
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8249888	N/A	2016/04/22	Name Redacted
Alkalinity - Water	AT/ALK	8249660	2016/04/22	2016/04/22	
Chloride by Automated Colourimetry	KONE/COL	8249894	N/A	2016/04/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	
Colour (True) by Kone Lab	KONE	8250078	N/A	2016/04/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8249937	N/A	2016/04/22	
Conductance - water	AT/ALK	8249667	N/A	2016/04/22	
Fluoride	ISE/ISE	8250598	N/A	2016/04/22	
Hardness Total (calculated as CaCO3)	CALC	8248121	N/A	2016/04/27	
Hardness (calculated as CaCO3)	CALC	8248339	N/A	2016/04/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251076	N/A	2016/04/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8251300	2016/04/25	2016/04/25	
Ion Balance	CALC	8248420	N/A	2016/04/26	
Sum of cations, anions	CALC	8249010	N/A	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8248340	N/A	2016/04/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8249542	N/A	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8248369	N/A	2016/04/27	
Elements by ICPMS Low Level (total)	ICP/CRCM	8248894	N/A	2016/04/26	
Ammonia-N (Unpreserved)	KONE/COL	8251506	N/A	2016/04/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250297	N/A	2016/04/22	
Nitrite (N) (low level)	TRAA/COL	8250298	N/A	2016/04/22	

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OM4609
Sample ID: KZ-19
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8248315	N/A	2016/04/26	Name Redacted
Filter and HNO3 Preserve for Metals	ICP	8249308	N/A	2016/04/22	
pH Water	AT/ALK	8249668	N/A	2016/04/22	
Sulphate by Automated Colourimetry	KONE/COL	8249901	N/A	2016/04/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8250164	2016/04/22	2016/04/22	
Total Phosphorus - unpreserved	KONE/COL	8250165	N/A	2016/04/22	
Total Suspended Solids-Low Level	BAL/BAL	8250744	2016/04/25	2016/04/26	

Maxxam ID: OM4610
Sample ID: KZ-21
Matrix: Water

Collected: 2016/04/19
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8249917	N/A	2016/04/22	Name Redacted
Alkalinity - Water	AT/ALK	8249683	2016/04/22	2016/04/23	
Chloride by Automated Colourimetry	KONE/COL	8249894	N/A	2016/04/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	
Colour (True) by Kone Lab	KONE	8254062	N/A	2016/04/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8249937	N/A	2016/04/22	
Conductance - water	AT/ALK	8249686	N/A	2016/04/23	
Fluoride	ISE/ISE	8253852	N/A	2016/04/27	
Hardness Total (calculated as CaCO3)	CALC	8249009	N/A	2016/04/27	
Hardness (calculated as CaCO3)	CALC	8248339	N/A	2016/04/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251076	N/A	2016/04/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8251300	2016/04/25	2016/04/25	
Ion Balance	CALC	8248420	N/A	2016/04/26	
Sum of cations, anions	CALC	8249010	N/A	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8248340	N/A	2016/04/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8249542	N/A	2016/04/26	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8251717	2016/04/25	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8248369	N/A	2016/04/27	
Ammonia-N (Unpreserved)	KONE/COL	8252906	N/A	2016/04/26	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8253389	N/A	2016/04/26	
Nitrite (N) (low level)	TRAA/COL	8253390	N/A	2016/04/26	
Nitrogen - Nitrate (as N)	CALC	8248315	N/A	2016/04/27	
Filter and HNO3 Preserve for Metals	ICP	8249308	N/A	2016/04/22	
pH Water	AT/ALK	8249688	N/A	2016/04/23	
Sulphate by Automated Colourimetry	KONE/COL	8249901	N/A	2016/04/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8250164	2016/04/22	2016/04/22	
Total Phosphorus - unpreserved	KONE/COL	8250165	N/A	2016/04/22	
Total Suspended Solids-Low Level	BAL/BAL	8250744	2016/04/25	2016/04/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OM4610 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2016/04/19
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8253852	N/A	2016/04/27	Name Redacted
Ammonia-N (Unpreserved)	KONE/COL	8252906	N/A	2016/04/26	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8253389	N/A	2016/04/26	
Nitrite (N) (low level)	TRAA/COL	8253390	N/A	2016/04/26	

Maxxam ID: OM4611
Sample ID: KZ-22
Matrix: Water

Collected: 2016/04/19
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8249888	N/A	2016/04/22	Name Redacted
Alkalinity - Water	AT/ALK	8249660	2016/04/22	2016/04/22	
Chloride by Automated Colourimetry	KONE/COL	8249894	N/A	2016/04/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	
Colour (True) by Kone Lab	KONE	8250078	N/A	2016/04/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8249937	N/A	2016/04/22	
Conductance - water	AT/ALK	8249667	N/A	2016/04/22	
Fluoride	ISE/ISE	8250598	N/A	2016/04/22	
Hardness Total (calculated as CaCO3)	CALC	8249009	N/A	2016/04/26	
Hardness (calculated as CaCO3)	CALC	8248339	N/A	2016/04/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251076	N/A	2016/04/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8251300	2016/04/25	2016/04/25	
Ion Balance	CALC	8248420	N/A	2016/04/26	
Sum of cations, anions	CALC	8249010	N/A	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8248340	N/A	2016/04/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8249542	N/A	2016/04/26	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8249850	2016/04/22	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8248369	N/A	2016/04/26	
Ammonia-N (Unpreserved)	KONE/COL	8251506	N/A	2016/04/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250297	N/A	2016/04/22	
Nitrite (N) (low level)	TRAA/COL	8250298	N/A	2016/04/22	
Nitrogen - Nitrate (as N)	CALC	8248315	N/A	2016/04/26	
Filter and HNO3 Preserve for Metals	ICP	8249308	N/A	2016/04/22	
pH Water	AT/ALK	8249668	N/A	2016/04/22	
Sulphate by Automated Colourimetry	KONE/COL	8249901	N/A	2016/04/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8250164	2016/04/22	2016/04/22	
Total Phosphorus - unpreserved	KONE/COL	8250165	N/A	2016/04/22	
Total Suspended Solids-Low Level	BAL/BAL	8250744	2016/04/25	2016/04/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OM4612
Sample ID: KZ-26
Matrix: Water

Collected: 2016/04/19
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8249888	N/A	2016/04/22	Name Redacted
Alkalinity - Water	AT/ALK	8249660	2016/04/22	2016/04/22	
Chloride by Automated Colourimetry	KONE/COL	8249894	N/A	2016/04/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	
Colour (True) by Kone Lab	KONE	8250078	N/A	2016/04/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8249937	N/A	2016/04/22	
Conductance - water	AT/ALK	8249667	N/A	2016/04/22	
Fluoride	ISE/ISE	8250598	N/A	2016/04/22	
Hardness Total (calculated as CaCO3)	CALC	8249009	N/A	2016/04/26	
Hardness (calculated as CaCO3)	CALC	8248339	N/A	2016/04/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251076	N/A	2016/04/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8251300	2016/04/25	2016/04/25	
Ion Balance	CALC	8248420	N/A	2016/04/26	
Sum of cations, anions	CALC	8249010	N/A	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8248340	N/A	2016/04/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8249542	N/A	2016/04/26	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8249850	2016/04/22	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8248369	N/A	2016/04/26	
Ammonia-N (Unpreserved)	KONE/COL	8251506	N/A	2016/04/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250297	N/A	2016/04/22	
Nitrite (N) (low level)	TRAA/COL	8250298	N/A	2016/04/22	
Nitrogen - Nitrate (as N)	CALC	8248315	N/A	2016/04/26	
Filter and HNO3 Preserve for Metals	ICP	8249308	N/A	2016/04/22	
pH Water	AT/ALK	8249668	N/A	2016/04/22	
Sulphate by Automated Colourimetry	KONE/COL	8249901	N/A	2016/04/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8250164	2016/04/22	2016/04/22	
Total Phosphorus - unpreserved	KONE/COL	8250165	N/A	2016/04/22	
Total Suspended Solids-Low Level	BAL/BAL	8250744	2016/04/25	2016/04/26	

Maxxam ID: OM4613
Sample ID: KZ-28
Matrix: Water

Collected: 2016/04/19
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8249888	N/A	2016/04/22	Name Redacted
Alkalinity - Water	AT/ALK	8249660	2016/04/22	2016/04/22	
Chloride by Automated Colourimetry	KONE/COL	8249894	N/A	2016/04/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	
Colour (True) by Kone Lab	KONE	8250078	N/A	2016/04/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8249937	N/A	2016/04/22	
Conductance - water	AT/ALK	8249667	N/A	2016/04/22	
Fluoride	ISE/ISE	8250598	N/A	2016/04/22	
Hardness Total (calculated as CaCO3)	CALC	8249009	N/A	2016/04/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OM4613
Sample ID: KZ-28
Matrix: Water

Collected: 2016/04/19
Shipped:
Received: 2016/04/20

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst	
Hardness (calculated as CaCO3)	CALC	8248339	N/A	2016/04/26	Name Redacted	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251076	N/A	2016/04/25		
Mercury (Total-LowLevel) by CVAF	CV/AF	8251300	2016/04/25	2016/04/25		
Ion Balance	CALC	8248420	N/A	2016/04/26		
Sum of cations, anions	CALC	8249010	N/A	2016/04/26		
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8248340	N/A	2016/04/26		
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8249542	N/A	2016/04/26		
Elements by ICPMS Digested LL (total)	ICP/CRCM	8249850	2016/04/22	2016/04/26		
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8248369	N/A	2016/04/26		
Ammonia-N (Unpreserved)	KONE/COL	8251506	N/A	2016/04/25		
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250297	N/A	2016/04/22		
Nitrite (N) (low level)	TRAA/COL	8250298	N/A	2016/04/22		
Nitrogen - Nitrate (as N)	CALC	8248315	N/A	2016/04/26		
Filter and HNO3 Preserve for Metals	ICP	8249308	N/A	2016/04/22		
pH Water	AT/ALK	8249668	N/A	2016/04/22		
Sulphate by Automated Colourimetry	KONE/COL	8249901	N/A	2016/04/22		
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8250164	2016/04/22	2016/04/22		
Total Phosphorus - unpreserved	KONE/COL	8250165	N/A	2016/04/22		
Total Suspended Solids-Low Level	BAL/BAL	8250744	2016/04/25	2016/04/26		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	5.0°C
Package 2	6.0°C

Sample OM4605-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OM4606-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OM4608-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OM4610-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OM4611-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OM4612-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OM4613-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8248894	Total Aluminum (Al)	2016/04/22	97	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8248894	Total Antimony (Sb)	2016/04/22	98	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8248894	Total Arsenic (As)	2016/04/22	99	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8248894	Total Barium (Ba)	2016/04/22	98	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8248894	Total Beryllium (Be)	2016/04/22	97	80 - 120	97	80 - 120	<0.000010	mg/L	NC	20
8248894	Total Bismuth (Bi)	2016/04/22	93	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8248894	Total Boron (B)	2016/04/22	93	80 - 120	93	80 - 120	<0.010	mg/L	NC	20
8248894	Total Cadmium (Cd)	2016/04/22	97	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8248894	Total Chromium (Cr)	2016/04/22	98	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8248894	Total Cobalt (Co)	2016/04/22	100	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8248894	Total Copper (Cu)	2016/04/22	101	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8248894	Total Iron (Fe)	2016/04/22	104	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20
8248894	Total Lead (Pb)	2016/04/22	97	80 - 120	98	80 - 120	<0.0000050	mg/L	0.85	20
8248894	Total Lithium (Li)	2016/04/22	100	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8248894	Total Manganese (Mn)	2016/04/22	101	80 - 120	99	80 - 120	<0.000050	mg/L	1.6	20
8248894	Total Molybdenum (Mo)	2016/04/22	97	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8248894	Total Nickel (Ni)	2016/04/22	100	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8248894	Total Phosphorus (P)	2016/04/22					<0.0020	mg/L		
8248894	Total Selenium (Se)	2016/04/22	99	80 - 120	94	80 - 120	<0.000040	mg/L	NC	20
8248894	Total Silicon (Si)	2016/04/22					<0.050	mg/L	NC	20
8248894	Total Silver (Ag)	2016/04/22	94	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8248894	Total Strontium (Sr)	2016/04/22	94	80 - 120	94	80 - 120	<0.000050	mg/L	NC	20
8248894	Total Thallium (Tl)	2016/04/22	96	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8248894	Total Tin (Sn)	2016/04/22	101	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8248894	Total Titanium (Ti)	2016/04/22	100	80 - 120	89	80 - 120	<0.00050	mg/L	NC	20
8248894	Total Uranium (U)	2016/04/22	103	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8248894	Total Vanadium (V)	2016/04/22	98	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8248894	Total Zinc (Zn)	2016/04/22	105	80 - 120	103	80 - 120	<0.00010	mg/L	5.9	20
8248894	Total Zirconium (Zr)	2016/04/22					<0.00010	mg/L	NC	20
8249542	Dissolved Aluminum (Al)	2016/04/26	95	80 - 120	103	80 - 120	<0.00050	mg/L	0.99	20
8249542	Dissolved Antimony (Sb)	2016/04/26	99	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8249542	Dissolved Arsenic (As)	2016/04/26	106	80 - 120	100	80 - 120	<0.000020	mg/L	0.51	20
8249542	Dissolved Barium (Ba)	2016/04/26	NC	80 - 120	105	80 - 120	<0.000020	mg/L	2.9	20
8249542	Dissolved Beryllium (Be)	2016/04/26	94	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8249542	Dissolved Bismuth (Bi)	2016/04/26	97	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8249542	Dissolved Boron (B)	2016/04/26	95	80 - 120	100	80 - 120	<0.010	mg/L	NC	20
8249542	Dissolved Cadmium (Cd)	2016/04/26	102	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8249542	Dissolved Chromium (Cr)	2016/04/26	96	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8249542	Dissolved Cobalt (Co)	2016/04/26	95	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8249542	Dissolved Copper (Cu)	2016/04/26	89	80 - 120	100	80 - 120	<0.000050	mg/L	2.3	20
8249542	Dissolved Iron (Fe)	2016/04/26	NC	80 - 120	107	80 - 120	<0.0010	mg/L	0.52	20
8249542	Dissolved Lead (Pb)	2016/04/26	101	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8249542	Dissolved Lithium (Li)	2016/04/26	110	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8249542	Dissolved Manganese (Mn)	2016/04/26	NC	80 - 120	103	80 - 120	<0.000050	mg/L	1.1	20
8249542	Dissolved Molybdenum (Mo)	2016/04/26	NC	80 - 120	98	80 - 120	<0.000050	mg/L	1.8	20
8249542	Dissolved Nickel (Ni)	2016/04/26	94	80 - 120	98	80 - 120	<0.000020	mg/L	2.6	20
8249542	Dissolved Phosphorus (P)	2016/04/26					0.0020, RDL=0.0020	mg/L	NC	20
8249542	Dissolved Selenium (Se)	2016/04/26	114	80 - 120	95	80 - 120	<0.000040	mg/L	4.6	20
8249542	Dissolved Silicon (Si)	2016/04/26					<0.050	mg/L	0.67	20
8249542	Dissolved Silver (Ag)	2016/04/26	97	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8249542	Dissolved Strontium (Sr)	2016/04/26	NC	80 - 120	106	80 - 120	<0.000050	mg/L	0.24	20
8249542	Dissolved Thallium (Tl)	2016/04/26	97	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8249542	Dissolved Tin (Sn)	2016/04/26	103	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8249542	Dissolved Titanium (Ti)	2016/04/26	94	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8249542	Dissolved Uranium (U)	2016/04/26	116	80 - 120	105	80 - 120	<0.0000020	mg/L	3.3	20
8249542	Dissolved Vanadium (V)	2016/04/26	100	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8249542	Dissolved Zinc (Zn)	2016/04/26	91	80 - 120	103	80 - 120	<0.00010	mg/L	3.1	20
8249542	Dissolved Zirconium (Zr)	2016/04/26					<0.00010	mg/L	NC	20
8249660	Alkalinity (PP as CaCO3)	2016/04/22					<0.50	mg/L	NC	20
8249660	Alkalinity (Total as CaCO3)	2016/04/22	NC	80 - 120	96	80 - 120	<0.50	mg/L	0.47	20
8249660	Bicarbonate (HCO3)	2016/04/22					<0.50	mg/L	0.47	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8249660	Carbonate (CO3)	2016/04/22					<0.50	mg/L	NC	20
8249660	Hydroxide (OH)	2016/04/22					<0.50	mg/L	NC	20
8249667	Conductivity	2016/04/22			101	80 - 120	<1.0	uS/cm	0.17	20
8249668	pH	2016/04/22			101	97 - 103			0	N/A
8249683	Alkalinity (PP as CaCO3)	2016/04/23					<0.50	mg/L	NC	20
8249683	Alkalinity (Total as CaCO3)	2016/04/23	NC	80 - 120	100	80 - 120	0.64, RDL=0.50	mg/L	1.7	20
8249683	Bicarbonate (HCO3)	2016/04/23					0.78, RDL=0.50	mg/L	1.7	20
8249683	Carbonate (CO3)	2016/04/23					<0.50	mg/L	NC	20
8249683	Hydroxide (OH)	2016/04/23					<0.50	mg/L	NC	20
8249686	Conductivity	2016/04/23			101	80 - 120			0.47	20
8249688	pH	2016/04/23			101	97 - 103			0.38	N/A
8249850	Total Aluminum (Al)	2016/04/25	111	80 - 120	107	80 - 120	<0.0030	mg/L		
8249850	Total Antimony (Sb)	2016/04/25	104	80 - 120	99	80 - 120	<0.000050	mg/L		
8249850	Total Arsenic (As)	2016/04/25	122 (1)	80 - 120	101	80 - 120	<0.000020	mg/L		
8249850	Total Barium (Ba)	2016/04/25	NC	80 - 120	101	80 - 120	<0.00010	mg/L		
8249850	Total Beryllium (Be)	2016/04/25	100	80 - 120	103	80 - 120	<0.000010	mg/L		
8249850	Total Bismuth (Bi)	2016/04/26	101	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8249850	Total Boron (B)	2016/04/25	NC	80 - 120	104	80 - 120	<0.050	mg/L		
8249850	Total Cadmium (Cd)	2016/04/25	102	80 - 120	102	80 - 120	<0.0000050	mg/L		
8249850	Total Chromium (Cr)	2016/04/25	NC	80 - 120	100	80 - 120	<0.00050	mg/L		
8249850	Total Cobalt (Co)	2016/04/25	97	80 - 120	100	80 - 120	<0.000010	mg/L		
8249850	Total Copper (Cu)	2016/04/25	91	80 - 120	103	80 - 120	<0.00020	mg/L		
8249850	Total Iron (Fe)	2016/04/25	NC	80 - 120	107	80 - 120	<0.0050	mg/L		
8249850	Total Lead (Pb)	2016/04/25	105	80 - 120	99	80 - 120	<0.000050	mg/L		
8249850	Total Lithium (Li)	2016/04/25	NC	80 - 120	98	80 - 120	<0.00050	mg/L		
8249850	Total Manganese (Mn)	2016/04/25	NC	80 - 120	101	80 - 120	<0.00010	mg/L		
8249850	Total Molybdenum (Mo)	2016/04/25	NC	80 - 120	96	80 - 120	<0.000050	mg/L		
8249850	Total Nickel (Ni)	2016/04/25	NC	80 - 120	98	80 - 120	<0.00010	mg/L		
8249850	Total Phosphorus (P)	2016/04/25					<0.010	mg/L		
8249850	Total Selenium (Se)	2016/04/25	NC	80 - 120	99	80 - 120	<0.000040	mg/L		
8249850	Total Silicon (Si)	2016/04/25					<0.10	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8249850	Total Silver (Ag)	2016/04/25	100	80 - 120	103	80 - 120	<0.0000050	mg/L		
8249850	Total Strontium (Sr)	2016/04/25	NC	80 - 120	99	80 - 120	<0.000050	mg/L		
8249850	Total Thallium (Tl)	2016/04/25	103	80 - 120	93	80 - 120	<0.0000020	mg/L		
8249850	Total Tin (Sn)	2016/04/25	104	80 - 120	103	80 - 120	<0.00020	mg/L		
8249850	Total Titanium (Ti)	2016/04/25	104	80 - 120	106	80 - 120	<0.0050	mg/L		
8249850	Total Uranium (U)	2016/04/25	NC	80 - 120	100	80 - 120	<0.0000050	mg/L		
8249850	Total Vanadium (V)	2016/04/25	NC	80 - 120	101	80 - 120	<0.00050	mg/L		
8249850	Total Zinc (Zn)	2016/04/25	91	80 - 120	101	80 - 120	<0.0010	mg/L		
8249850	Total Zirconium (Zr)	2016/04/25					<0.00010	mg/L		
8249888	Acidity (pH 4.5)	2016/04/22					<0.50	mg/L	NC	20
8249888	Acidity (pH 8.3)	2016/04/22			99	80 - 120	<0.50	mg/L	NC	20
8249894	Dissolved Chloride (Cl)	2016/04/22	110	80 - 120	98	80 - 120	<0.50	mg/L	NC	20
8249901	Dissolved Sulphate (SO4)	2016/04/22	NC	80 - 120	91	80 - 120	0.68, RDL=0.50	mg/L	0.80	20
8249917	Acidity (pH 4.5)	2016/04/22					<0.50	mg/L	NC	20
8249917	Acidity (pH 8.3)	2016/04/22			99	80 - 120	<0.50	mg/L	3.5	20
8249937	Dissolved Organic Carbon (C)	2016/04/22	102	80 - 120	106	80 - 120	<0.50	mg/L	NC	20
8250078	True Colour	2016/04/22			109	80 - 120	<5.0	Col. Unit	NC	20
8250164	Dissolved Phosphorus (P)	2016/04/22	99	80 - 120	107	80 - 120	<0.0020	mg/L	NC	20
8250165	Total Phosphorus (P)	2016/04/22	99	80 - 120	109	80 - 120	<0.0020	mg/L	NC	20
8250297	Nitrate plus Nitrite (N)	2016/04/22	104	80 - 120	109	80 - 120	<0.0020	mg/L	3.8	25
8250298	Nitrite (N)	2016/04/22	99	80 - 120	102	80 - 120	<0.0020	mg/L	NC	25
8250598	Fluoride (F)	2016/04/22			96	80 - 120	0.014, RDL=0.010	mg/L		
8250744	Total Suspended Solids	2016/04/26			94	80 - 120	<1.0	mg/L		
8251076	Dissolved Mercury (Hg)	2016/04/25	98	80 - 120	106	80 - 120	<0.0000020	mg/L	NC	20
8251169	Strong Acid Dissoc. Cyanide (CN)	2016/04/25	96	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8251174	Weak Acid Dissoc. Cyanide (CN)	2016/04/25	98	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8251300	Total Mercury (Hg)	2016/04/25	90	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8251506	Total Ammonia (N)	2016/04/25	103	80 - 120	92	80 - 120	<0.0050	mg/L	NC	20
8251717	Total Aluminum (Al)	2016/04/26	105	80 - 120	101	80 - 120	<0.0030	mg/L	NC	20
8251717	Total Antimony (Sb)	2016/04/26	110	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8251717	Total Arsenic (As)	2016/04/26	111	80 - 120	102	80 - 120	<0.000020	mg/L	14	20
8251717	Total Barium (Ba)	2016/04/26	NC	80 - 120	100	80 - 120	<0.00010	mg/L	2.1	20
8251717	Total Beryllium (Be)	2016/04/26	107	80 - 120	101	80 - 120	<0.000010	mg/L	NC	20
8251717	Total Bismuth (Bi)	2016/04/26	97	80 - 120	95	80 - 120	<0.000020	mg/L	NC	20
8251717	Total Boron (B)	2016/04/26	113	80 - 120	106	80 - 120	<0.050	mg/L	NC	20
8251717	Total Cadmium (Cd)	2016/04/26	108	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8251717	Total Chromium (Cr)	2016/04/26	101	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8251717	Total Cobalt (Co)	2016/04/26	102	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20
8251717	Total Copper (Cu)	2016/04/26	99	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8251717	Total Iron (Fe)	2016/04/26	NC	80 - 120	107	80 - 120	<0.0050	mg/L	0.053	20
8251717	Total Lead (Pb)	2016/04/26	106	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8251717	Total Lithium (Li)	2016/04/26	100	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8251717	Total Manganese (Mn)	2016/04/26	NC	80 - 120	98	80 - 120	<0.00010	mg/L	2.0	20
8251717	Total Molybdenum (Mo)	2016/04/26	NC	80 - 120	98	80 - 120	<0.000050	mg/L	6.4	20
8251717	Total Nickel (Ni)	2016/04/26	99	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8251717	Total Phosphorus (P)	2016/04/26					<0.010	mg/L	NC	20
8251717	Total Selenium (Se)	2016/04/26	109	80 - 120	101	80 - 120	<0.000040	mg/L	12	20
8251717	Total Silicon (Si)	2016/04/26					<0.10	mg/L	3.6	20
8251717	Total Silver (Ag)	2016/04/26	106	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8251717	Total Strontium (Sr)	2016/04/26	NC	80 - 120	100	80 - 120	<0.000050	mg/L	1.4	20
8251717	Total Thallium (Tl)	2016/04/26	100	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8251717	Total Tin (Sn)	2016/04/26	107	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
8251717	Total Titanium (Ti)	2016/04/26	100	80 - 120	98	80 - 120	<0.0050	mg/L	NC	20
8251717	Total Uranium (U)	2016/04/26	106	80 - 120	104	80 - 120	<0.0000050	mg/L	6.2	20
8251717	Total Vanadium (V)	2016/04/26	108	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
8251717	Total Zinc (Zn)	2016/04/26	103	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
8251717	Total Zirconium (Zr)	2016/04/26					<0.00010	mg/L	NC	20
8252906	Total Ammonia (N)	2016/04/26	93	80 - 120	91	80 - 120	<0.0050	mg/L	NC	20
8253389	Nitrate plus Nitrite (N)	2016/04/26	102	80 - 120	104	80 - 120	<0.0020	mg/L	0.30	25
8253390	Nitrite (N)	2016/04/26	96	80 - 120	101	80 - 120	<0.0020	mg/L	NC	25

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8253852	Fluoride (F)	2016/04/27	94	80 - 120	98	80 - 120	0.016, RDL=0.010	mg/L	0	20
8254062	True Colour	2016/04/27			95	80 - 120	<5.0	Col. Unit	NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B629952
Report Date: 2016/04/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Rob Reinert, B.Sc., Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC # 08420290

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where a		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	~~KZ-2~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
3	~~KZ-7~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
4	~~KZ-9~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
5	KZ-13		20-Apr-16	8:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
6	KZ-15		20-Apr-16	8:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
7	KZ-16		20-Apr-16	10:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
8	KZ-17		20-Apr-16	11:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
9	KZ-19		20-Apr-16	8:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		
10	KZ-21		19-Apr-16	15:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12		

LABORATORY USE ONLY

CUSTODY SEAL Y / N (N)		COOLER TEMPERATURES
Present	Intact	
		3,2,2
		4,4,4

COOLING MEDIA PRESENT (Y) / N

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXX
Andrew MacPhail	20/04/2016	12:30	Signature Redacted	2016/04/21	13:30	B629952

B629952_COC

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CC 08420291

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (w		around Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Andrew MacPhail	Date Required:
						Rush Confirmation #:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-22		19-Apr-16	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
2	KZ-26		19-Apr-16	11:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
3	KZ-28		19-Apr-16	12:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
4	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		
5																					
6																					
7																					
8																					
9																					
10																					

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
		3,2,2
		4,4,4

COOLING MEDIA PRESENT Y / N

RECEVIED IN WHITEHORSE
BY: [signature] @ 1500
2016 -04- 20
TEMP: 6 / 4 / 5 → 1 cooler
7 / 7 / 4 → 2

B629952_COC

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Andrew MacPhail	20/04/2016	12:00	Signature Redacted	2016/04/21	13:30	B629952

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08420310

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/06/09
Report #: R2194029
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B630374
Received: 2016/04/21, 16:10

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	5	N/A	2016/04/25	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	5	2016/04/23	2016/04/24	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	5	N/A	2016/04/25	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	5	N/A	2016/04/25	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	5	N/A	2016/04/25	BBY6SOP-00004	SM 22 4500-CN O m
Colour (True) by Kone Lab	5	N/A	2016/04/23	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	5	N/A	2016/04/25	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	5	N/A	2016/04/24	BBY6SOP-00026	SM 22 2510 B m
Fluoride	5	N/A	2016/04/26	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	5	N/A	2016/04/26	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	5	N/A	2016/04/26	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	5	N/A	2016/04/26	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	5	2016/04/26	2016/04/26	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	5	N/A	2016/06/09	BBY WI-00033	SM 22 1030E
Sum of cations, anions	5	N/A	2016/06/09	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	5	N/A	2016/04/26	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	5	N/A	2016/04/26	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	1	2016/04/25	2016/04/26	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	5	N/A	2016/04/26	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	4	N/A	2016/04/26	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Unpreserved)	5	N/A	2016/04/25	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	5	N/A	2016/04/23	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	5	N/A	2016/04/23	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	5	N/A	2016/04/26	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	4	N/A	2016/04/25	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	5	N/A	2016/04/24	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	5	N/A	2016/04/25	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	5	2016/04/25	2016/04/26	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	5	N/A	2016/04/26	BBY6SOP-00013	SM 22 4500-P E m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08420310

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/06/09
Report #: R2194029
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B630374
Received: 2016/04/21, 16:10

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Suspended Solids-Low Level	5	2016/04/25	2016/04/26	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone and Fax Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OM7108		OM7152	OM7153		OM7157		
Sampling Date		2016/04/21 08:30		2016/04/20 15:15	2016/04/20 13:20		2016/04/21 16:10		
COC Number		08420310		08420310	08420310		08420310		
	UNITS	KZ-2	QC Batch	KZ-7	KZ-9	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	2.8	8293579	3.4	3.9	8293579	0.016	N/A	8293579
Cation Sum	meq/L	2.9	8293579	3.4	3.9	8293579	0.0020	N/A	8293579
Filter and HNO3 Preservation	N/A	LAB	8250937	LAB	LAB	8250937		N/A	8250937
Ion Balance	N/A	1.0	8293322	1.0	0.99	8293322	0.13	0.010	8293322
Nitrate (N)	mg/L	0.129	8250149	0.0880	0.123	8250149	<0.0020	0.0020	8250149
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8251169	0.00050	0.00051	8251169	<0.00050	0.00050	8251173
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8251174	<0.00050	<0.00050	8251174	<0.00050	0.00050	8251174
Fluoride (F)	mg/L	0.044	8252818	0.061	0.069	8252818	0.014	0.010	8252818
Dissolved Organic Carbon (C)	mg/L	1.37	8251658	3.56	3.36	8251658	<0.50	0.50	8251658
Acidity (pH 4.5)	mg/L	<0.50	8251112	<0.50	<0.50	8251112	<0.50	0.50	8251112
Alkalinity (Total as CaCO3)	mg/L	90.4	8250514	138	166	8250364	<0.50	0.50	8250364
Acidity (pH 8.3)	mg/L	<0.50	8251112	<0.50	3.73	8251112	<0.50	0.50	8251112
Alkalinity (PP as CaCO3)	mg/L	<0.50	8250514	<0.50	<0.50	8250364	<0.50	0.50	8250364
Bicarbonate (HCO3)	mg/L	110	8250514	168	203	8250364	<0.50	0.50	8250364
Carbonate (CO3)	mg/L	<0.50	8250514	<0.50	<0.50	8250364	<0.50	0.50	8250364
Hydroxide (OH)	mg/L	<0.50	8250514	<0.50	<0.50	8250364	<0.50	0.50	8250364
Anions									
Dissolved Sulphate (SO4)	mg/L	47.8	8251619	29.6	26.4	8251619	<0.50	0.50	8251619
Dissolved Chloride (Cl)	mg/L	0.83	8251615	0.65	1.1	8251615	0.52	0.50	8251615
MISCELLANEOUS									
True Colour	Col. Unit	<5.0	8250595	12.2	12.0	8250595	<5.0	5.0	8250595
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	8251697	0.0038 (1)	0.0026 (1)	8251697	<0.0020 (1)	0.0020	8251697
Total Ammonia (N)	mg/L	0.016 (1)	8250601	0.0080 (1)	0.019 (1)	8250601	0.0083 (1)	0.0050	8250601
Nitrate plus Nitrite (N)	mg/L	0.129	8250611	0.0880	0.123	8250611	<0.0020	0.0020	8250611
Nitrite (N)	mg/L	<0.0020	8250612	<0.0020	<0.0020	8250612	<0.0020	0.0020	8250612
Total Phosphorus (P)	mg/L	<0.0020 (1)	8251698	0.0029 (1)	0.0027 (1)	8251698	<0.0020 (1)	0.0020	8251698
Physical Properties									
Conductivity	uS/cm	282	8250515	318	361	8250363	1.2	1.0	8250363

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OM7108		OM7152	OM7153		OM7157		
Sampling Date		2016/04/21 08:30		2016/04/20 15:15	2016/04/20 13:20		2016/04/21 16:10		
COC Number		08420310		08420310	08420310		08420310		
	UNITS	KZ-2	QC Batch	KZ-7	KZ-9	QC Batch	TRIP BLANK	RDL	QC Batch
pH	pH	8.06	8250516	8.25	8.04	8250361	5.85		8250361
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8251343	1.0	2.4	8251343	<1.0	1.0	8251343
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OM7158		
Sampling Date		2016/04/20 16:15		
COC Number		08420310		
	UNITS	KZ-6	RDL	QC Batch
Calculated Parameters				
Anion Sum	meq/L	3.3	N/A	8293579
Cation Sum	meq/L	3.4	N/A	8293579
Filter and HNO3 Preservation	N/A	LAB	N/A	8250937
Ion Balance	N/A	1.0	0.010	8293322
Nitrate (N)	mg/L	0.129	0.0020	8250149
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8251173
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8251174
Fluoride (F)	mg/L	0.060	0.010	8252818
Dissolved Organic Carbon (C)	mg/L	2.57	0.50	8251658
Acidity (pH 4.5)	mg/L	<0.50	0.50	8251112
Alkalinity (Total as CaCO3)	mg/L	142	0.50	8250514
Acidity (pH 8.3)	mg/L	<0.50	0.50	8251112
Alkalinity (PP as CaCO3)	mg/L	0.63	0.50	8250514
Bicarbonate (HCO3)	mg/L	172	0.50	8250514
Carbonate (CO3)	mg/L	0.76	0.50	8250514
Hydroxide (OH)	mg/L	<0.50	0.50	8250514
Anions				
Dissolved Sulphate (SO4)	mg/L	20.6	0.50	8251619
Dissolved Chloride (Cl)	mg/L	1.0	0.50	8251615
MISCELLANEOUS				
True Colour	Col. Unit	11.7	5.0	8250595
Nutrients				
Dissolved Phosphorus (P)	mg/L	0.0024 (1)	0.0020	8251697
Total Ammonia (N)	mg/L	0.0069 (1)	0.0050	8250601
Nitrate plus Nitrite (N)	mg/L	0.129	0.0020	8250611
Nitrite (N)	mg/L	<0.0020	0.0020	8250612
Total Phosphorus (P)	mg/L	0.0025 (1)	0.0020	8251698
Physical Properties				
Conductivity	uS/cm	308	1.0	8250515

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OM7158		
Sampling Date		2016/04/20 16:15		
COC Number		08420310		
	UNITS	**KZ-6**	**RDL**	**QC Batch**
pH	pH	8.31		8250516
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8251343
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OM7108	OM7152	OM7153		OM7157		
Sampling Date		2016/04/21 08:30	2016/04/20 15:15	2016/04/20 13:20		2016/04/21 16:10		
COC Number		08420310	08420310	08420310		08420310		
	UNITS	KZ-2	KZ-7	KZ-9	QC Batch	TRIP BLANK	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	142	165	188	8249197	<0.50	0.50	8250177
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8251936	<0.0000020	0.0000020	8251936
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00225	0.00655	0.00267	8251299	<0.00050	0.00050	8251299
Dissolved Antimony (Sb)	mg/L	0.000031	0.000043	0.000035	8251299	<0.000020	0.000020	8251299
Dissolved Arsenic (As)	mg/L	0.000082	0.000290	0.000285	8251299	<0.000020	0.000020	8251299
Dissolved Barium (Ba)	mg/L	0.0776	0.0908	0.0929	8251299	<0.000020	0.000020	8251299
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8251299	<0.000010	0.000010	8251299
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8251299	<0.0000050	0.0000050	8251299
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8251299	<0.010	0.010	8251299
Dissolved Cadmium (Cd)	mg/L	0.000201	0.0000810	0.0000720	8251299	<0.0000050	0.0000050	8251299
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8251299	<0.00010	0.00010	8251299
Dissolved Cobalt (Co)	mg/L	0.0000070	0.0000580	0.0000910	8251299	<0.0000050	0.0000050	8251299
Dissolved Copper (Cu)	mg/L	0.000929	0.000439	0.000488	8251299	<0.000050	0.000050	8251299
Dissolved Iron (Fe)	mg/L	0.0015	0.0894	0.206	8251299	<0.0010	0.0010	8251299
Dissolved Lead (Pb)	mg/L	0.0000320	0.0000120	0.0000320	8251299	<0.0000050	0.0000050	8251299
Dissolved Lithium (Li)	mg/L	0.00182	0.00393	0.00396	8251299	<0.00050	0.00050	8251299
Dissolved Manganese (Mn)	mg/L	0.000091	0.0592	0.0917	8251299	<0.000050	0.000050	8251299
Dissolved Molybdenum (Mo)	mg/L	0.000775	0.000641	0.000674	8251299	<0.000050	0.000050	8251299
Dissolved Nickel (Ni)	mg/L	0.000275	0.000471	0.000533	8251299	<0.000020	0.000020	8251299
Dissolved Phosphorus (P)	mg/L	<0.0020	<0.0020	<0.0020	8251299	<0.0020	0.0020	8251299
Dissolved Selenium (Se)	mg/L	0.00300	0.000811	0.000943	8251299	<0.000040	0.000040	8251299
Dissolved Silicon (Si)	mg/L	2.43	3.54	3.88	8251299	<0.050	0.050	8251299
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8251299	<0.0000050	0.0000050	8251299
Dissolved Strontium (Sr)	mg/L	0.151	0.184	0.220	8251299	<0.000050	0.000050	8251299
Dissolved Thallium (Tl)	mg/L	0.0000030	0.0000020	<0.0000020	8251299	<0.0000020	0.0000020	8251299
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8251299	<0.00020	0.00020	8251299
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8251299	<0.00050	0.00050	8251299
Dissolved Uranium (U)	mg/L	0.00535	0.00138	0.00153	8251299	<0.0000020	0.0000020	8251299
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8251299	<0.00020	0.00020	8251299

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OM7108	OM7152	OM7153		OM7157		
Sampling Date		2016/04/21 08:30	2016/04/20 15:15	2016/04/20 13:20		2016/04/21 16:10		
COC Number		08420310	08420310	08420310		08420310		
	UNITS	KZ-2	KZ-7	KZ-9	QC Batch	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0238	0.0319	0.0103	8251299	<0.00010	0.00010	8251299
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8251299	<0.00010	0.00010	8251299
Dissolved Calcium (Ca)	mg/L	44.6	53.9	62.2	8249198	<0.050	0.050	8249198
Dissolved Magnesium (Mg)	mg/L	7.38	7.32	7.85	8249198	<0.050	0.050	8249198
Dissolved Potassium (K)	mg/L	2.49	2.02	2.00	8249198	<0.050	0.050	8249198
Dissolved Sodium (Na)	mg/L	0.944	1.25	1.41	8249198	<0.050	0.050	8249198
Dissolved Sulphur (S)	mg/L	17.0	10.3	9.5	8249198	<3.0	3.0	8249198

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OM7158		
Sampling Date		2016/04/20 16:15		
COC Number		08420310		
	UNITS	KZ-6	RDL	QC Batch
Misc. Inorganics				
Dissolved Hardness (CaCO3)	mg/L	168	0.50	8250177
Elements				
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000020	8251936
Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	mg/L	0.00428	0.00050	8251299
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000020	8251299
Dissolved Arsenic (As)	mg/L	0.000086	0.000020	8251299
Dissolved Barium (Ba)	mg/L	0.0503	0.000020	8251299
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000010	8251299
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8251299
Dissolved Boron (B)	mg/L	<0.010	0.010	8251299
Dissolved Cadmium (Cd)	mg/L	0.0000130	0.0000050	8251299
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00010	8251299
Dissolved Cobalt (Co)	mg/L	0.0000180	0.0000050	8251299
Dissolved Copper (Cu)	mg/L	0.000503	0.000050	8251299
Dissolved Iron (Fe)	mg/L	0.0098	0.0010	8251299
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000050	8251299
Dissolved Lithium (Li)	mg/L	0.00092	0.00050	8251299
Dissolved Manganese (Mn)	mg/L	0.000178	0.000050	8251299
Dissolved Molybdenum (Mo)	mg/L	0.000675	0.000050	8251299
Dissolved Nickel (Ni)	mg/L	0.000298	0.000020	8251299
Dissolved Phosphorus (P)	mg/L	0.0051	0.0020	8251299
Dissolved Selenium (Se)	mg/L	0.00121	0.000040	8251299
Dissolved Silicon (Si)	mg/L	3.13	0.050	8251299
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	8251299
Dissolved Strontium (Sr)	mg/L	0.166	0.000050	8251299
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000020	8251299
Dissolved Tin (Sn)	mg/L	<0.00020	0.00020	8251299
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00050	8251299
Dissolved Uranium (U)	mg/L	0.00129	0.0000020	8251299
Dissolved Vanadium (V)	mg/L	<0.00020	0.00020	8251299
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OM7158		
Sampling Date		2016/04/20 16:15		
COC Number		08420310		
	UNITS	KZ-6	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00061	0.00010	8251299
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00010	8251299
Dissolved Calcium (Ca)	mg/L	55.7	0.050	8249198
Dissolved Magnesium (Mg)	mg/L	6.93	0.050	8249198
Dissolved Potassium (K)	mg/L	1.51	0.050	8249198
Dissolved Sodium (Na)	mg/L	0.737	0.050	8249198
Dissolved Sulphur (S)	mg/L	6.9	3.0	8249198
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OM7108	OM7152	OM7157	OM7158		
Sampling Date		2016/04/21 08:30	2016/04/20 15:15	2016/04/21 16:10	2016/04/20 16:15		
COC Number		08420310	08420310	08420310	08420310		
	UNITS	KZ-2	KZ-7	TRIP BLANK	KZ-6	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	145	176	<0.50	167	0.50	8249196
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8251947
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00299	0.0208	<0.00050	0.00809	0.00050	8252056
Total Antimony (Sb)	mg/L	0.000027	0.000046	<0.000020	<0.000020	0.000020	8252056
Total Arsenic (As)	mg/L	0.000094	0.000452	<0.000020	0.000147	0.000020	8252056
Total Barium (Ba)	mg/L	0.0785	0.0999	<0.000020	0.0494	0.000020	8252056
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8252056
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8252056
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8252056
Total Cadmium (Cd)	mg/L	0.000199	0.000221	<0.0000050	0.0000300	0.0000050	8252056
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8252056
Total Cobalt (Co)	mg/L	0.0000080	0.0000850	<0.0000050	0.0000270	0.0000050	8252056
Total Copper (Cu)	mg/L	0.000983	0.000545	<0.000050	0.000525	0.000050	8252056
Total Iron (Fe)	mg/L	0.0031	0.525	<0.0010	0.0516	0.0010	8252056
Total Lead (Pb)	mg/L	0.0000400	0.000119	<0.0000050	0.0000450	0.0000050	8252056
Total Lithium (Li)	mg/L	0.00153	0.00410	<0.00050	0.00105	0.00050	8252056
Total Manganese (Mn)	mg/L	0.000081	0.0810	<0.000050	0.00810	0.000050	8252056
Total Molybdenum (Mo)	mg/L	0.000791	0.000645	<0.000050	0.000652	0.000050	8252056
Total Nickel (Ni)	mg/L	0.000283	0.000554	<0.000020	0.000339	0.000020	8252056
Total Phosphorus (P)	mg/L	0.0024	0.0065	<0.0020	0.0030	0.0020	8252056
Total Selenium (Se)	mg/L	0.00308	0.000777	<0.000040	0.00122	0.000040	8252056
Total Silicon (Si)	mg/L	2.44	3.66	<0.050	3.31	0.050	8252056
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8252056
Total Strontium (Sr)	mg/L	0.155	0.203	<0.000050	0.170	0.000050	8252056
Total Thallium (Tl)	mg/L	0.0000030	0.0000020	<0.0000020	<0.0000020	0.0000020	8252056
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8252056
Total Titanium (Ti)	mg/L	<0.00050	0.00103	<0.00050	<0.00050	0.00050	8252056
Total Uranium (U)	mg/L	0.00545	0.00142	<0.0000020	0.00127	0.0000020	8252056
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8252056

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OM7108	OM7152	OM7157	OM7158		
Sampling Date		2016/04/21 08:30	2016/04/20 15:15	2016/04/21 16:10	2016/04/20 16:15		
COC Number		08420310	08420310	08420310	08420310		
	UNITS	KZ-2	KZ-7	TRIP BLANK	KZ-6	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0241	0.0457	<0.00010	0.00101	0.00010	8252056
Total Zirconium (Zr)	mg/L	<0.00010	0.00011	<0.00010	<0.00010	0.00010	8252056
Total Calcium (Ca)	mg/L	46.1	58.0	<0.050	55.7	0.050	8249199
Total Magnesium (Mg)	mg/L	7.29	7.64	<0.050	6.91	0.050	8249199
Total Potassium (K)	mg/L	2.51	2.22	<0.050	1.52	0.050	8249199
Total Sodium (Na)	mg/L	0.925	1.29	<0.050	0.732	0.050	8249199
Total Sulphur (S)	mg/L	16.5	10.1	<3.0	6.9	3.0	8249199
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OM7153		
Sampling Date		2016/04/20 13:20		
COC Number		08420310		
	UNITS	KZ-9	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	153	0.50	8249196
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8251947
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.0225	0.0030	8251717
Total Antimony (Sb)	mg/L	<0.000050	0.000050	8251717
Total Arsenic (As)	mg/L	0.000304	0.000020	8251717
Total Barium (Ba)	mg/L	0.0784	0.00010	8251717
Total Beryllium (Be)	mg/L	<0.000010	0.000010	8251717
Total Bismuth (Bi)	mg/L	<0.000020	0.000020	8251717
Total Boron (B)	mg/L	<0.050	0.050	8251717
Total Cadmium (Cd)	mg/L	0.0000730	0.0000050	8251717
Total Chromium (Cr)	mg/L	<0.00050	0.00050	8251717
Total Cobalt (Co)	mg/L	0.000138	0.000010	8251717
Total Copper (Cu)	mg/L	0.00061	0.00020	8251717
Total Iron (Fe)	mg/L	0.476	0.0050	8251717
Total Lead (Pb)	mg/L	0.000120	0.000050	8251717
Total Lithium (Li)	mg/L	0.00365	0.00050	8251717
Total Manganese (Mn)	mg/L	0.0852	0.00010	8251717
Total Molybdenum (Mo)	mg/L	0.000564	0.000050	8251717
Total Nickel (Ni)	mg/L	0.00050	0.00010	8251717
Total Phosphorus (P)	mg/L	<0.010	0.010	8251717
Total Selenium (Se)	mg/L	0.000695	0.000040	8251717
Total Silicon (Si)	mg/L	3.52	0.10	8251717
Total Silver (Ag)	mg/L	<0.0000050	0.0000050	8251717
Total Strontium (Sr)	mg/L	0.181	0.000050	8251717
Total Thallium (Tl)	mg/L	<0.0000020	0.0000020	8251717
Total Tin (Sn)	mg/L	<0.00020	0.00020	8251717
Total Titanium (Ti)	mg/L	<0.0050	0.0050	8251717
Total Uranium (U)	mg/L	0.00122	0.0000050	8251717
Total Vanadium (V)	mg/L	<0.00050	0.00050	8251717
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OM7153		
Sampling Date		2016/04/20 13:20		
COC Number		08420310		
	UNITS	KZ-9	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0101	0.0010	8251717
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8251717
Total Calcium (Ca)	mg/L	50.7	0.25	8249199
Total Magnesium (Mg)	mg/L	6.36	0.25	8249199
Total Potassium (K)	mg/L	1.60	0.25	8249199
Total Sodium (Na)	mg/L	1.12	0.25	8249199
Total Sulphur (S)	mg/L	<15	15	8249199
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: OM7108 **Collected:** 2016/04/21
Sample ID: KZ-2 **Shipped:**
Matrix: Water **Received:** 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8251112	N/A	2016/04/25	Name Redacted
Alkalinity - Water	AT/ALK	8250514	2016/04/23	2016/04/24	
Chloride by Automated Colourimetry	KONE/COL	8251615	N/A	2016/04/25	
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	
Colour (True) by Kone Lab	KONE	8250595	N/A	2016/04/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8251658	N/A	2016/04/25	
Conductance - water	AT/ALK	8250515	N/A	2016/04/24	
Fluoride	ISE/ISE	8252818	N/A	2016/04/26	
Hardness Total (calculated as CaCO3)	CALC	8249196	N/A	2016/04/26	
Hardness (calculated as CaCO3)	CALC	8249197	N/A	2016/04/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251936	N/A	2016/04/26	
Mercury (Total-LowLevel) by CVAF	CV/AF	8251947	2016/04/26	2016/04/26	
Ion Balance	CALC	8293322	N/A	2016/06/09	
Sum of cations, anions	CALC	8293579	N/A	2016/06/09	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8249198	N/A	2016/04/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8251299	N/A	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8249199	N/A	2016/04/26	
Elements by ICPMS Low Level (total)	ICP/CRCM	8252056	N/A	2016/04/26	
Ammonia-N (Unpreserved)	KONE/COL	8250601	N/A	2016/04/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250611	N/A	2016/04/23	
Nitrite (N) (low level)	TRAA/COL	8250612	N/A	2016/04/23	
Nitrogen - Nitrate (as N)	CALC	8250149	N/A	2016/04/26	
Filter and HNO3 Preserve for Metals	ICP	8250937	N/A	2016/04/25	
pH Water	AT/ALK	8250516	N/A	2016/04/24	
Sulphate by Automated Colourimetry	KONE/COL	8251619	N/A	2016/04/25	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8251697	2016/04/25	2016/04/26	
Total Phosphorus - unpreserved	KONE/COL	8251698	N/A	2016/04/26	
Total Suspended Solids-Low Level	BAL/BAL	8251343	2016/04/25	2016/04/26	

Maxxam ID: OM7108 Dup **Collected:** 2016/04/21
Sample ID: KZ-2 **Shipped:**
Matrix: Water **Received:** 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - unpreserved	KONE/COL	8251698	N/A	2016/04/26	Name

Maxxam ID: OM7152 **Collected:** 2016/04/20
Sample ID: KZ-7 **Shipped:**
Matrix: Water **Received:** 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8251112	N/A	2016/04/25	Name Redacted
Alkalinity - Water	AT/ALK	8250364	2016/04/23	2016/04/24	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: OM7152
Sample ID: KZ-7
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8251615	N/A	2016/04/25	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	
Colour (True) by Kone Lab	KONE	8250595	N/A	2016/04/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8251658	N/A	2016/04/25	
Conductance - water	AT/ALK	8250363	N/A	2016/04/24	
Fluoride	ISE/ISE	8252818	N/A	2016/04/26	
Hardness Total (calculated as CaCO3)	CALC	8249196	N/A	2016/04/26	
Hardness (calculated as CaCO3)	CALC	8249197	N/A	2016/04/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251936	N/A	2016/04/26	
Mercury (Total-LowLevel) by CVAF	CV/AF	8251947	2016/04/26	2016/04/26	
Ion Balance	CALC	8293322	N/A	2016/06/09	
Sum of cations, anions	CALC	8293579	N/A	2016/06/09	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8249198	N/A	2016/04/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8251299	N/A	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8249199	N/A	2016/04/26	
Elements by ICPMS Low Level (total)	ICP/CRCM	8252056	N/A	2016/04/26	
Ammonia-N (Unpreserved)	KONE/COL	8250601	N/A	2016/04/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250611	N/A	2016/04/23	
Nitrite (N) (low level)	TRAA/COL	8250612	N/A	2016/04/23	
Nitrogen - Nitrate (as N)	CALC	8250149	N/A	2016/04/26	
Filter and HNO3 Preserve for Metals	ICP	8250937	N/A	2016/04/25	
pH Water	AT/ALK	8250361	N/A	2016/04/24	
Sulphate by Automated Colourimetry	KONE/COL	8251619	N/A	2016/04/25	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8251697	2016/04/25	2016/04/26	
Total Phosphorus - unpreserved	KONE/COL	8251698	N/A	2016/04/26	
Total Suspended Solids-Low Level	BAL/BAL	8251343	2016/04/25	2016/04/26	

Maxxam ID: OM7152 Dup
Sample ID: KZ-7
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8251112	N/A	2016/04/25	Name Redacted
Colour (True) by Kone Lab	KONE	8250595	N/A	2016/04/23	

Maxxam ID: OM7153
Sample ID: KZ-9
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8251112	N/A	2016/04/25	Name Redacted
Alkalinity - Water	AT/ALK	8250364	2016/04/23	2016/04/24	
Chloride by Automated Colourimetry	KONE/COL	8251615	N/A	2016/04/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: OM7153
Sample ID: KZ-9
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8251169	N/A	2016/04/25	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	
Colour (True) by Kone Lab	KONE	8250595	N/A	2016/04/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8251658	N/A	2016/04/25	
Conductance - water	AT/ALK	8250363	N/A	2016/04/24	
Fluoride	ISE/ISE	8252818	N/A	2016/04/26	
Hardness Total (calculated as CaCO3)	CALC	8249196	N/A	2016/04/26	
Hardness (calculated as CaCO3)	CALC	8249197	N/A	2016/04/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251936	N/A	2016/04/26	
Mercury (Total-LowLevel) by CVAF	CV/AF	8251947	2016/04/26	2016/04/26	
Ion Balance	CALC	8293322	N/A	2016/06/09	
Sum of cations, anions	CALC	8293579	N/A	2016/06/09	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8249198	N/A	2016/04/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8251299	N/A	2016/04/26	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8251717	2016/04/25	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8249199	N/A	2016/04/26	
Ammonia-N (Unpreserved)	KONE/COL	8250601	N/A	2016/04/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250611	N/A	2016/04/23	
Nitrite (N) (low level)	TRAA/COL	8250612	N/A	2016/04/23	
Nitrogen - Nitrate (as N)	CALC	8250149	N/A	2016/04/26	
Filter and HNO3 Preserve for Metals	ICP	8250937	N/A	2016/04/25	
pH Water	AT/ALK	8250361	N/A	2016/04/24	
Sulphate by Automated Colourimetry	KONE/COL	8251619	N/A	2016/04/25	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8251697	2016/04/25	2016/04/26	
Total Phosphorus - unpreserved	KONE/COL	8251698	N/A	2016/04/26	
Total Suspended Solids-Low Level	BAL/BAL	8251343	2016/04/25	2016/04/26	

Maxxam ID: OM7157
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/04/21
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8251112	N/A	2016/04/25	Name Redacted
Alkalinity - Water	AT/ALK	8250364	2016/04/23	2016/04/24	
Chloride by Automated Colourimetry	KONE/COL	8251615	N/A	2016/04/25	
Cyanide SAD (strong acid dissociable)	TECH/COL	8251173	N/A	2016/04/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	
Colour (True) by Kone Lab	KONE	8250595	N/A	2016/04/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8251658	N/A	2016/04/25	
Conductance - water	AT/ALK	8250363	N/A	2016/04/24	
Fluoride	ISE/ISE	8252818	N/A	2016/04/26	
Hardness Total (calculated as CaCO3)	CALC	8249196	N/A	2016/04/26	
Hardness (calculated as CaCO3)	CALC	8250177	N/A	2016/04/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251936	N/A	2016/04/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: OM7157
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/04/21
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8251947	2016/04/26	2016/04/26	Name Redacted
Ion Balance	CALC	8293322	N/A	2016/06/09	
Sum of cations, anions	CALC	8293579	N/A	2016/06/09	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8249198	N/A	2016/04/26	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8251299	N/A	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8249199	N/A	2016/04/26	
Elements by ICPMS Low Level (total)	ICP/CRCM	8252056	N/A	2016/04/26	
Ammonia-N (Unpreserved)	KONE/COL	8250601	N/A	2016/04/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250611	N/A	2016/04/23	
Nitrite (N) (low level)	TRAA/COL	8250612	N/A	2016/04/23	
Nitrogen - Nitrate (as N)	CALC	8250149	N/A	2016/04/26	
pH Water	AT/ALK	8250361	N/A	2016/04/24	
Sulphate by Automated Colourimetry	KONE/COL	8251619	N/A	2016/04/25	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8251697	2016/04/25	2016/04/26	
Total Phosphorus - unpreserved	KONE/COL	8251698	N/A	2016/04/26	
Total Suspended Solids-Low Level	BAL/BAL	8251343	2016/04/25	2016/04/26	

Maxxam ID: OM7157 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/04/21
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251936	N/A	2016/04/26	Name Redacted

Maxxam ID: OM7158
Sample ID: KZ-6
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8251112	N/A	2016/04/25	Name Redacted
Alkalinity - Water	AT/ALK	8250514	2016/04/23	2016/04/24	
Chloride by Automated Colourimetry	KONE/COL	8251615	N/A	2016/04/25	
Cyanide SAD (strong acid dissociable)	TECH/COL	8251173	N/A	2016/04/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	
Colour (True) by Kone Lab	KONE	8250595	N/A	2016/04/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8251658	N/A	2016/04/25	
Conductance - water	AT/ALK	8250515	N/A	2016/04/24	
Fluoride	ISE/ISE	8252818	N/A	2016/04/26	
Hardness Total (calculated as CaCO3)	CALC	8249196	N/A	2016/04/26	
Hardness (calculated as CaCO3)	CALC	8250177	N/A	2016/04/26	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8251936	N/A	2016/04/26	
Mercury (Total-LowLevel) by CVAF	CV/AF	8251947	2016/04/26	2016/04/26	
Ion Balance	CALC	8293322	N/A	2016/06/09	
Sum of cations, anions	CALC	8293579	N/A	2016/06/09	

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: OM7158
Sample ID: KZ-6
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8249198	N/A	2016/04/26	Name Redacted
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8251299	N/A	2016/04/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8249199	N/A	2016/04/26	
Elements by ICPMS Low Level (total)	ICP/CRCM	8252056	N/A	2016/04/26	
Ammonia-N (Unpreserved)	KONE/COL	8250601	N/A	2016/04/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250611	N/A	2016/04/23	
Nitrite (N) (low level)	TRAA/COL	8250612	N/A	2016/04/23	
Nitrogen - Nitrate (as N)	CALC	8250149	N/A	2016/04/26	
Filter and HNO3 Preserve for Metals	ICP	8250937	N/A	2016/04/25	
pH Water	AT/ALK	8250516	N/A	2016/04/24	
Sulphate by Automated Colourimetry	KONE/COL	8251619	N/A	2016/04/25	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8251697	2016/04/25	2016/04/26	
Total Phosphorus - unpreserved	KONE/COL	8251698	N/A	2016/04/26	
Total Suspended Solids-Low Level	BAL/BAL	8251343	2016/04/25	2016/04/26	

Maxxam ID: OM7158 Dup
Sample ID: KZ-6
Matrix: Water

Collected: 2016/04/20
Shipped:
Received: 2016/04/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8251173	N/A	2016/04/25	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8251174	N/A	2016/04/25	
Ammonia-N (Unpreserved)	KONE/COL	8250601	N/A	2016/04/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8250611	N/A	2016/04/23	
Nitrite (N) (low level)	TRAA/COL	8250612	N/A	2016/04/23	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.0°C
Package 2	5.0°C

Revised report V2: Ion Balance and Ion Sum added per client requirements, not originally reported (MM4).

Sample OM7153-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8250361	pH	2016/04/24			102	97 - 103			0.49	N/A
8250363	Conductivity	2016/04/24			101	80 - 120	1.0, RDL=1.0	uS/cm	0.086	20
8250364	Alkalinity (PP as CaCO3)	2016/04/24					<0.50	mg/L	NC	20
8250364	Alkalinity (Total as CaCO3)	2016/04/24	NC	80 - 120	100	80 - 120	<0.50	mg/L	0.069	20
8250364	Bicarbonate (HCO3)	2016/04/24					<0.50	mg/L	0.069	20
8250364	Carbonate (CO3)	2016/04/24					<0.50	mg/L	NC	20
8250364	Hydroxide (OH)	2016/04/24					<0.50	mg/L	NC	20
8250514	Alkalinity (PP as CaCO3)	2016/04/24					<0.50	mg/L	NC	20
8250514	Alkalinity (Total as CaCO3)	2016/04/24	99	80 - 120	99	80 - 120	<0.50	mg/L	11	20
8250514	Bicarbonate (HCO3)	2016/04/24					<0.50	mg/L	11	20
8250514	Carbonate (CO3)	2016/04/24					<0.50	mg/L	NC	20
8250514	Hydroxide (OH)	2016/04/24					<0.50	mg/L	NC	20
8250515	Conductivity	2016/04/24			101	80 - 120	1.1, RDL=1.0	uS/cm	0	20
8250516	pH	2016/04/24			101	97 - 103			0.86	N/A
8250595	True Colour	2016/04/23			99	80 - 120	<5.0	Col. Unit	NC	20
8250601	Total Ammonia (N)	2016/04/25	93	80 - 120	95	80 - 120	<0.0050	mg/L	NC	20
8250611	Nitrate plus Nitrite (N)	2016/04/23	106	80 - 120	101	80 - 120	<0.0020	mg/L	0.077	25
8250612	Nitrite (N)	2016/04/23	100	80 - 120	96	80 - 120	<0.0020	mg/L	NC	25
8251112	Acidity (pH 4.5)	2016/04/25					<0.50	mg/L	NC	20
8251112	Acidity (pH 8.3)	2016/04/25			101	80 - 120	<0.50	mg/L	NC	20
8251169	Strong Acid Dissoc. Cyanide (CN)	2016/04/25	96	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8251173	Strong Acid Dissoc. Cyanide (CN)	2016/04/25	100	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8251174	Weak Acid Dissoc. Cyanide (CN)	2016/04/25	98	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8251299	Dissolved Aluminum (Al)	2016/04/26	100	80 - 120	97	80 - 120	<0.00050	mg/L	1.2	20
8251299	Dissolved Antimony (Sb)	2016/04/26	NC	80 - 120	97	80 - 120	<0.000020	mg/L	2.3	20
8251299	Dissolved Arsenic (As)	2016/04/26	104	80 - 120	100	80 - 120	<0.000020	mg/L	4.2	20
8251299	Dissolved Barium (Ba)	2016/04/26	NC	80 - 120	98	80 - 120	<0.000020	mg/L	0.22	20
8251299	Dissolved Beryllium (Be)	2016/04/26	112	80 - 120	107	80 - 120	<0.000010	mg/L	NC	20
8251299	Dissolved Bismuth (Bi)	2016/04/26	104	80 - 120	92	80 - 120	<0.0000050	mg/L	NC	20
8251299	Dissolved Boron (B)	2016/04/26	119	80 - 120	106	80 - 120	<0.010	mg/L	NC	20
8251299	Dissolved Cadmium (Cd)	2016/04/26	99	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8251299	Dissolved Chromium (Cr)	2016/04/26	99	80 - 120	98	80 - 120	<0.00010	mg/L	1.2	20
8251299	Dissolved Cobalt (Co)	2016/04/26	99	80 - 120	103	80 - 120	<0.0000050	mg/L	9.3	20
8251299	Dissolved Copper (Cu)	2016/04/26	95	80 - 120	102	80 - 120	<0.000050	mg/L	1.5	20
8251299	Dissolved Iron (Fe)	2016/04/26	107	80 - 120	104	80 - 120	<0.0010	mg/L	NC	20
8251299	Dissolved Lead (Pb)	2016/04/26	108	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8251299	Dissolved Lithium (Li)	2016/04/26	102	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8251299	Dissolved Manganese (Mn)	2016/04/26	95	80 - 120	96	80 - 120	<0.000050	mg/L	NC	20
8251299	Dissolved Molybdenum (Mo)	2016/04/26	NC	80 - 120	97	80 - 120	<0.000050	mg/L	0.26	20
8251299	Dissolved Nickel (Ni)	2016/04/26	97	80 - 120	101	80 - 120	<0.000020	mg/L	13	20
8251299	Dissolved Phosphorus (P)	2016/04/26					<0.0020	mg/L		
8251299	Dissolved Selenium (Se)	2016/04/26	97	80 - 120	100	80 - 120	<0.000040	mg/L	1.5	20
8251299	Dissolved Silicon (Si)	2016/04/26					<0.050	mg/L	1.7	20
8251299	Dissolved Silver (Ag)	2016/04/26	102	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8251299	Dissolved Strontium (Sr)	2016/04/26	NC	80 - 120	91	80 - 120	<0.000050	mg/L	4.4	20
8251299	Dissolved Thallium (Tl)	2016/04/26	101	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8251299	Dissolved Tin (Sn)	2016/04/26	102	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
8251299	Dissolved Titanium (Ti)	2016/04/26	93	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8251299	Dissolved Uranium (U)	2016/04/26	107	80 - 120	97	80 - 120	<0.0000020	mg/L	0.83	20
8251299	Dissolved Vanadium (V)	2016/04/26	103	80 - 120	101	80 - 120	<0.00020	mg/L	3.5	20
8251299	Dissolved Zinc (Zn)	2016/04/26	99	80 - 120	102	80 - 120	<0.00010	mg/L	6.2	20
8251299	Dissolved Zirconium (Zr)	2016/04/26					<0.00010	mg/L	NC	20
8251343	Total Suspended Solids	2016/04/26			96	80 - 120	<1.0	mg/L		
8251615	Dissolved Chloride (Cl)	2016/04/25	NC	80 - 120	95	80 - 120	0.65, RDL=0.50	mg/L	0.35	20
8251619	Dissolved Sulphate (SO4)	2016/04/25	NC	80 - 120	101	80 - 120	0.53, RDL=0.50	mg/L	0.95	20
8251658	Dissolved Organic Carbon (C)	2016/04/25	99	80 - 120	112	80 - 120	<0.50	mg/L	NC	20
8251697	Dissolved Phosphorus (P)	2016/04/26	103	80 - 120	103	80 - 120	<0.0020	mg/L	NC	20
8251698	Total Phosphorus (P)	2016/04/26	98	80 - 120	98	80 - 120	<0.0020	mg/L	NC	20
8251717	Total Aluminum (Al)	2016/04/26	105	80 - 120	101	80 - 120	<0.0030	mg/L	NC	20
8251717	Total Antimony (Sb)	2016/04/26	110	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8251717	Total Arsenic (As)	2016/04/26	111	80 - 120	102	80 - 120	<0.000020	mg/L	14	20
8251717	Total Barium (Ba)	2016/04/26	NC	80 - 120	100	80 - 120	<0.00010	mg/L	2.1	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8251717	Total Beryllium (Be)	2016/04/26	107	80 - 120	101	80 - 120	<0.000010	mg/L	NC	20
8251717	Total Bismuth (Bi)	2016/04/26	97	80 - 120	95	80 - 120	<0.000020	mg/L	NC	20
8251717	Total Boron (B)	2016/04/26	113	80 - 120	106	80 - 120	<0.050	mg/L	NC	20
8251717	Total Cadmium (Cd)	2016/04/26	108	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8251717	Total Chromium (Cr)	2016/04/26	101	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8251717	Total Cobalt (Co)	2016/04/26	102	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20
8251717	Total Copper (Cu)	2016/04/26	99	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8251717	Total Iron (Fe)	2016/04/26	NC	80 - 120	107	80 - 120	<0.0050	mg/L	0.053	20
8251717	Total Lead (Pb)	2016/04/26	106	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8251717	Total Lithium (Li)	2016/04/26	100	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8251717	Total Manganese (Mn)	2016/04/26	NC	80 - 120	98	80 - 120	<0.00010	mg/L	2.0	20
8251717	Total Molybdenum (Mo)	2016/04/26	NC	80 - 120	98	80 - 120	<0.000050	mg/L	6.4	20
8251717	Total Nickel (Ni)	2016/04/26	99	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8251717	Total Phosphorus (P)	2016/04/26					<0.010	mg/L	NC	20
8251717	Total Selenium (Se)	2016/04/26	109	80 - 120	101	80 - 120	<0.000040	mg/L	12	20
8251717	Total Silicon (Si)	2016/04/26					<0.10	mg/L	3.6	20
8251717	Total Silver (Ag)	2016/04/26	106	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8251717	Total Strontium (Sr)	2016/04/26	NC	80 - 120	100	80 - 120	<0.000050	mg/L	1.4	20
8251717	Total Thallium (Tl)	2016/04/26	100	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8251717	Total Tin (Sn)	2016/04/26	107	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
8251717	Total Titanium (Ti)	2016/04/26	100	80 - 120	98	80 - 120	<0.0050	mg/L	NC	20
8251717	Total Uranium (U)	2016/04/26	106	80 - 120	104	80 - 120	<0.0000050	mg/L	6.2	20
8251717	Total Vanadium (V)	2016/04/26	108	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
8251717	Total Zinc (Zn)	2016/04/26	103	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
8251717	Total Zirconium (Zr)	2016/04/26					<0.00010	mg/L	NC	20
8251936	Dissolved Mercury (Hg)	2016/04/26	92	80 - 120	92	80 - 120	<0.0000020	mg/L	NC	20
8251947	Total Mercury (Hg)	2016/04/26	94	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8252056	Total Aluminum (Al)	2016/04/26	96	80 - 120	100	80 - 120	<0.00050	mg/L	9.2	20
8252056	Total Antimony (Sb)	2016/04/26	97	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8252056	Total Arsenic (As)	2016/04/26	103	80 - 120	99	80 - 120	<0.000020	mg/L	6.8	20
8252056	Total Barium (Ba)	2016/04/26	99	80 - 120	100	80 - 120	<0.000020	mg/L	0.28	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8252056	Total Beryllium (Be)	2016/04/26	108	80 - 120	109	80 - 120	<0.000010	mg/L	NC	20
8252056	Total Bismuth (Bi)	2016/04/26	96	80 - 120	93	80 - 120	<0.0000050	mg/L	NC	20
8252056	Total Boron (B)	2016/04/26	108	80 - 120	108	80 - 120	<0.010	mg/L	NC	20
8252056	Total Cadmium (Cd)	2016/04/26	101	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8252056	Total Chromium (Cr)	2016/04/26	100	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8252056	Total Cobalt (Co)	2016/04/26	100	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8252056	Total Copper (Cu)	2016/04/26	99	80 - 120	101	80 - 120	<0.000050	mg/L	5.0	20
8252056	Total Iron (Fe)	2016/04/26	101	80 - 120	105	80 - 120	<0.0010	mg/L	7.3	20
8252056	Total Lead (Pb)	2016/04/26	103	80 - 120	98	80 - 120	<0.0000050	mg/L	2.2	20
8252056	Total Lithium (Li)	2016/04/26	108	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8252056	Total Manganese (Mn)	2016/04/26	94	80 - 120	96	80 - 120	<0.000050	mg/L	0.24	20
8252056	Total Molybdenum (Mo)	2016/04/26	98	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8252056	Total Nickel (Ni)	2016/04/26	99	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8252056	Total Phosphorus (P)	2016/04/26					<0.0020	mg/L		
8252056	Total Selenium (Se)	2016/04/26	99	80 - 120	100	80 - 120	<0.000040	mg/L	NC	20
8252056	Total Silicon (Si)	2016/04/26					<0.050	mg/L	1.2	20
8252056	Total Silver (Ag)	2016/04/26	95	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8252056	Total Strontium (Sr)	2016/04/26	NC	80 - 120	91	80 - 120	<0.000050	mg/L	1.6	20
8252056	Total Thallium (Tl)	2016/04/26	101	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8252056	Total Tin (Sn)	2016/04/26	98	80 - 120	110	80 - 120	<0.00020	mg/L	NC	20
8252056	Total Titanium (Ti)	2016/04/26	102	80 - 120	93	80 - 120	<0.00050	mg/L	NC	20
8252056	Total Uranium (U)	2016/04/26	102	80 - 120	101	80 - 120	<0.0000020	mg/L	0	20
8252056	Total Vanadium (V)	2016/04/26	105	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8252056	Total Zinc (Zn)	2016/04/26	102	80 - 120	105	80 - 120	<0.00010	mg/L	5.8	20
8252056	Total Zirconium (Zr)	2016/04/26					<0.00010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B630374
Report Date: 2016/06/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8252818	Fluoride (F)	2016/04/26			100	80 - 120	0.013, RDL=0.010	mg/L	NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Maxxam Job #: B630374
Report Date: 2016/06/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Signature Redacted

Rob Reinert, B.Sc., Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08420310

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[X] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Andrew MacPhail	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL Y / N (Present / Intact)

COOLER TEMPERATURES: 2, 3, 4 / 5, 6, 4

COOLING MEDIA PRESENT Y / N

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		21-Apr-16	8:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
3	KZ-7		20-Apr-16	15:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
4	KZ-9		20-Apr-16	13:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
5	KZ-13				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
6	KZ-15				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
7	KZ-16				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
8	KZ-17				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
9	KZ-19				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	
10	KZ-21				Water	x	x	x	x	x	x	x	x	x	x	x	x	x				12	

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	21/04/2016	16:15	Signature Redacted	2016/04/22	13:15

MAX. B630374

B630374_COC

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY F

COC 08420311

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Andrew MacPhail	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL Y / N (Present / Intact)

COOLER TEMPERATURES: 2,3,4 / 5,6,4 /

COOLING MEDIA PRESENT Y / N

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-22				Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
2	KZ-26				Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
3	KZ-28				Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
4	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
5	KZ-6		20-Apr-16	16:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12	
6																				
7																				
8																				
9																				
10																				

B630374_COC

COMMENTS

RECEVIED IN WHITEHORSE

BY: 16:18

2016-04-21

TEMP: 8 / 7 / 8

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	22/03/2016	13:30	Signature Redacted	2016/04/22	13:15	

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08420816, 08420817

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2016/05/16
Report #: R2181680
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B635308
Received: 2016/05/06, 11:50

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	13	N/A	2016/05/10	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	13	2016/05/10	2016/05/10	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	13	N/A	2016/05/10	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	13	N/A	2016/05/10	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	13	N/A	2016/05/10	BBY6SOP-00004	SM 22 4500-CN O
Colour (True) by Kone Lab	13	N/A	2016/05/10	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	12	N/A	2016/05/10	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2016/05/10	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	13	N/A	2016/05/10	BBY6SOP-00026	SM 22 2510 B m
Fluoride	13	N/A	2016/05/11	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	13	N/A	2016/05/11	BBY7SOP-00002	EPA 6020a R1 m
Hardness (calculated as CaCO3)	13	N/A	2016/05/11	BBY7SOP-00002	EPA 6020a R1 m
Mercury (Dissolved-LowLevel) by CVAF	13	N/A	2016/05/11	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	13	2016/05/11	2016/05/11	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	13	N/A	2016/05/11	BBY WI-00033	SM 22 1030E
Sum of cations, anions	13	N/A	2016/05/11	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	13	N/A	2016/05/11	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	4	N/A	2016/05/10	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (dissolved)	9	N/A	2016/05/11	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Digested LL (total)	8	2016/05/10	2016/05/10	BBY7SOP-00002	EPA 6020A R1 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	13	N/A	2016/05/11	BBY7SOP-00002	EPA 6020A R1 m
Elements by ICPMS Low Level (total)	5	N/A	2016/05/11	BBY7SOP-00002	EPA 6020A R1 m
Ammonia-N (Unpreserved)	13	N/A	2016/05/11	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	13	N/A	2016/05/10	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	13	N/A	2016/05/10	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	13	N/A	2016/05/11	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	12	N/A	2016/05/10	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	13	N/A	2016/05/10	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	13	N/A	2016/05/10	BBY6SOP-00017	SM 22 4500-SO42- E m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08420816, 08420817

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2016/05/16
Report #: R2181680
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B635308
Received: 2016/05/06, 11:50

Sample Matrix: Water
Samples Received: 13

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Phosphorus-P (LL Tot, dissolved) - UF/UP	13	2016/05/10	2016/05/10	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	13	N/A	2016/05/10	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	13	2016/05/10	2016/05/11	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OP1398		OP1399		OP1400	OP1401		
Sampling Date		2016/05/05 12:19		2016/05/05 10:35		2016/05/05 09:02	2016/05/04 15:57		
COC Number		08420816		08420816		08420816	08420816		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	KZ-9	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	2.5	8264162	2.4	8264162	2.3	2.5	N/A	8264162
Cation Sum	meq/L	2.4	8264162	2.3	8264162	2.3	2.4	N/A	8264162
Filter and HNO3 Preservation	N/A	LAB	8265017	LAB	8265017	LAB	LAB	N/A	8265017
Ion Balance	N/A	0.96	8264161	0.95	8264161	1.0	0.97	0.010	8264161
Nitrate (N)	mg/L	0.0973	8264443	0.0604	8264443	0.0524	0.0571	0.0020	8264443
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00050	8265317	0.00064	8265317	0.00062	0.00066	0.00050	8265317
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8265322	0.00052	8265322	0.00057	<0.00050	0.00050	8265322
Fluoride (F)	mg/L	0.049	8266847	0.051	8266847	0.055	0.065	0.010	8266847
Dissolved Organic Carbon (C)	mg/L	2.26	8265288	4.97	8265288	4.85	3.80	0.50	8265288
Acidity (pH 4.5)	mg/L	<0.50	8265059	<0.50	8265061	<0.50	<0.50	0.50	8265059
Alkalinity (Total as CaCO3)	mg/L	78.4	8265235	103	8265245	92.4	106	0.50	8265235
Acidity (pH 8.3)	mg/L	<0.50	8265059	<0.50	8265061	0.58	3.72	0.50	8265059
Alkalinity (PP as CaCO3)	mg/L	<0.50	8265235	<0.50	8265245	<0.50	<0.50	0.50	8265235
Bicarbonate (HCO3)	mg/L	95.6	8265235	125	8265245	113	129	0.50	8265235
Carbonate (CO3)	mg/L	<0.50	8265235	<0.50	8265245	<0.50	<0.50	0.50	8265235
Hydroxide (OH)	mg/L	<0.50	8265235	<0.50	8265245	<0.50	<0.50	0.50	8265235
Anions									
Dissolved Sulphate (SO4)	mg/L	41.3	8265613	15.2	8265616	18.7	16.6	0.50	8265613
Dissolved Chloride (Cl)	mg/L	0.99	8265612	0.95	8265614	1.1	1.1	0.50	8265612
MISCELLANEOUS									
True Colour	Col. Unit	7.7 (1)	8265376	23.2 (1)	8265376	44.2 (1)	31.2 (1)	5.0	8265376
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0026 (1)	8265390	0.0060 (1)	8265391	0.0074 (1)	0.0067 (1)	0.0020	8265390
Total Ammonia (N)	mg/L	0.0164 (1)	8266220	<0.0050 (1)	8266223	0.0158 (1)	0.0171 (1)	0.0050	8266220
Nitrate plus Nitrite (N)	mg/L	0.0973 (1)	8265729	0.0604 (1)	8265731	0.0545 (1)	0.0571 (1)	0.0020	8265729
Nitrite (N)	mg/L	<0.0020 (1)	8265730	<0.0020 (1)	8265732	0.0021 (1)	<0.0020 (1)	0.0020	8265730
Total Phosphorus (P)	mg/L	0.0021 (1)	8265394	0.0058 (1)	8265394	0.0080 (1)	0.0060 (1)	0.0020	8265394
Physical Properties									
Conductivity	uS/cm	244	8265240	227	8265255	221	239	1.0	8265240

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OP1398		OP1399		OP1400	OP1401		
Sampling Date		2016/05/05 12:19		2016/05/05 10:35		2016/05/05 09:02	2016/05/04 15:57		
COC Number		08420816		08420816		08420816	08420816		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	KZ-9	RDL	QC Batch
pH	pH	7.96	8265241	8.15	8265256	7.98	7.84		8265241
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8264707	<1.0	8264707	1.7	4.1	1.0	8264707
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OP1402		OP1403	OP1404		OP1405		
Sampling Date		2016/05/04 12:06		2016/05/04 13:54	2016/05/04 13:25		2016/05/04 11:27		
COC Number		08420816		08420816	08420816		08420816		
	UNITS	KZ-15	QC Batch	KZ-16	KZ-17	QC Batch	KZ-19	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	3.6	8264162	3.4	3.4	8264162	2.5	N/A	8264162
Cation Sum	meq/L	3.5	8264162	3.4	3.4	8264162	2.4	N/A	8264162
Filter and HNO3 Preservation	N/A	LAB	8265017	LAB	LAB	8265017	LAB	N/A	8265017
Ion Balance	N/A	0.97	8264161	0.99	0.98	8264161	0.98	0.010	8264161
Nitrate (N)	mg/L	0.0883	8264443	0.101	0.0702	8264443	0.0967	0.0020	8264443
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00053	8265317	0.00061	0.00050	8265317	0.00054	0.00050	8265317
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8265322	<0.00050	<0.00050	8265322	0.00050	0.00050	8265322
Fluoride (F)	mg/L	0.092	8266847	0.076	0.100	8266847	0.050	0.010	8266847
Dissolved Organic Carbon (C)	mg/L	3.24	8265288	2.50	4.16	8265288	2.87	0.50	8265288
Acidity (pH 4.5)	mg/L	<0.50	8265059	<0.50	<0.50	8265059	<0.50	0.50	8265061
Alkalinity (Total as CaCO3)	mg/L	154	8265245	147	148	8265235	78.2	0.50	8265245
Acidity (pH 8.3)	mg/L	0.73	8265059	1.09	0.51	8265059	<0.50	0.50	8265061
Alkalinity (PP as CaCO3)	mg/L	<0.50	8265245	<0.50	<0.50	8265235	<0.50	0.50	8265245
Bicarbonate (HCO3)	mg/L	188	8265245	179	181	8265235	95.4	0.50	8265245
Carbonate (CO3)	mg/L	<0.50	8265245	<0.50	<0.50	8265235	<0.50	0.50	8265245
Hydroxide (OH)	mg/L	<0.50	8265245	<0.50	<0.50	8265235	<0.50	0.50	8265245
Anions									
Dissolved Sulphate (SO4)	mg/L	22.3	8265613	21.7	20.8	8265613	43.6	0.50	8265616
Dissolved Chloride (Cl)	mg/L	1.1	8265612	1.0	1.1	8265612	0.57	0.50	8265614
MISCELLANEOUS									
True Colour	Col. Unit	14.8 (1)	8265376	7.8 (1)	22.9 (1)	8265376	7.5 (1)	5.0	8265376
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0087 (1)	8265390	0.0031 (1)	0.0101 (1)	8265390	<0.0020 (1)	0.0020	8265391
Total Ammonia (N)	mg/L	<0.0050 (1)	8266220	0.0207 (1)	0.0102 (1)	8266220	0.0062 (1)	0.0050	8266223
Nitrate plus Nitrite (N)	mg/L	0.0883 (1)	8265729	0.101 (1)	0.0702 (1)	8265729	0.0967 (1)	0.0020	8265731
Nitrite (N)	mg/L	<0.0020 (1)	8265730	<0.0020 (1)	<0.0020 (1)	8265730	<0.0020 (1)	0.0020	8265732
Total Phosphorus (P)	mg/L	0.0063 (1)	8265394	0.0025 (1)	0.0083 (1)	8265394	<0.0020 (1)	0.0020	8265394
Physical Properties									
Conductivity	uS/cm	328	8265255	314	321	8265240	246	1.0	8265255

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OP1402		OP1403	OP1404		OP1405		
Sampling Date		2016/05/04 12:06		2016/05/04 13:54	2016/05/04 13:25		2016/05/04 11:27		
COC Number		08420816		08420816	08420816		08420816		
	UNITS	KZ-15	QC Batch	KZ-16	KZ-17	QC Batch	KZ-19	RDL	QC Batch
pH	pH	8.12	8265256	8.10	8.15	8265241	8.05		8265256
Physical Properties									
Total Suspended Solids	mg/L	1.5	8264707	<1.0	2.1	8264707	1.5	1.0	8264707
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OP1407		OP1408		OP1409	OP1410		
Sampling Date		2016/05/04 10:11		2016/05/04 08:53		2016/05/03 13:59	2016/05/03 15:07		
COC Number		08420817		08420817		08420817	08420817		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	KZ-28	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	3.9	8264162	4.1	8264162	4.2	0.048	N/A	8264162
Cation Sum	meq/L	3.9	8264162	4.0	8264162	4.2	0.0020	N/A	8264162
Filter and HNO3 Preservation	N/A	LAB	8265017	LAB	8265017	LAB	LAB	N/A	8265017
Ion Balance	N/A	1.0	8264161	0.97	8264161	0.98	0.041	0.010	8264161
Nitrate (N)	mg/L	0.0496	8264443	0.0609	8264443	0.0538	<0.0020	0.0020	8264443
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00075	8265317	0.00075	8265317	0.00070	<0.00050	0.00050	8265317
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00070	8265322	0.00069	8265322	0.00062	<0.00050	0.00050	8265322
Fluoride (F)	mg/L	0.170	8266847	0.130	8266847	0.120	0.011	0.010	8266847
Dissolved Organic Carbon (C)	mg/L	5.75	8265288	5.29	8265288	4.61	<0.50	0.50	8265288
Acidity (pH 4.5)	mg/L	<0.50	8265059	<0.50	8265061	<0.50	<0.50 (1)	0.50	8265059
Alkalinity (Total as CaCO3)	mg/L	164	8265235	171	8265245	178	1.17	0.50	8265235
Acidity (pH 8.3)	mg/L	2.00	8265059	0.67	8265061	<0.50	<0.50	0.50	8265059
Alkalinity (PP as CaCO3)	mg/L	<0.50	8265235	<0.50	8265245	<0.50	<0.50	0.50	8265235
Bicarbonate (HCO3)	mg/L	200	8265235	209	8265245	217	1.43	0.50	8265235
Carbonate (CO3)	mg/L	<0.50	8265235	<0.50	8265245	<0.50	<0.50	0.50	8265235
Hydroxide (OH)	mg/L	<0.50	8265235	<0.50	8265245	<0.50	<0.50	0.50	8265235
Anions									
Dissolved Sulphate (SO4)	mg/L	27.2	8265613	29.6	8265616	30.5	<0.50	0.50	8265613
Dissolved Chloride (Cl)	mg/L	1.2	8265612	0.82	8265614	1.2	0.86	0.50	8265612
MISCELLANEOUS									
True Colour	Col. Unit	46.4 (2)	8265376	31.7 (2)	8265376	24.5 (2)	<5.0 (2)	5.0	8265376
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0210 (2)	8265390	0.0120 (2)	8265391	0.0085 (2)	<0.0020 (2)	0.0020	8265390
Total Ammonia (N)	mg/L	0.0147 (2)	8266220	0.0089 (2)	8266223	0.0100 (2)	0.0116 (2)	0.0050	8266220
Nitrate plus Nitrite (N)	mg/L	0.0496 (2)	8265729	0.0609 (2)	8265731	0.0538 (2)	<0.0020 (2)	0.0020	8265729
Nitrite (N)	mg/L	<0.0020 (2)	8265730	<0.0020 (2)	8265732	<0.0020 (2)	<0.0020 (2)	0.0020	8265730
Total Phosphorus (P)	mg/L	0.0203 (2)	8265394	0.0109 (2)	8265394	0.0080 (2)	<0.0020 (2)	0.0020	8265394

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

(2) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OP1407		OP1408		OP1409	OP1410		
Sampling Date		2016/05/04 10:11		2016/05/04 08:53		2016/05/03 13:59	2016/05/03 15:07		
COC Number		08420817		08420817		08420817	08420817		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	KZ-28	RDL	QC Batch
Physical Properties									
Conductivity	uS/cm	356	8265240	369	8265255	380	1.1	1.0	8265240
pH	pH	8.09	8265241	8.22	8265256	8.23	5.95		8265241
Physical Properties									
Total Suspended Solids	mg/L	2.8	8264707	1.7	8264707	4.0	<1.0	1.0	8264707
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OP1411		
Sampling Date		2016/05/06 11:50		
COC Number		08420817		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Anion Sum	meq/L	0.034	N/A	8264162
Cation Sum	meq/L	0.0017	N/A	8264162
Ion Balance	N/A	0.050	0.010	8264161
Nitrate (N)	mg/L	<0.0020	0.0020	8264443
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8265317
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8265322
Fluoride (F)	mg/L	0.011	0.010	8266847
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8263437
Acidity (pH 4.5)	mg/L	<0.50 (1)	0.50	8265061
Alkalinity (Total as CaCO3)	mg/L	0.94	0.50	8265245
Acidity (pH 8.3)	mg/L	<0.50	0.50	8265061
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8265245
Bicarbonate (HCO3)	mg/L	1.15	0.50	8265245
Carbonate (CO3)	mg/L	<0.50	0.50	8265245
Hydroxide (OH)	mg/L	<0.50	0.50	8265245
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8265616
Dissolved Chloride (Cl)	mg/L	0.51	0.50	8265614
MISCELLANEOUS				
True Colour	Col. Unit	<5.0	5.0	8265376
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8265391
Total Ammonia (N)	mg/L	0.0073	0.0050	8266223
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	8265731
Nitrite (N)	mg/L	<0.0020	0.0020	8265732
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8265394
Physical Properties				
Conductivity	uS/cm	1.1	1.0	8265255

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OP1411		
Sampling Date		2016/05/06 11:50		
COC Number		08420817		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
pH	pH	5.93		8265256
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8264707
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OP1398	OP1399	OP1400	OP1401	OP1402		
Sampling Date		2016/05/05 12:19	2016/05/05 10:35	2016/05/05 09:02	2016/05/04 15:57	2016/05/04 12:06		
COC Number		08420816	08420816	08420816	08420816	08420816		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-9	KZ-15	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	114	111	112	116	170	0.50	8264028
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8265992
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00295	0.00654	0.00764	0.00510	0.00294	0.00050	8265346
Dissolved Antimony (Sb)	mg/L	0.000025	<0.000020	0.000060	0.000046	0.000033	0.000020	8265346
Dissolved Arsenic (As)	mg/L	0.000074	0.000081	0.000430	0.000309	0.000410	0.000020	8265346
Dissolved Barium (Ba)	mg/L	0.0647	0.0359	0.0614	0.0609	0.0641	0.000020	8265346
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8265346
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000060	<0.0000050	0.0000050	8265346
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8265346
Dissolved Cadmium (Cd)	mg/L	0.000190	0.0000110	0.000107	0.0000540	0.0000190	0.0000050	8265346
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8265346
Dissolved Cobalt (Co)	mg/L	0.0000070	0.0000180	0.0000450	0.0000720	0.0000160	0.0000050	8265346
Dissolved Copper (Cu)	mg/L	0.00143	0.000579	0.000853	0.000805	0.000492	0.000050	8265346
Dissolved Iron (Fe)	mg/L	0.0020	0.0234	0.246	0.238	0.0401	0.0010	8265346
Dissolved Lead (Pb)	mg/L	0.0000230	<0.0000050	0.000227	0.0000850	0.0000120	0.0000050	8265346
Dissolved Lithium (Li)	mg/L	0.00160	<0.00050	0.00168	0.00228	0.00242	0.00050	8265346
Dissolved Manganese (Mn)	mg/L	0.000118	0.000225	0.0348	0.0456	0.00842	0.000050	8265346
Dissolved Molybdenum (Mo)	mg/L	0.000674	0.000490	0.000515	0.000516	0.00109	0.000050	8265346
Dissolved Nickel (Ni)	mg/L	0.000318	0.000410	0.000480	0.000514	0.000676	0.000020	8265346
Dissolved Phosphorus (P)	mg/L	0.0030	0.0068	0.0057	0.0029	<0.0020	0.0020	8265346
Dissolved Selenium (Se)	mg/L	0.00240	0.000811	0.000618	0.000649	0.000765	0.000040	8265346
Dissolved Silicon (Si)	mg/L	2.22	2.37	2.52	2.67	3.08	0.050	8265346
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8265346
Dissolved Strontium (Sr)	mg/L	0.128	0.114	0.122	0.135	0.171	0.000050	8265346
Dissolved Thallium (Tl)	mg/L	0.0000040	<0.0000020	0.0000020	<0.0000020	<0.0000020	0.0000020	8265346
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8265346
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8265346
Dissolved Uranium (U)	mg/L	0.00388	0.000666	0.000764	0.000799	0.00272	0.0000020	8265346
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8265346
Dissolved Zinc (Zn)	mg/L	0.0226	0.00056	0.0248	0.00973	0.00212	0.00010	8265346
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OP1398	OP1399	OP1400	OP1401	OP1402		
Sampling Date		2016/05/05 12:19	2016/05/05 10:35	2016/05/05 09:02	2016/05/04 15:57	2016/05/04 12:06		
COC Number		08420816	08420816	08420816	08420816	08420816		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-9	KZ-15	RDL	QC Batch
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8265346
Dissolved Calcium (Ca)	mg/L	36.0	36.6	37.2	38.6	50.2	0.050	8264201
Dissolved Magnesium (Mg)	mg/L	5.76	4.77	4.73	4.78	11.0	0.050	8264201
Dissolved Potassium (K)	mg/L	2.22	1.43	1.66	1.56	1.26	0.050	8264201
Dissolved Sodium (Na)	mg/L	0.718	0.488	0.738	0.797	0.976	0.050	8264201
Dissolved Sulphur (S)	mg/L	14.0	5.4	6.4	5.6	7.4	3.0	8264201
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OP1403	OP1404	OP1405	OP1407	OP1408		
Sampling Date		2016/05/04 13:54	2016/05/04 13:25	2016/05/04 11:27	2016/05/04 10:11	2016/05/04 08:53		
COC Number		08420816	08420816	08420816	08420817	08420817		
	UNITS	KZ-16	KZ-17	KZ-19	KZ-21	KZ-22	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	165	164	118	189	193	0.50	8264028
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8265992
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00159	0.00341	0.00290	0.00256	0.00184	0.00050	8265346
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000039	0.000022	0.000089	0.000068	0.000020	8265346
Dissolved Arsenic (As)	mg/L	0.000238	0.000619	0.000086	0.00172	0.00125	0.000020	8265346
Dissolved Barium (Ba)	mg/L	0.0580	0.0603	0.0639	0.0482	0.0544	0.000020	8265346
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8265346
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8265346
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8265346
Dissolved Cadmium (Cd)	mg/L	0.0000090	0.0000310	0.000176	0.0000100	0.0000090	0.0000050	8265346
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8265346
Dissolved Cobalt (Co)	mg/L	0.0000170	0.0000230	0.0000080	0.0000780	0.0000710	0.0000050	8265346
Dissolved Copper (Cu)	mg/L	0.000412	0.000567	0.00154	0.000431	0.000399	0.000050	8265346
Dissolved Iron (Fe)	mg/L	0.0072	0.0920	0.0021	0.282	0.158	0.0010	8265346
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000270	0.0000220	0.0000060	0.0000090	0.0000050	8265346
Dissolved Lithium (Li)	mg/L	0.00172	0.00291	0.00104	0.00399	0.00331	0.00050	8265346
Dissolved Manganese (Mn)	mg/L	0.00410	0.0209	0.000121	0.0671	0.0409	0.000050	8265346
Dissolved Molybdenum (Mo)	mg/L	0.000480	0.00149	0.000707	0.00180	0.00140	0.000050	8265346
Dissolved Nickel (Ni)	mg/L	0.000529	0.000783	0.000313	0.00250	0.00159	0.000020	8265346
Dissolved Phosphorus (P)	mg/L	0.0023	0.0058	0.0040	0.0095	0.0060	0.0020	8265346
Dissolved Selenium (Se)	mg/L	0.000727	0.000782	0.00237	0.000335	0.000542	0.000040	8265346
Dissolved Silicon (Si)	mg/L	2.96	2.98	2.23	3.71	3.52	0.050	8265346
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8265346
Dissolved Strontium (Sr)	mg/L	0.167	0.162	0.133	0.149	0.168	0.000050	8265346
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000040	<0.0000020	<0.0000020	0.0000020	8265346
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8265346
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8265346
Dissolved Uranium (U)	mg/L	0.00172	0.00307	0.00399	0.00216	0.00246	0.0000020	8265346
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8265346
Dissolved Zinc (Zn)	mg/L	0.00046	0.00357	0.0216	0.00087	0.00072	0.00010	8265346

RDL = Reportable Detection Limit

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OP1403	OP1404	OP1405	OP1407	OP1408		
Sampling Date		2016/05/04 13:54	2016/05/04 13:25	2016/05/04 11:27	2016/05/04 10:11	2016/05/04 08:53		
COC Number		08420816	08420816	08420816	08420817	08420817		
	UNITS	KZ-16	KZ-17	KZ-19	KZ-21	KZ-22	RDL	QC Batch
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8265346
Dissolved Calcium (Ca)	mg/L	50.8	47.7	37.8	47.4	51.1	0.050	8264201
Dissolved Magnesium (Mg)	mg/L	9.35	10.9	5.75	17.2	15.9	0.050	8264201
Dissolved Potassium (K)	mg/L	1.12	1.41	2.21	1.53	1.40	0.050	8264201
Dissolved Sodium (Na)	mg/L	0.943	0.929	0.702	1.17	1.18	0.050	8264201
Dissolved Sulphur (S)	mg/L	7.3	7.5	13.6	9.3	9.5	3.0	8264201
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OP1409	OP1410	OP1411		
Sampling Date		2016/05/03 13:59	2016/05/03 15:07	2016/05/06 11:50		
COC Number		08420817	08420817	08420817		
	UNITS	KZ-26	KZ-28	TRIP BLANK	RDL	QC Batch
Misc. Inorganics						
Dissolved Hardness (CaCO3)	mg/L	204	<0.50	<0.50	0.50	8264028
Elements						
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8265992
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	0.00150	<0.00050	<0.00050	0.00050	8265346
Dissolved Antimony (Sb)	mg/L	0.000084	<0.000020	<0.000020	0.000020	8265346
Dissolved Arsenic (As)	mg/L	0.000883	<0.000020	<0.000020	0.000020	8265346
Dissolved Barium (Ba)	mg/L	0.0592	<0.000020	<0.000020	0.000020	8265346
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8265346
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8265346
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	8265346
Dissolved Cadmium (Cd)	mg/L	0.0000060	<0.0000050	<0.0000050	0.0000050	8265346
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8265346
Dissolved Cobalt (Co)	mg/L	0.0000160	<0.0000050	<0.0000050	0.0000050	8265346
Dissolved Copper (Cu)	mg/L	0.000519	<0.000050	<0.000050	0.000050	8265346
Dissolved Iron (Fe)	mg/L	0.0607	<0.0010	<0.0010	0.0010	8265346
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8265346
Dissolved Lithium (Li)	mg/L	0.00387	<0.00050	<0.00050	0.00050	8265346
Dissolved Manganese (Mn)	mg/L	0.00113	<0.000050	<0.000050	0.000050	8265346
Dissolved Molybdenum (Mo)	mg/L	0.00121	<0.000050	<0.000050	0.000050	8265346
Dissolved Nickel (Ni)	mg/L	0.00113	<0.000020	<0.000020	0.000020	8265346
Dissolved Phosphorus (P)	mg/L	<0.0020	<0.0020	<0.0020	0.0020	8265346
Dissolved Selenium (Se)	mg/L	0.000589	<0.000040	<0.000040	0.000040	8265346
Dissolved Silicon (Si)	mg/L	3.46	<0.050	<0.050	0.050	8265346
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8265346
Dissolved Strontium (Sr)	mg/L	0.185	<0.000050	<0.000050	0.000050	8265346
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8265346
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8265346
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8265346
Dissolved Uranium (U)	mg/L	0.00250	<0.0000020	<0.0000020	0.0000020	8265346
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8265346
Dissolved Zinc (Zn)	mg/L	0.00025	<0.00010	<0.00010	0.00010	8265346
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OP1409	OP1410	OP1411		
Sampling Date		2016/05/03 13:59	2016/05/03 15:07	2016/05/06 11:50		
COC Number		08420817	08420817	08420817		
	UNITS	KZ-26	KZ-28	TRIP BLANK	RDL	QC Batch
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8265346
Dissolved Calcium (Ca)	mg/L	54.2	<0.050	<0.050	0.050	8264201
Dissolved Magnesium (Mg)	mg/L	16.6	<0.050	<0.050	0.050	8264201
Dissolved Potassium (K)	mg/L	1.33	<0.050	<0.050	0.050	8264201
Dissolved Sodium (Na)	mg/L	1.34	<0.050	<0.050	0.050	8264201
Dissolved Sulphur (S)	mg/L	10.6	<3.0	<3.0	3.0	8264201
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OP1398	OP1403	OP1405	OP1410	OP1411		
Sampling Date		2016/05/05 12:19	2016/05/04 13:54	2016/05/04 11:27	2016/05/03 15:07	2016/05/06 11:50		
COC Number		08420816	08420816	08420816	08420817	08420817		
	UNITS	KZ-2	KZ-16	KZ-19	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	117	167	119	<0.50	<0.50	0.50	8264070
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8265985
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00611	0.00353	0.0987	<0.00050	<0.00050	0.00050	8265075
Total Antimony (Sb)	mg/L	0.000024	<0.000020	0.000031	<0.000020	<0.000020	0.000020	8265075
Total Arsenic (As)	mg/L	0.000080	0.000284	0.000084	<0.000020	<0.000020	0.000020	8265075
Total Barium (Ba)	mg/L	0.0639	0.0609	0.0670	<0.000020	<0.000020	0.000020	8265075
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8265075
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8265075
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8265075
Total Cadmium (Cd)	mg/L	0.000194	0.0000190	0.000189	<0.0000050	<0.0000050	0.0000050	8265075
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00018	<0.00010	<0.00010	0.00010	8265075
Total Cobalt (Co)	mg/L	0.0000110	0.0000340	0.0000710	<0.0000050	<0.0000050	0.0000050	8265075
Total Copper (Cu)	mg/L	0.00157	0.000474	0.00170	0.000062	<0.000050	0.000050	8265075
Total Iron (Fe)	mg/L	0.0109	0.0435	0.140	<0.0010	<0.0010	0.0010	8265075
Total Lead (Pb)	mg/L	0.0000690	0.0000210	0.000103	0.0000060	<0.0000050	0.0000050	8265075
Total Lithium (Li)	mg/L	0.00140	0.00164	0.00129	<0.00050	<0.00050	0.00050	8265075
Total Manganese (Mn)	mg/L	0.000324	0.00940	0.00196	<0.000050	<0.000050	0.000050	8265075
Total Molybdenum (Mo)	mg/L	0.000700	0.000493	0.000734	<0.000050	<0.000050	0.000050	8265075
Total Nickel (Ni)	mg/L	0.000309	0.000583	0.000446	<0.000020	<0.000020	0.000020	8265075
Total Phosphorus (P)	mg/L	0.0068	0.0032	0.0042	<0.0020	<0.0020	0.0020	8265075
Total Selenium (Se)	mg/L	0.00244	0.000710	0.00236	<0.000040	<0.000040	0.000040	8265075
Total Silicon (Si)	mg/L	2.31	2.93	2.43	<0.050	<0.050	0.050	8265075
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8265075
Total Strontium (Sr)	mg/L	0.129	0.170	0.134	<0.000050	<0.000050	0.000050	8265075
Total Thallium (Tl)	mg/L	0.0000040	<0.0000020	0.0000040	<0.0000020	<0.0000020	0.0000020	8265075
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8265075
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00724	<0.00050	<0.00050	0.00050	8265075
Total Uranium (U)	mg/L	0.00399	0.00175	0.00386	<0.0000020	<0.0000020	0.0000020	8265075
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00042	<0.00020	<0.00020	0.00020	8265075
Total Zinc (Zn)	mg/L	0.0227	0.00062	0.0242	0.00040	<0.00010	0.00010	8265075

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OP1398	OP1403	OP1405	OP1410	OP1411		
Sampling Date		2016/05/05 12:19	2016/05/04 13:54	2016/05/04 11:27	2016/05/03 15:07	2016/05/06 11:50		
COC Number		08420816	08420816	08420816	08420817	08420817		
	UNITS	**KZ-2**	**KZ-16**	**KZ-19**	**KZ-28**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8265075
Total Calcium (Ca)	mg/L	37.4	50.6	38.1	<0.050	<0.050	0.050	8264442
Total Magnesium (Mg)	mg/L	5.83	9.91	5.87	<0.050	<0.050	0.050	8264442
Total Potassium (K)	mg/L	2.24	1.17	2.26	<0.050	<0.050	0.050	8264442
Total Sodium (Na)	mg/L	0.717	0.955	0.735	<0.050	<0.050	0.050	8264442
Total Sulphur (S)	mg/L	14.2	7.3	14.2	<3.0	<3.0	3.0	8264442

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OP1399	OP1400	OP1401	OP1402	OP1404		
Sampling Date		2016/05/05 10:35	2016/05/05 09:02	2016/05/04 15:57	2016/05/04 12:06	2016/05/04 13:25		
COC Number		08420816	08420816	08420816	08420816	08420816		
	UNITS	KZ-6	KZ-7	KZ-9	KZ-15	KZ-17	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	118	114	121	169	165	0.50	8264070
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8265985
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0095	0.0587	0.0422	0.0125	0.0181	0.0030	8265052
Total Antimony (Sb)	mg/L	<0.000050	0.000070	<0.000050	<0.000050	<0.000050	0.000050	8265052
Total Arsenic (As)	mg/L	0.000109	0.000622	0.000380	0.000554	0.000998	0.000020	8265052
Total Barium (Ba)	mg/L	0.0363	0.0633	0.0656	0.0629	0.0619	0.00010	8265052
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8265052
Total Bismuth (Bi)	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	8265052
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8265052
Total Cadmium (Cd)	mg/L	0.0000200	0.000170	0.0000760	0.0000310	0.0000520	0.0000050	8265052
Total Chromium (Cr)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8265052
Total Cobalt (Co)	mg/L	0.000019	0.000076	0.000105	0.000036	0.000060	0.000010	8265052
Total Copper (Cu)	mg/L	0.00080	0.00134	0.00124	0.00072	0.00088	0.00020	8265052
Total Iron (Fe)	mg/L	0.0378	0.506	0.527	0.146	0.300	0.0050	8265052
Total Lead (Pb)	mg/L	<0.000050	0.000631	0.000283	0.000062	0.000115	0.000050	8265052
Total Lithium (Li)	mg/L	0.00081	0.00236	0.00248	0.00277	0.00322	0.00050	8265052
Total Manganese (Mn)	mg/L	0.00175	0.0418	0.0573	0.0218	0.0489	0.00010	8265052
Total Molybdenum (Mo)	mg/L	0.000506	0.000536	0.000571	0.00101	0.00149	0.000050	8265052
Total Nickel (Ni)	mg/L	0.00043	0.00067	0.00070	0.00075	0.00101	0.00010	8265052
Total Phosphorus (P)	mg/L	<0.010	<0.010	<0.010	<0.010	0.011	0.010	8265052
Total Selenium (Se)	mg/L	0.000797	0.000652	0.000627	0.000742	0.000756	0.000040	8265052
Total Silicon (Si)	mg/L	2.53	2.70	2.78	3.08	3.10	0.10	8265052
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8265052
Total Strontium (Sr)	mg/L	0.117	0.125	0.136	0.166	0.161	0.000050	8265052
Total Thallium (Tl)	mg/L	0.0000020	0.0000030	0.0000020	<0.0000020	<0.0000020	0.0000020	8265052
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8265052
Total Titanium (Ti)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8265052
Total Uranium (U)	mg/L	0.000691	0.000796	0.000851	0.00255	0.00315	0.0000050	8265052
Total Vanadium (V)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8265052
Total Zinc (Zn)	mg/L	<0.0010	0.0350	0.0134	0.0034	0.0064	0.0010	8265052

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OP1399	OP1400	OP1401	OP1402	OP1404		
Sampling Date		2016/05/05 10:35	2016/05/05 09:02	2016/05/04 15:57	2016/05/04 12:06	2016/05/04 13:25		
COC Number		08420816	08420816	08420816	08420816	08420816		
	UNITS	**KZ-6**	**KZ-7**	**KZ-9**	**KZ-15**	**KZ-17**	**RDL**	**QC Batch**
Total Zirconium (Zr)	mg/L	<0.00010	0.00013	<0.00010	<0.00010	<0.00010	0.00010	8265052
Total Calcium (Ca)	mg/L	39.1	37.6	40.2	50.1	48.5	0.25	8264442
Total Magnesium (Mg)	mg/L	4.95	4.79	4.93	10.7	10.6	0.25	8264442
Total Potassium (K)	mg/L	1.41	1.66	1.59	1.24	1.38	0.25	8264442
Total Sodium (Na)	mg/L	0.49	0.74	0.80	0.95	0.92	0.25	8264442
Total Sulphur (S)	mg/L	<15	<15	<15	<15	<15	15	8264442

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OP1407	OP1408	OP1409		
Sampling Date		2016/05/04 10:11	2016/05/04 08:53	2016/05/03 13:59		
COC Number		08420817	08420817	08420817		
	UNITS	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	193	196	207	0.50	8264070
Elements						
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8265985
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.0103	0.0085	0.0139	0.0030	8265052
Total Antimony (Sb)	mg/L	0.000098	0.000083	0.000081	0.000050	8265052
Total Arsenic (As)	mg/L	0.00373	0.00227	0.00129	0.000020	8265052
Total Barium (Ba)	mg/L	0.0504	0.0646	0.0600	0.00010	8265052
Total Beryllium (Be)	mg/L	0.000010	<0.000010	<0.000010	0.000010	8265052
Total Bismuth (Bi)	mg/L	<0.000020	<0.000020	<0.000020	0.000020	8265052
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	0.050	8265052
Total Cadmium (Cd)	mg/L	0.0000190	0.0000200	0.0000210	0.0000050	8265052
Total Chromium (Cr)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8265052
Total Cobalt (Co)	mg/L	0.000149	0.000094	0.000048	0.000010	8265052
Total Copper (Cu)	mg/L	0.00079	0.00067	0.00083	0.00020	8265052
Total Iron (Fe)	mg/L	0.811	0.459	0.270	0.0050	8265052
Total Lead (Pb)	mg/L	<0.000050	<0.000050	<0.000050	0.000050	8265052
Total Lithium (Li)	mg/L	0.00415	0.00460	0.00458	0.00050	8265052
Total Manganese (Mn)	mg/L	0.110	0.0616	0.0161	0.00010	8265052
Total Molybdenum (Mo)	mg/L	0.00193	0.00169	0.00126	0.000050	8265052
Total Nickel (Ni)	mg/L	0.00276	0.00177	0.00128	0.00010	8265052
Total Phosphorus (P)	mg/L	0.017	0.010	<0.010	0.010	8265052
Total Selenium (Se)	mg/L	0.000343	0.000564	0.000535	0.000040	8265052
Total Silicon (Si)	mg/L	3.92	3.51	3.49	0.10	8265052
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8265052
Total Strontium (Sr)	mg/L	0.153	0.176	0.190	0.000050	8265052
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8265052
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8265052
Total Titanium (Ti)	mg/L	<0.0050	<0.0050	<0.0050	0.0050	8265052
Total Uranium (U)	mg/L	0.00214	0.00288	0.00263	0.0000050	8265052
Total Vanadium (V)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8265052
Total Zinc (Zn)	mg/L	0.0020	0.0018	0.0012	0.0010	8265052
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OP1407	OP1408	OP1409		
Sampling Date		2016/05/04 10:11	2016/05/04 08:53	2016/05/03 13:59		
COC Number		08420817	08420817	08420817		
	UNITS	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Total Zirconium (Zr)	mg/L	0.00019	0.00011	0.00011	0.00010	8265052
Total Calcium (Ca)	mg/L	48.1	52.1	54.9	0.25	8264442
Total Magnesium (Mg)	mg/L	17.7	16.0	17.1	0.25	8264442
Total Potassium (K)	mg/L	1.52	1.43	1.32	0.25	8264442
Total Sodium (Na)	mg/L	1.19	1.21	1.36	0.25	8264442
Total Sulphur (S)	mg/L	<15	<15	<15	15	8264442
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1398
Sample ID: KZ-2
Matrix: Water

Collected: 2016/05/05
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265059	N/A	2016/05/10	Name Redacted
Alkalinity - Water	AT/ALK	8265235	2016/05/10	2016/05/10	
Chloride by Automated Colourimetry	KONE/COL	8265612	N/A	2016/05/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	
Conductance - water	AT/ALK	8265240	N/A	2016/05/10	
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	
Ion Balance	CALC	8264161	N/A	2016/05/11	
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/10	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	
Elements by ICPMS Low Level (total)	ICP/CRCM	8265075	N/A	2016/05/11	
Ammonia-N (Unpreserved)	KONE/COL	8266220	N/A	2016/05/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265729	N/A	2016/05/10	
Nitrite (N) (low level)	TRAA/COL	8265730	N/A	2016/05/10	
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	
pH Water	AT/ALK	8265241	N/A	2016/05/10	
Sulphate by Automated Colourimetry	KONE/COL	8265613	N/A	2016/05/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265390	2016/05/10	2016/05/10	
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	

Maxxam ID: OP1398 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2016/05/05
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265059	N/A	2016/05/10	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	
Ammonia-N (Unpreserved)	KONE/COL	8266220	N/A	2016/05/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265729	N/A	2016/05/10	
Nitrite (N) (low level)	TRAA/COL	8265730	N/A	2016/05/10	
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1399
Sample ID: KZ-6
Matrix: Water

Collected: 2016/05/05
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265061	N/A	2016/05/10	Name Redacted
Alkalinity - Water	AT/ALK	8265245	2016/05/10	2016/05/10	
Chloride by Automated Colourimetry	KONE/COL	8265614	N/A	2016/05/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	
Conductance - water	AT/ALK	8265255	N/A	2016/05/10	
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	
Ion Balance	CALC	8264161	N/A	2016/05/11	
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/10	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8265052	2016/05/10	2016/05/10	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	
Ammonia-N (Unpreserved)	KONE/COL	8266223	N/A	2016/05/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265731	N/A	2016/05/10	
Nitrite (N) (low level)	TRAA/COL	8265732	N/A	2016/05/10	
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	
pH Water	AT/ALK	8265256	N/A	2016/05/10	
Sulphate by Automated Colourimetry	KONE/COL	8265616	N/A	2016/05/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265391	2016/05/10	2016/05/10	
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	

Maxxam ID: OP1400
Sample ID: KZ-7
Matrix: Water

Collected: 2016/05/05
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265059	N/A	2016/05/10	Name Redacted
Alkalinity - Water	AT/ALK	8265235	2016/05/10	2016/05/10	
Chloride by Automated Colourimetry	KONE/COL	8265612	N/A	2016/05/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	
Conductance - water	AT/ALK	8265240	N/A	2016/05/10	
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1400
Sample ID: KZ-7
Matrix: Water

Collected: 2016/05/05
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	
Ion Balance	CALC	8264161	N/A	2016/05/11	
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/11	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8265052	2016/05/10	2016/05/10	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	
Ammonia-N (Unpreserved)	KONE/COL	8266220	N/A	2016/05/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265729	N/A	2016/05/10	
Nitrite (N) (low level)	TRAA/COL	8265730	N/A	2016/05/10	
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	
pH Water	AT/ALK	8265241	N/A	2016/05/10	
Sulphate by Automated Colourimetry	KONE/COL	8265613	N/A	2016/05/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265390	2016/05/10	2016/05/10	
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	

Maxxam ID: OP1401
Sample ID: KZ-9
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265059	N/A	2016/05/10	Name Redacted
Alkalinity - Water	AT/ALK	8265235	2016/05/10	2016/05/10	
Chloride by Automated Colourimetry	KONE/COL	8265612	N/A	2016/05/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	
Conductance - water	AT/ALK	8265240	N/A	2016/05/10	
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	
Ion Balance	CALC	8264161	N/A	2016/05/11	
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/11	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8265052	2016/05/10	2016/05/10	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	
Ammonia-N (Unpreserved)	KONE/COL	8266220	N/A	2016/05/11	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1401
Sample ID: KZ-9
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265729	N/A	2016/05/10	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8265730	N/A	2016/05/10	
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	
pH Water	AT/ALK	8265241	N/A	2016/05/10	
Sulphate by Automated Colourimetry	KONE/COL	8265613	N/A	2016/05/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265390	2016/05/10	2016/05/10	
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	

Maxxam ID: OP1401 Dup
Sample ID: KZ-9
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	Name Redacted

Maxxam ID: OP1402
Sample ID: KZ-15
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265059	N/A	2016/05/10	Name Redacted
Alkalinity - Water	AT/ALK	8265245	2016/05/10	2016/05/10	
Chloride by Automated Colourimetry	KONE/COL	8265612	N/A	2016/05/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	
Conductance - water	AT/ALK	8265255	N/A	2016/05/10	
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	
Ion Balance	CALC	8264161	N/A	2016/05/11	
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/11	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8265052	2016/05/10	2016/05/10	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	
Ammonia-N (Unpreserved)	KONE/COL	8266220	N/A	2016/05/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265729	N/A	2016/05/10	
Nitrite (N) (low level)	TRAA/COL	8265730	N/A	2016/05/10	
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1402
Sample ID: KZ-15
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	Name Redacted
pH Water	AT/ALK	8265256	N/A	2016/05/10	
Sulphate by Automated Colourimetry	KONE/COL	8265613	N/A	2016/05/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265390	2016/05/10	2016/05/10	
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	

Maxxam ID: OP1402 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8265245	2016/05/10	2016/05/10	Name Redacted
Conductance - water	AT/ALK	8265255	N/A	2016/05/10	
pH Water	AT/ALK	8265256	N/A	2016/05/10	

Maxxam ID: OP1403
Sample ID: KZ-16
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265059	N/A	2016/05/10	Name Redacted
Alkalinity - Water	AT/ALK	8265235	2016/05/10	2016/05/10	
Chloride by Automated Colourimetry	KONE/COL	8265612	N/A	2016/05/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	
Conductance - water	AT/ALK	8265240	N/A	2016/05/10	
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	
Ion Balance	CALC	8264161	N/A	2016/05/11	
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/11	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	
Elements by ICPMS Low Level (total)	ICP/CRCM	8265075	N/A	2016/05/11	
Ammonia-N (Unpreserved)	KONE/COL	8266220	N/A	2016/05/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265729	N/A	2016/05/10	
Nitrite (N) (low level)	TRAA/COL	8265730	N/A	2016/05/10	
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1403
Sample ID: KZ-16
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH Water	AT/ALK	8265241	N/A	2016/05/10	Name Redacted
Sulphate by Automated Colourimetry	KONE/COL	8265613	N/A	2016/05/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265390	2016/05/10	2016/05/10	
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	

Maxxam ID: OP1404
Sample ID: KZ-17
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265059	N/A	2016/05/10	Name Redacted
Alkalinity - Water	AT/ALK	8265235	2016/05/10	2016/05/10	
Chloride by Automated Colourimetry	KONE/COL	8265612	N/A	2016/05/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	
Conductance - water	AT/ALK	8265240	N/A	2016/05/10	
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	
Ion Balance	CALC	8264161	N/A	2016/05/11	
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/11	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8265052	2016/05/10	2016/05/10	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	
Ammonia-N (Unpreserved)	KONE/COL	8266220	N/A	2016/05/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265729	N/A	2016/05/10	
Nitrite (N) (low level)	TRAA/COL	8265730	N/A	2016/05/10	
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	
pH Water	AT/ALK	8265241	N/A	2016/05/10	
Sulphate by Automated Colourimetry	KONE/COL	8265613	N/A	2016/05/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265390	2016/05/10	2016/05/10	
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1405
Sample ID: KZ-19
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265061	N/A	2016/05/10	Name Redacted
Alkalinity - Water	AT/ALK	8265245	2016/05/10	2016/05/10	
Chloride by Automated Colourimetry	KONE/COL	8265614	N/A	2016/05/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	
Conductance - water	AT/ALK	8265255	N/A	2016/05/10	
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	
Ion Balance	CALC	8264161	N/A	2016/05/11	
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/11	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	
Elements by ICPMS Low Level (total)	ICP/CRCM	8265075	N/A	2016/05/11	
Ammonia-N (Unpreserved)	KONE/COL	8266223	N/A	2016/05/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265731	N/A	2016/05/10	
Nitrite (N) (low level)	TRAA/COL	8265732	N/A	2016/05/10	
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	
pH Water	AT/ALK	8265256	N/A	2016/05/10	
Sulphate by Automated Colourimetry	KONE/COL	8265616	N/A	2016/05/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265391	2016/05/10	2016/05/10	
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	

Maxxam ID: OP1407
Sample ID: KZ-21
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265059	N/A	2016/05/10	Name Redacted
Alkalinity - Water	AT/ALK	8265235	2016/05/10	2016/05/10	
Chloride by Automated Colourimetry	KONE/COL	8265612	N/A	2016/05/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	
Conductance - water	AT/ALK	8265240	N/A	2016/05/10	
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1407
Sample ID: KZ-21
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	
Ion Balance	CALC	8264161	N/A	2016/05/11	
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/11	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8265052	2016/05/10	2016/05/10	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	
Ammonia-N (Unpreserved)	KONE/COL	8266220	N/A	2016/05/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265729	N/A	2016/05/10	
Nitrite (N) (low level)	TRAA/COL	8265730	N/A	2016/05/10	
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	
pH Water	AT/ALK	8265241	N/A	2016/05/10	
Sulphate by Automated Colourimetry	KONE/COL	8265613	N/A	2016/05/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265390	2016/05/10	2016/05/10	
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	

Maxxam ID: OP1408
Sample ID: KZ-22
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265061	N/A	2016/05/10	Name Redacted
Alkalinity - Water	AT/ALK	8265245	2016/05/10	2016/05/10	
Chloride by Automated Colourimetry	KONE/COL	8265614	N/A	2016/05/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	
Conductance - water	AT/ALK	8265255	N/A	2016/05/10	
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	
Ion Balance	CALC	8264161	N/A	2016/05/11	
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/11	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8265052	2016/05/10	2016/05/10	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	
Ammonia-N (Unpreserved)	KONE/COL	8266223	N/A	2016/05/11	

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1408
Sample ID: KZ-22
Matrix: Water

Collected: 2016/05/04
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265731	N/A	2016/05/10	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8265732	N/A	2016/05/10	
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	
pH Water	AT/ALK	8265256	N/A	2016/05/10	
Sulphate by Automated Colourimetry	KONE/COL	8265616	N/A	2016/05/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265391	2016/05/10	2016/05/10	
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	

Maxxam ID: OP1409
Sample ID: KZ-26
Matrix: Water

Collected: 2016/05/03
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265059	N/A	2016/05/10	Name Redacted
Alkalinity - Water	AT/ALK	8265235	2016/05/10	2016/05/10	
Chloride by Automated Colourimetry	KONE/COL	8265612	N/A	2016/05/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	
Conductance - water	AT/ALK	8265240	N/A	2016/05/10	
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	
Ion Balance	CALC	8264161	N/A	2016/05/11	
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/11	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8265052	2016/05/10	2016/05/10	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	
Ammonia-N (Unpreserved)	KONE/COL	8266220	N/A	2016/05/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265729	N/A	2016/05/10	
Nitrite (N) (low level)	TRAA/COL	8265730	N/A	2016/05/10	
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	
pH Water	AT/ALK	8265241	N/A	2016/05/10	
Sulphate by Automated Colourimetry	KONE/COL	8265613	N/A	2016/05/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265390	2016/05/10	2016/05/10	
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1410
Sample ID: KZ-28
Matrix: Water

Collected: 2016/05/03
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265059	N/A	2016/05/10	Name Redacted
Alkalinity - Water	AT/ALK	8265235	2016/05/10	2016/05/10	
Chloride by Automated Colourimetry	KONE/COL	8265612	N/A	2016/05/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8265288	N/A	2016/05/10	
Conductance - water	AT/ALK	8265240	N/A	2016/05/10	
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	
Ion Balance	CALC	8264161	N/A	2016/05/11	
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/10	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	
Elements by ICPMS Low Level (total)	ICP/CRCM	8265075	N/A	2016/05/11	
Ammonia-N (Unpreserved)	KONE/COL	8266220	N/A	2016/05/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265729	N/A	2016/05/10	
Nitrite (N) (low level)	TRAA/COL	8265730	N/A	2016/05/10	
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	
Filter and HNO3 Preserve for Metals	ICP	8265017	N/A	2016/05/10	
pH Water	AT/ALK	8265241	N/A	2016/05/10	
Sulphate by Automated Colourimetry	KONE/COL	8265613	N/A	2016/05/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265390	2016/05/10	2016/05/10	
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	

Maxxam ID: OP1410 Dup
Sample ID: KZ-28
Matrix: Water

Collected: 2016/05/03
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/10	Name Redacted
Elements by ICPMS Low Level (total)	ICP/CRCM	8265075	N/A	2016/05/11	

Maxxam ID: OP1411
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/05/06
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8265061	N/A	2016/05/10	Name Redacted
Alkalinity - Water	AT/ALK	8265245	2016/05/10	2016/05/10	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OP1411
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/05/06
Shipped:
Received: 2016/05/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8265614	N/A	2016/05/10	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8265317	N/A	2016/05/10	
Cyanide WAD (weak acid dissociable)	TECH/COL	8265322	N/A	2016/05/10	
Colour (True) by Kone Lab	KONE	8265376	N/A	2016/05/10	
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8263437	N/A	2016/05/10	
Conductance - water	AT/ALK	8265255	N/A	2016/05/10	
Fluoride	ISE/ISE	8266847	N/A	2016/05/11	
Hardness Total (calculated as CaCO3)	CALC	8264070	N/A	2016/05/11	
Hardness (calculated as CaCO3)	CALC	8264028	N/A	2016/05/11	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8265992	N/A	2016/05/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8265985	2016/05/11	2016/05/11	
Ion Balance	CALC	8264161	N/A	2016/05/11	
Sum of cations, anions	CALC	8264162	N/A	2016/05/11	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8264201	N/A	2016/05/11	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8265346	N/A	2016/05/10	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8264442	N/A	2016/05/11	
Elements by ICPMS Low Level (total)	ICP/CRCM	8265075	N/A	2016/05/11	
Ammonia-N (Unpreserved)	KONE/COL	8266223	N/A	2016/05/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8265731	N/A	2016/05/10	
Nitrite (N) (low level)	TRAA/COL	8265732	N/A	2016/05/10	
Nitrogen - Nitrate (as N)	CALC	8264443	N/A	2016/05/11	
pH Water	AT/ALK	8265256	N/A	2016/05/10	
Sulphate by Automated Colourimetry	KONE/COL	8265616	N/A	2016/05/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8265391	2016/05/10	2016/05/10	
Total Phosphorus - unpreserved	KONE/COL	8265394	N/A	2016/05/10	
Total Suspended Solids-Low Level	BAL/BAL	8264707	2016/05/10	2016/05/11	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	0.0°C
Package 2	3.7°C
Package 3	1.3°C

Sample OP1399-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OP1400-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OP1401-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OP1402-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OP1404-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OP1407-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OP1408-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OP1409-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8263437	Dissolved Organic Carbon (C)	2016/05/10	113	80 - 120	111	80 - 120	<0.50	mg/L	4.2	20
8264707	Total Suspended Solids	2016/05/11			98	80 - 120	<1.0	mg/L		
8265052	Total Aluminum (Al)	2016/05/10	NC	80 - 120	105	80 - 120	<0.0030	mg/L	4.8	20
8265052	Total Antimony (Sb)	2016/05/10	102	80 - 120	100	80 - 120	<0.000050	mg/L	0.97	20
8265052	Total Arsenic (As)	2016/05/10	101	80 - 120	99	80 - 120	<0.000020	mg/L	4.9	20
8265052	Total Barium (Ba)	2016/05/10	NC	80 - 120	102	80 - 120	<0.00010	mg/L	0.0046	20
8265052	Total Beryllium (Be)	2016/05/10	101	80 - 120	97	80 - 120	<0.000010	mg/L	NC	20
8265052	Total Bismuth (Bi)	2016/05/10	98	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8265052	Total Boron (B)	2016/05/10	NC	80 - 120	111	80 - 120	<0.050	mg/L	NC	20
8265052	Total Cadmium (Cd)	2016/05/10	101	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8265052	Total Chromium (Cr)	2016/05/10	101	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8265052	Total Cobalt (Co)	2016/05/10	99	80 - 120	100	80 - 120	<0.000010	mg/L	3.8	20
8265052	Total Copper (Cu)	2016/05/10	99	80 - 120	107	80 - 120	<0.00020	mg/L	0.16	20
8265052	Total Iron (Fe)	2016/05/10	NC	80 - 120	104	80 - 120	<0.0050	mg/L	0.85	20
8265052	Total Lead (Pb)	2016/05/10	104	80 - 120	98	80 - 120	<0.000050	mg/L	4.7	20
8265052	Total Lithium (Li)	2016/05/10	NC	80 - 120	94	80 - 120	<0.00050	mg/L	4.9	20
8265052	Total Manganese (Mn)	2016/05/10	NC	80 - 120	100	80 - 120	<0.00010	mg/L	0.064	20
8265052	Total Molybdenum (Mo)	2016/05/10	NC	80 - 120	100	80 - 120	<0.000050	mg/L	1.8	20
8265052	Total Nickel (Ni)	2016/05/10	95	80 - 120	100	80 - 120	<0.00010	mg/L	0.98	20
8265052	Total Phosphorus (P)	2016/05/10					<0.010	mg/L		
8265052	Total Selenium (Se)	2016/05/10	101	80 - 120	98	80 - 120	<0.000040	mg/L	NC	20
8265052	Total Silicon (Si)	2016/05/10					<0.10	mg/L	1.8	20
8265052	Total Silver (Ag)	2016/05/10	120	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8265052	Total Strontium (Sr)	2016/05/10	NC	80 - 120	102	80 - 120	<0.000050	mg/L	0.80	20
8265052	Total Thallium (Tl)	2016/05/10	89	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8265052	Total Tin (Sn)	2016/05/10	90	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
8265052	Total Titanium (Ti)	2016/05/10	NC	80 - 120	105	80 - 120	<0.0050	mg/L	NC	20
8265052	Total Uranium (U)	2016/05/10	103	80 - 120	96	80 - 120	<0.0000050	mg/L	5.1	20
8265052	Total Vanadium (V)	2016/05/10	100	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8265052	Total Zinc (Zn)	2016/05/10	NC	80 - 120	107	80 - 120	<0.0010	mg/L	0.38	20
8265052	Total Zirconium (Zr)	2016/05/10					<0.00010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8265059	Acidity (pH 4.5)	2016/05/10					<0.50	mg/L	NC	20
8265059	Acidity (pH 8.3)	2016/05/10			99	80 - 120	<0.50	mg/L	NC	20
8265061	Acidity (pH 4.5)	2016/05/10					<0.50	mg/L	NC	20
8265061	Acidity (pH 8.3)	2016/05/10			99	80 - 120	<0.50	mg/L	NC	20
8265075	Total Aluminum (Al)	2016/05/11	107	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8265075	Total Antimony (Sb)	2016/05/11	103	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8265075	Total Arsenic (As)	2016/05/11	102	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8265075	Total Barium (Ba)	2016/05/11	104	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8265075	Total Beryllium (Be)	2016/05/11	104	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8265075	Total Bismuth (Bi)	2016/05/11	101	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8265075	Total Boron (B)	2016/05/11	108	80 - 120	107	80 - 120	<0.010	mg/L	NC	20
8265075	Total Cadmium (Cd)	2016/05/11	105	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8265075	Total Chromium (Cr)	2016/05/11	95	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8265075	Total Cobalt (Co)	2016/05/11	99	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8265075	Total Copper (Cu)	2016/05/11	100	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
8265075	Total Iron (Fe)	2016/05/11	103	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20
8265075	Total Lead (Pb)	2016/05/11	101	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8265075	Total Lithium (Li)	2016/05/11	104	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8265075	Total Manganese (Mn)	2016/05/11	100	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
8265075	Total Molybdenum (Mo)	2016/05/11	100	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8265075	Total Nickel (Ni)	2016/05/11	98	80 - 120	101	80 - 120	0.000024, RDL=0.000020	mg/L	NC	20
8265075	Total Phosphorus (P)	2016/05/11					<0.0020	mg/L	NC	20
8265075	Total Selenium (Se)	2016/05/11	100	80 - 120	96	80 - 120	<0.000040	mg/L	NC	20
8265075	Total Silicon (Si)	2016/05/11					<0.050	mg/L	NC	20
8265075	Total Silver (Ag)	2016/05/11	102	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8265075	Total Strontium (Sr)	2016/05/11	97	80 - 120	105	80 - 120	<0.000050	mg/L	NC	20
8265075	Total Thallium (Tl)	2016/05/11	110	80 - 120	110	80 - 120	<0.0000020	mg/L	NC	20
8265075	Total Tin (Sn)	2016/05/11	103	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8265075	Total Titanium (Ti)	2016/05/11	96	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8265075	Total Uranium (U)	2016/05/11	101	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8265075	Total Vanadium (V)	2016/05/11	98	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8265075	Total Zinc (Zn)	2016/05/11	108	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8265075	Total Zirconium (Zr)	2016/05/11					<0.00010	mg/L	NC	20
8265235	Alkalinity (PP as CaCO3)	2016/05/10					<0.50	mg/L	NC	20
8265235	Alkalinity (Total as CaCO3)	2016/05/10	NC	80 - 120	98	80 - 120	<0.50	mg/L	0.20	20
8265235	Bicarbonate (HCO3)	2016/05/10					<0.50	mg/L	0.20	20
8265235	Carbonate (CO3)	2016/05/10					<0.50	mg/L	NC	20
8265235	Hydroxide (OH)	2016/05/10					<0.50	mg/L	NC	20
8265240	Conductivity	2016/05/10			100	80 - 120	<1.0	uS/cm	0.29	20
8265241	pH	2016/05/10			102	97 - 103			0.25	N/A
8265245	Alkalinity (PP as CaCO3)	2016/05/10					<0.50	mg/L	NC	20
8265245	Alkalinity (Total as CaCO3)	2016/05/10	NC	80 - 120	100	80 - 120	0.77, RDL=0.50	mg/L	1.3	20
8265245	Bicarbonate (HCO3)	2016/05/10					0.94, RDL=0.50	mg/L	1.3	20
8265245	Carbonate (CO3)	2016/05/10					<0.50	mg/L	NC	20
8265245	Hydroxide (OH)	2016/05/10					<0.50	mg/L	NC	20
8265255	Conductivity	2016/05/10			102	80 - 120	<1.0	uS/cm	0	20
8265256	pH	2016/05/10			102	97 - 103			0.61	N/A
8265288	Dissolved Organic Carbon (C)	2016/05/10	96	80 - 120	109	80 - 120	<0.50	mg/L	8.3	20
8265317	Strong Acid Dissoc. Cyanide (CN)	2016/05/10	101	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8265322	Weak Acid Dissoc. Cyanide (CN)	2016/05/10	106	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8265346	Dissolved Aluminum (Al)	2016/05/10	98	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8265346	Dissolved Antimony (Sb)	2016/05/10	99	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8265346	Dissolved Arsenic (As)	2016/05/10	102	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8265346	Dissolved Barium (Ba)	2016/05/10	100	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8265346	Dissolved Beryllium (Be)	2016/05/10	98	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
8265346	Dissolved Bismuth (Bi)	2016/05/10	98	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8265346	Dissolved Boron (B)	2016/05/10	104	80 - 120	96	80 - 120	<0.010	mg/L	NC	20
8265346	Dissolved Cadmium (Cd)	2016/05/10	115	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8265346	Dissolved Chromium (Cr)	2016/05/10	96	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8265346	Dissolved Cobalt (Co)	2016/05/10	99	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8265346	Dissolved Copper (Cu)	2016/05/10	98	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8265346	Dissolved Iron (Fe)	2016/05/10	105	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
8265346	Dissolved Lead (Pb)	2016/05/10	99	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8265346	Dissolved Lithium (Li)	2016/05/10	94	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8265346	Dissolved Manganese (Mn)	2016/05/10	99	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8265346	Dissolved Molybdenum (Mo)	2016/05/10	96	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8265346	Dissolved Nickel (Ni)	2016/05/10	99	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8265346	Dissolved Phosphorus (P)	2016/05/10					<0.0020	mg/L	NC	20
8265346	Dissolved Selenium (Se)	2016/05/10	100	80 - 120	97	80 - 120	<0.000040	mg/L	NC	20
8265346	Dissolved Silicon (Si)	2016/05/10					<0.050	mg/L	NC	20
8265346	Dissolved Silver (Ag)	2016/05/10	101	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8265346	Dissolved Strontium (Sr)	2016/05/10	97	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8265346	Dissolved Thallium (Tl)	2016/05/10	107	80 - 120	108	80 - 120	<0.0000020	mg/L	NC	20
8265346	Dissolved Tin (Sn)	2016/05/10	102	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8265346	Dissolved Titanium (Ti)	2016/05/10	98	80 - 120	94	80 - 120	<0.00050	mg/L	NC	20
8265346	Dissolved Uranium (U)	2016/05/10	99	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8265346	Dissolved Vanadium (V)	2016/05/10	96	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8265346	Dissolved Zinc (Zn)	2016/05/10	108	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8265346	Dissolved Zirconium (Zr)	2016/05/10					<0.00010	mg/L	NC	20
8265376	True Colour	2016/05/10			111	80 - 120	<5.0	Col. Unit	NC	20
8265390	Dissolved Phosphorus (P)	2016/05/10	99	80 - 120	97	80 - 120	<0.0020	mg/L		
8265391	Dissolved Phosphorus (P)	2016/05/10	NC	80 - 120	97	80 - 120	<0.0020	mg/L	3.0	20
8265394	Total Phosphorus (P)	2016/05/10	104	80 - 120	96	80 - 120	<0.0020	mg/L	NC	20
8265612	Dissolved Chloride (Cl)	2016/05/10	112	80 - 120	97	80 - 120	0.94, RDL=0.50	mg/L	NC	20
8265613	Dissolved Sulphate (SO4)	2016/05/10	NC	80 - 120	93	80 - 120	<0.50	mg/L	0.36	20
8265614	Dissolved Chloride (Cl)	2016/05/10			97	80 - 120	0.63, RDL=0.50	mg/L		
8265616	Dissolved Sulphate (SO4)	2016/05/10			94	80 - 120	<0.50	mg/L		
8265729	Nitrate plus Nitrite (N)	2016/05/10	107	80 - 120	110	80 - 120	<0.0020	mg/L	0.21	25
8265730	Nitrite (N)	2016/05/10	96	80 - 120	100	80 - 120	<0.0020	mg/L	NC	25
8265731	Nitrate plus Nitrite (N)	2016/05/10	107	80 - 120	110	80 - 120	<0.0020	mg/L	1.8	25
8265732	Nitrite (N)	2016/05/10	101	80 - 120	101	80 - 120	<0.0020	mg/L	NC	25
8265985	Total Mercury (Hg)	2016/05/11	93	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8265992	Dissolved Mercury (Hg)	2016/05/11	94	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8266220	Total Ammonia (N)	2016/05/11	92	80 - 120	95	80 - 120	<0.0050	mg/L	NC	20
8266223	Total Ammonia (N)	2016/05/11	98	80 - 120	97	80 - 120	<0.0050	mg/L	NC	20
8266847	Fluoride (F)	2016/05/11	96	80 - 120	98	80 - 120	0.015, RDL=0.010	mg/L	0	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B635308
Report Date: 2016/05/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

B635308_COC

CHAIN OF CUSTODY RE

Burnaby: 4606 Ca[illegible] Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08420816

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:
						Rush Confirmation #:

Regulatory Criteria

[ ] BC CSR Soil [ ] BC CSR Water
[ ] CCME (Specify) [ ] Other (Specify)
[ ] Drinking Water [ ] BC Water Quality

Special Instructions

[ ] Return Cooler
[ ] Ship Sample Bottles (Please Specify)
USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-2		2016/05/05	12:19	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Hg filtered & preserved as indicated on vials
3	KZ-6		2016/05/05	10:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Hg filtered & preserved as indicated on vials
4	KZ-7		2016/05/05	09:02	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Hg filtered & preserved as indicated on vials
5	KZ-9		2016/05/04	15:57	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Hg raw.
~~6~~	~~KZ-13~~		~~[illegible]~~		~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~12~~		
7	KZ-15		2016/05/04	12:06	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Hg Raw
8	KZ-16		2016/05/04	13:54	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Hg Raw
9	KZ-17		2016/05/04	13:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Hg Raw
10	KZ-19		2016/05/04	11:27	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Hg filtered and preserved as indicated on vials.

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	~~See Temp Bell~~ 2016/05/[illegible]
		3,3,4 (7.7
N	A	4,4,4 (7.8
		4,4,4 8.8

COOLING MEDIA PRESENT Y / N

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature	2016/05/05 ~~22/03/2016~~	11:50 ~~13:30~~	Signature Redacted	2016/05/09	09:45	B635308

3,3,4
4,4,4

Maxxam
A Bureau Veritas Group Company

B635308_COC

Burnaby: 4606

CHAIN OF CUSTODY RE

COC #: 08420817

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Andrew MacPhail	Date Required:

Rush Confirmation #:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-21		2016/05/04	~~9:30~~ 10:11	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Hg both raw
2	KZ-22		2016/05/04	~~10:30~~ 08:53	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		Hg both raw
3	KZ-26		2016/05/03	~~15:30~~ 13:59	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		filtered one Hg Vial & Labelled
4	KZ-28		2016/05/03	15:07	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	12		filtered on Hg Vial & Labelled
5	Trip Blank		N/A	N/A	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	13		
6																					
7																					
8																					
9																					
10																					

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	2016/05/09
		3,3,4
N/A		4,4,4
		4,4,4

COOLING MEDIA PRESENT Y / N

RECEIVED IN WHITEHORSE
BY [signature] @ 1150
2016 -05- 06
TEMP: Ø / Ø / Ø cooler

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2016/05/06	11:50	Signature Redacted	2016/05/09	09:45	B635308

3,3,4
4,4,4

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08421149

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2016/05/27
Report #: R2187628
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B638452
Received: 2016/05/17, 13:00

Sample Matrix: Water
Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	9	N/A	2016/05/19	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	9	2016/05/19	2016/05/20	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	9	N/A	2016/05/19	BBY6SOP-00011	SM 22 4500-Cl- G m
Cyanide SAD (strong acid dissociable)	9	N/A	2016/05/24	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	9	N/A	2016/05/24	BBY6SOP-00004	SM 22 4500-CN O m
Colour (True) by Kone Lab	9	N/A	2016/05/19	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	9	N/A	2016/05/20	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	9	N/A	2016/05/20	BBY6SOP-00026	SM 22 2510 B m
Fluoride	9	N/A	2016/05/19	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	9	N/A	2016/05/24	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	9	N/A	2016/05/24	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	9	N/A	2016/05/20	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	9	2016/05/20	2016/05/20	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	9	N/A	2016/05/25	BBY WI-00033	SM 22 1030E
Sum of cations, anions	9	N/A	2016/05/25	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	9	N/A	2016/05/24	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	9	N/A	2016/05/20	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	3	2016/05/19	2016/05/20	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Digested LL (total)	6	2016/05/20	2016/05/20	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	9	N/A	2016/05/24	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Unpreserved)	9	N/A	2016/05/19	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	9	N/A	2016/05/19	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	9	N/A	2016/05/19	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	9	N/A	2016/05/24	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	9	N/A	2016/05/19	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	9	N/A	2016/05/20	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	4	N/A	2016/05/19	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	5	N/A	2016/05/20	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	9	2016/05/19	2016/05/19	BBY6SOP-00013	SM 22 4500-P E m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08421149

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2016/05/27
Report #: R2187628
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B638452
Received: 2016/05/17, 13:00

Sample Matrix: Water
Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Phosphorus - unpreserved	9	N/A	2016/05/19	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	9	2016/05/19	2016/05/20	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.

(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OQ7198	OQ7199		OQ7200		OQ7201		
Sampling Date		2016/05/14 10:40	2016/05/14 10:15		2016/05/16 08:22		2016/05/15 17:02		
COC Number		08421149	08421149		08421149		08421149		
	UNITS	KZ-6	KZ-7	QC Batch	KZ-13	QC Batch	KZ-15	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	2.8	2.7	8273224	1.3	8273224	2.4	N/A	8273224
Cation Sum	meq/L	2.8	2.6	8273224	1.3	8273224	2.4	N/A	8273224
Filter and HNO3 Preservation	N/A	LAB	LAB	8274227	LAB	8274227	LAB	N/A	8274227
Ion Balance	N/A	0.98	0.96	8273223	1.0	8273223	1.0	0.010	8273223
Nitrate (N)	mg/L	0.0605	0.0639	8273090	0.0344	8273090	0.0533	0.0020	8273090
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00051	0.00051	8277533	0.00053	8277533	0.00055	0.00050	8277533
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8277538	<0.00050	8277538	0.00053	0.00050	8277538
Fluoride (F)	mg/L	0.064	0.065	8275672	0.044	8275672	0.074	0.010	8275672
Dissolved Organic Carbon (C)	mg/L	2.48	2.55	8276144	3.17	8276144	2.12	0.50	8276144
Acidity (pH 4.5)	mg/L	<0.50	<0.50	8274251	<0.50	8274251	<0.50	0.50	8274251
Alkalinity (Total as CaCO3)	mg/L	119	110	8274287	53.5	8274287	102	0.50	8274287
Acidity (pH 8.3)	mg/L	<0.50	<0.50	8274251	<0.50	8274251	<0.50	0.50	8274251
Alkalinity (PP as CaCO3)	mg/L	0.96	<0.50	8274287	<0.50	8274287	<0.50	0.50	8274287
Bicarbonate (HCO3)	mg/L	143	134	8274287	65.2	8274287	125	0.50	8274287
Carbonate (CO3)	mg/L	1.15	<0.50	8274287	<0.50	8274287	<0.50	0.50	8274287
Hydroxide (OH)	mg/L	<0.50	<0.50	8274287	<0.50	8274287	<0.50	0.50	8274287
Anions									
Dissolved Sulphate (SO4)	mg/L	20.0	23.5	8275948	8.17	8274755	15.8	0.50	8275948
Dissolved Chloride (Cl)	mg/L	0.63	0.59	8274752	0.54	8274752	0.54	0.50	8274752
MISCELLANEOUS									
True Colour	Col. Unit	11.1 (1)	9.4 (1)	8274675	18.3	8274675	14.2 (2)	5.0	8274675
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0034 (1)	0.0069 (1)	8274694	0.0062	8274694	0.0118 (2)	0.0020	8274694
Total Ammonia (N)	mg/L	<0.0050 (1)	0.0062 (1)	8274771	<0.0050	8274771	<0.0050 (2)	0.0050	8274773
Nitrate plus Nitrite (N)	mg/L	0.0605 (1)	0.0639 (1)	8276016	0.0344	8276016	0.0533 (2)	0.0020	8276016
Nitrite (N)	mg/L	<0.0020 (1)	<0.0020 (1)	8276017	<0.0020	8276017	<0.0020 (2)	0.0020	8276017
Total Phosphorus (P)	mg/L	0.0040 (1)	0.0042 (1)	8274697	0.0053	8274697	0.0076 (2)	0.0020	8274697

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Sample arrived to laboratory past recommended hold time.

(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OQ7198	OQ7199		OQ7200		OQ7201		
Sampling Date		2016/05/14 10:40	2016/05/14 10:15		2016/05/16 08:22		2016/05/15 17:02		
COC Number		08421149	08421149		08421149		08421149		
	UNITS	KZ-6	KZ-7	QC Batch	KZ-13	QC Batch	KZ-15	RDL	QC Batch
Physical Properties									
Conductivity	uS/cm	256	250	8274291	119	8274291	221	1.0	8274291
pH	pH	8.31	8.24	8274293	7.99	8274293	8.18		8274293
Physical Properties									
Total Suspended Solids	mg/L	<1.0	<1.0	8273554	1.0	8273554	2.7	1.0	8273554
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OQ7202		OQ7203	OQ7204	OQ7205		
Sampling Date		2016/05/15 17:50		2016/05/15 17:29	2016/05/15 16:10	2016/05/15 15:37		
COC Number		08421149		08421149	08421149	08421149		
	UNITS	KZ-16	QC Batch	KZ-17	KZ-21	KZ-22	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	1.9	8273224	4.0	4.6	3.8	N/A	8273224
Cation Sum	meq/L	1.9	8273224	4.2	4.4	4.1	N/A	8273224
Filter and HNO3 Preservation	N/A	LAB	8274227	LAB	LAB	LAB	N/A	8274227
Ion Balance	N/A	0.99	8273223	1.1	0.95	1.1	0.010	8273223
Nitrate (N)	mg/L	0.0486	8273090	0.0517	<0.0020	0.0137	0.0020	8273090
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00061	8277533	<0.00050	0.00062	0.00056	0.00050	8277533
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8277538	0.00050	<0.00050	0.00054	0.00050	8277538
Fluoride (F)	mg/L	0.065	8275672	0.120	0.190	0.130	0.010	8275675
Dissolved Organic Carbon (C)	mg/L	3.79	8276144	3.08	5.45	3.77	0.50	8276144
Acidity (pH 4.5)	mg/L	<0.50	8274251	<0.50	<0.50	<0.50	0.50	8274251
Alkalinity (Total as CaCO3)	mg/L	82.5	8274287	170	190	161	0.50	8274287
Acidity (pH 8.3)	mg/L	<0.50	8274251	<0.50	<0.50	<0.50	0.50	8274251
Alkalinity (PP as CaCO3)	mg/L	<0.50	8274287	2.33	2.96	2.36	0.50	8274287
Bicarbonate (HCO3)	mg/L	101	8274287	201	225	190	0.50	8274287
Carbonate (CO3)	mg/L	<0.50	8274287	2.80	3.55	2.83	0.50	8274287
Hydroxide (OH)	mg/L	<0.50	8274287	<0.50	<0.50	<0.50	0.50	8274287
Anions								
Dissolved Sulphate (SO4)	mg/L	12.9	8275967	27.8	38.9	28.4	0.50	8274778
Dissolved Chloride (Cl)	mg/L	0.51	8274752	0.77	0.78	0.91	0.50	8274762
MISCELLANEOUS								
True Colour	Col. Unit	16.7 (1)	8274675	<5.0 (1)	19.6 (1)	13.7 (1)	5.0	8274675
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0046 (1)	8274694	0.0038 (1)	0.0160 (1)	0.0072 (1)	0.0020	8274694
Total Ammonia (N)	mg/L	<0.0050 (1)	8274771	0.0112 (1)	<0.0050 (1)	0.0080 (1)	0.0050	8274773
Nitrate plus Nitrite (N)	mg/L	0.0486 (1)	8276016	0.0517 (1)	<0.0020 (1)	0.0137 (1)	0.0020	8276016
Nitrite (N)	mg/L	<0.0020 (1)	8276017	<0.0020 (1)	<0.0020 (1)	<0.0020 (1)	0.0020	8276017
Total Phosphorus (P)	mg/L	0.0044 (1)	8274697	0.0047 (1)	0.0193 (1)	0.0068 (1)	0.0020	8274697
Physical Properties								
Conductivity	uS/cm	179	8274291	355	394	339	1.0	8274291

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OQ7202		OQ7203	OQ7204	OQ7205		
Sampling Date		2016/05/15 17:50		2016/05/15 17:29	2016/05/15 16:10	2016/05/15 15:37		
COC Number		08421149		08421149	08421149	08421149		
	UNITS	**KZ-16**	**QC Batch**	**KZ-17**	**KZ-21**	**KZ-22**	**RDL**	**QC Batch**
pH	pH	8.13	8274293	8.37	8.39	8.38		8274293
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8273554	2.9	2.7	2.3	1.0	8273554
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OQ7206		
Sampling Date		2016/05/14 18:17		
COC Number		08421149		
	UNITS	KZ-26	RDL	QC Batch
Calculated Parameters				
Anion Sum	meq/L	4.8	N/A	8273224
Cation Sum	meq/L	4.6	N/A	8273224
Filter and HNO3 Preservation	N/A	LAB	N/A	8274227
Ion Balance	N/A	0.96	0.010	8273223
Nitrate (N)	mg/L	0.0280	0.0020	8273090
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00050	0.00050	8277533
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8277538
Fluoride (F)	mg/L	0.140	0.010	8275672
Dissolved Organic Carbon (C)	mg/L	3.27	0.50	8276144
Acidity (pH 4.5)	mg/L	<0.50	0.50	8274251
Alkalinity (Total as CaCO3)	mg/L	199	0.50	8274287
Acidity (pH 8.3)	mg/L	<0.50	0.50	8274251
Alkalinity (PP as CaCO3)	mg/L	5.27	0.50	8274287
Bicarbonate (HCO3)	mg/L	229	0.50	8274287
Carbonate (CO3)	mg/L	6.32	0.50	8274287
Hydroxide (OH)	mg/L	<0.50	0.50	8274287
Anions				
Dissolved Sulphate (SO4)	mg/L	37.0	0.50	8275967
Dissolved Chloride (Cl)	mg/L	1.2	0.50	8274752
MISCELLANEOUS				
True Colour	Col. Unit	9.4 (1)	5.0	8274675
Nutrients				
Dissolved Phosphorus (P)	mg/L	0.0039 (1)	0.0020	8274694
Total Ammonia (N)	mg/L	<0.0050 (1)	0.0050	8274771
Nitrate plus Nitrite (N)	mg/L	0.0280 (1)	0.0020	8276016
Nitrite (N)	mg/L	<0.0020 (1)	0.0020	8276017
Total Phosphorus (P)	mg/L	0.0052 (1)	0.0020	8274697
Physical Properties				
Conductivity	uS/cm	417	1.0	8274291

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OQ7206		
Sampling Date		2016/05/14 18:17		
COC Number		08421149		
	UNITS	**KZ-26**	**RDL**	**QC Batch**
pH	pH	8.48		8274293
Physical Properties				
Total Suspended Solids	mg/L	1.1	1.0	8273554
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OQ7198		OQ7199	OQ7200	OQ7201		
Sampling Date		2016/05/14 10:40		2016/05/14 10:15	2016/05/16 08:22	2016/05/15 17:02		
COC Number		08421149		08421149	08421149	08421149		
	UNITS	KZ-6	QC Batch	KZ-7	KZ-13	KZ-15	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	136	8272442	126	59.4	118	0.50	8272442
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8275424	<0.0000020	<0.0000020	<0.0000020	0.0000020	8275424
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00441	8275057	0.00381	0.0108	0.00320	0.00050	8275057
Dissolved Antimony (Sb)	mg/L	<0.000020	8275057	0.000060	0.000020	0.000023	0.000020	8275057
Dissolved Arsenic (As)	mg/L	0.000096	8275057	0.000267	0.000155	0.000261	0.000020	8275057
Dissolved Barium (Ba)	mg/L	0.0406	8275057	0.0626	0.0719	0.0445	0.000020	8275057
Dissolved Beryllium (Be)	mg/L	<0.000010	8275057	<0.000010	<0.000010	<0.000010	0.000010	8275057
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8275057	<0.0000050	<0.0000050	<0.0000050	0.0000050	8275057
Dissolved Boron (B)	mg/L	<0.010	8275057	<0.010	<0.010	<0.010	0.010	8275057
Dissolved Cadmium (Cd)	mg/L	0.0000100	8275057	0.0000590	0.0000120	0.0000130	0.0000050	8275057
Dissolved Chromium (Cr)	mg/L	<0.00010	8275057	<0.00010	<0.00010	<0.00010	0.00010	8275057
Dissolved Cobalt (Co)	mg/L	0.0000130	8275057	0.0000180	0.0000130	0.0000140	0.0000050	8275057
Dissolved Copper (Cu)	mg/L	0.000437	8275057	0.000565	0.000634	0.000705	0.000050	8275057
Dissolved Iron (Fe)	mg/L	0.0093	8275057	0.136	0.0369	0.0156	0.0010	8275057
Dissolved Lead (Pb)	mg/L	<0.0000050	8275057	0.0000470	0.0000070	<0.0000050	0.0000050	8275057
Dissolved Lithium (Li)	mg/L	0.00054	8275057	0.00210	0.00102	0.00126	0.00050	8275057
Dissolved Manganese (Mn)	mg/L	0.000225	8275057	0.0165	0.00559	0.00385	0.000050	8275057
Dissolved Molybdenum (Mo)	mg/L	0.000533	8275057	0.000542	0.000499	0.000652	0.000050	8275057
Dissolved Nickel (Ni)	mg/L	0.000308	8279202	0.000465	0.000451	0.000552	0.000020	8275057
Dissolved Phosphorus (P)	mg/L	<0.0020	8275057	0.0039	0.0065	0.0095	0.0020	8275057
Dissolved Selenium (Se)	mg/L	0.000686	8275057	0.000562	0.000123	0.000403	0.000040	8275057
Dissolved Silicon (Si)	mg/L	2.43	8275057	2.61	2.57	2.30	0.050	8275057
Dissolved Silver (Ag)	mg/L	0.0000050	8275057	<0.0000050	0.0000050	0.0000060	0.0000050	8275057
Dissolved Strontium (Sr)	mg/L	0.133	8275057	0.138	0.0557	0.114	0.000050	8275057
Dissolved Thallium (Tl)	mg/L	0.0000050	8275057	0.0000030	0.0000040	<0.0000020	0.0000020	8275057
Dissolved Tin (Sn)	mg/L	<0.00020	8275057	<0.00020	<0.00020	<0.00020	0.00020	8275057
Dissolved Titanium (Ti)	mg/L	<0.00050	8275057	<0.00050	<0.00050	<0.00050	0.00050	8275057
Dissolved Uranium (U)	mg/L	0.000870	8275057	0.000887	0.000355	0.00128	0.0000020	8275057
Dissolved Vanadium (V)	mg/L	<0.00020	8275057	<0.00020	<0.00020	<0.00020	0.00020	8275057
Dissolved Zinc (Zn)	mg/L	0.00040	8275057	0.0129	0.00165	0.00095	0.00010	8275057
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OQ7198		OQ7199	OQ7200	OQ7201		
Sampling Date		2016/05/14 10:40		2016/05/14 10:15	2016/05/16 08:22	2016/05/15 17:02		
COC Number		08421149		08421149	08421149	08421149		
	UNITS	KZ-6	QC Batch	KZ-7	KZ-13	KZ-15	RDL	QC Batch
Dissolved Zirconium (Zr)	mg/L	<0.00010	8275057	<0.00010	<0.00010	<0.00010	0.00010	8275057
Dissolved Calcium (Ca)	mg/L	44.7	8272825	41.5	20.3	36.6	0.050	8272825
Dissolved Magnesium (Mg)	mg/L	5.88	8272825	5.46	2.14	6.54	0.050	8272825
Dissolved Potassium (K)	mg/L	1.22	8272825	1.47	1.69	1.02	0.050	8272825
Dissolved Sodium (Na)	mg/L	0.604	8272825	0.925	0.719	0.777	0.050	8272825
Dissolved Sulphur (S)	mg/L	6.1	8272825	7.3	<3.0	4.9	3.0	8272825
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OQ7202	OQ7203	OQ7204	OQ7205	OQ7206		
Sampling Date		2016/05/15 17:50	2016/05/15 17:29	2016/05/15 16:10	2016/05/15 15:37	2016/05/14 18:17		
COC Number		08421149	08421149	08421149	08421149	08421149		
	UNITS	KZ-16	KZ-17	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	93.9	206	216	201	225	0.50	8272442
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8275424
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00361	0.00157	0.00130	0.00152	0.00104	0.00050	8275057
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000047	0.000097	0.000057	0.000086	0.000020	8275057
Dissolved Arsenic (As)	mg/L	0.000198	0.000588	0.00148	0.00105	0.000662	0.000020	8275057
Dissolved Barium (Ba)	mg/L	0.0361	0.0701	0.0507	0.0558	0.0660	0.000020	8275057
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8275057
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8275057
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8275057
Dissolved Cadmium (Cd)	mg/L	0.0000110	0.0000220	0.0000050	0.0000100	0.0000060	0.0000050	8275057
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8275057
Dissolved Cobalt (Co)	mg/L	0.0000100	0.0000130	0.0000370	0.0000270	0.0000150	0.0000050	8275057
Dissolved Copper (Cu)	mg/L	0.000723	0.000470	0.000420	0.000539	0.000538	0.000050	8275057
Dissolved Iron (Fe)	mg/L	0.0115	0.0304	0.150	0.0821	0.0217	0.0010	8275057
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000070	<0.0000050	<0.0000050	<0.0000050	0.0000050	8275057
Dissolved Lithium (Li)	mg/L	0.00079	0.00302	0.00430	0.00341	0.00489	0.00050	8275057
Dissolved Manganese (Mn)	mg/L	0.00111	0.0100	0.00830	0.00669	0.00164	0.000050	8275057
Dissolved Molybdenum (Mo)	mg/L	0.000353	0.00172	0.00202	0.00131	0.00124	0.000050	8275057
Dissolved Nickel (Ni)	mg/L	0.000441	0.000711	0.00202	0.00108	0.000876	0.000020	8275057
Dissolved Phosphorus (P)	mg/L	0.0052	0.0033	0.0059	<0.0020	0.0081	0.0020	8275057
Dissolved Selenium (Se)	mg/L	0.000317	0.000866	0.000340	0.000473	0.000549	0.000040	8275057
Dissolved Silicon (Si)	mg/L	2.06	3.27	3.21	2.98	3.41	0.050	8275057
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8275057
Dissolved Strontium (Sr)	mg/L	0.0933	0.191	0.170	0.166	0.207	0.000050	8275057
Dissolved Thallium (Tl)	mg/L	0.0000020	0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8275057
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8275057
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8275057
Dissolved Uranium (U)	mg/L	0.000632	0.00375	0.00244	0.00230	0.00281	0.0000020	8275057
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8275057
Dissolved Zinc (Zn)	mg/L	0.00034	0.00239	0.00029	0.00045	0.00027	0.00010	8275057

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OQ7202	OQ7203	OQ7204	OQ7205	OQ7206		
Sampling Date		2016/05/15 17:50	2016/05/15 17:29	2016/05/15 16:10	2016/05/15 15:37	2016/05/14 18:17		
COC Number		08421149	08421149	08421149	08421149	08421149		
	UNITS	KZ-16	KZ-17	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8275057
Dissolved Calcium (Ca)	mg/L	29.7	62.0	54.4	56.6	59.4	0.050	8272825
Dissolved Magnesium (Mg)	mg/L	4.77	12.4	19.5	14.6	18.7	0.050	8272825
Dissolved Potassium (K)	mg/L	0.907	1.56	1.63	1.42	1.43	0.050	8272825
Dissolved Sodium (Na)	mg/L	0.635	1.27	1.52	1.34	1.70	0.050	8272825
Dissolved Sulphur (S)	mg/L	3.6	8.9	11.0	9.0	11.5	3.0	8272825
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OQ7198		OQ7199	OQ7200		
Sampling Date		2016/05/14 10:40		2016/05/14 10:15	2016/05/16 08:22		
COC Number		08421149		08421149	08421149		
	UNITS	KZ-6	QC Batch	KZ-7	KZ-13	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	131	8272394	124	56.5	0.50	8272394
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	8275459	<0.0000020	<0.0000020	0.0000020	8275530
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0080	8274504	0.0125	0.0200	0.0030	8274504
Total Antimony (Sb)	mg/L	<0.000050	8274504	0.000057	<0.000050	0.000050	8274504
Total Arsenic (As)	mg/L	0.000105	8274504	0.000399	0.000150	0.000020	8274504
Total Barium (Ba)	mg/L	0.0422	8274504	0.0679	0.0768	0.00010	8274504
Total Beryllium (Be)	mg/L	<0.000010	8274504	<0.000010	<0.000010	0.000010	8274504
Total Bismuth (Bi)	mg/L	<0.000020	8274504	<0.000020	<0.000020	0.000020	8274504
Total Boron (B)	mg/L	<0.050	8274504	<0.050	<0.050	0.050	8274504
Total Cadmium (Cd)	mg/L	0.0000210	8274504	0.0000960	0.0000150	0.0000050	8274504
Total Chromium (Cr)	mg/L	<0.00050	8274504	<0.00050	<0.00050	0.00050	8274504
Total Cobalt (Co)	mg/L	0.000017	8274504	0.000034	0.000025	0.000010	8274504
Total Copper (Cu)	mg/L	0.00061	8274504	0.00071	0.00083	0.00020	8274504
Total Iron (Fe)	mg/L	0.0274	8274504	0.314	0.0758	0.0050	8274504
Total Lead (Pb)	mg/L	<0.000050	8274504	0.000149	<0.000050	0.000050	8274504
Total Lithium (Li)	mg/L	0.00058	8274504	0.00218	0.00103	0.00050	8274504
Total Manganese (Mn)	mg/L	0.00307	8274504	0.0272	0.0136	0.00010	8274504
Total Molybdenum (Mo)	mg/L	0.000519	8274504	0.000596	0.000500	0.000050	8274504
Total Nickel (Ni)	mg/L	0.00032	8274504	0.00039	0.00044	0.00010	8274504
Total Phosphorus (P)	mg/L	<0.010	8274504	<0.010	<0.010	0.010	8274504
Total Selenium (Se)	mg/L	0.000822	8274504	0.000643	0.000158	0.000040	8274504
Total Silicon (Si)	mg/L	2.54	8274504	2.63	2.55	0.10	8274504
Total Silver (Ag)	mg/L	<0.0000050	8274504	<0.0000050	<0.0000050	0.0000050	8274504
Total Strontium (Sr)	mg/L	0.135	8274504	0.143	0.0550	0.000050	8274504
Total Thallium (Tl)	mg/L	0.0000020	8274504	0.0000030	0.0000030	0.0000020	8274504
Total Tin (Sn)	mg/L	<0.00020	8274504	<0.00020	<0.00020	0.00020	8274504
Total Titanium (Ti)	mg/L	<0.0050	8274504	<0.0050	<0.0050	0.0050	8274504
Total Uranium (U)	mg/L	0.000915	8274504	0.000937	0.000402	0.0000050	8274504
Total Vanadium (V)	mg/L	<0.00050	8274504	<0.00050	<0.00050	0.00050	8274504
Total Zinc (Zn)	mg/L	<0.0010	8274504	0.0199	0.0022	0.0010	8274504
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OQ7198		OQ7199	OQ7200		
Sampling Date		2016/05/14 10:40		2016/05/14 10:15	2016/05/16 08:22		
COC Number		08421149		08421149	08421149		
	UNITS	KZ-6	QC Batch	KZ-7	KZ-13	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	8274504	<0.00010	<0.00010	0.00010	8274504
Total Calcium (Ca)	mg/L	42.8	8272444	40.7	19.1	0.25	8272444
Total Magnesium (Mg)	mg/L	5.94	8272444	5.53	2.13	0.25	8272444
Total Potassium (K)	mg/L	1.17	8272444	1.46	1.66	0.25	8272444
Total Sodium (Na)	mg/L	0.60	8272444	0.91	0.72	0.25	8272444
Total Sulphur (S)	mg/L	<15	8272444	<15	<15	15	8272444
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OQ7201	OQ7202	OQ7203	OQ7204	OQ7205		
Sampling Date		2016/05/15 17:02	2016/05/15 17:50	2016/05/15 17:29	2016/05/15 16:10	2016/05/15 15:37		
COC Number		08421149	08421149	08421149	08421149	08421149		
	UNITS	KZ-15	KZ-16	KZ-17	KZ-21	KZ-22	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	121	94.4	206	216	189	0.50	8272394
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8275530
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0158	0.0096	0.0075	0.0083	0.0064	0.0030	8275630
Total Antimony (Sb)	mg/L	<0.000050	<0.000050	0.000058	0.000105	0.000056	0.000050	8275630
Total Arsenic (As)	mg/L	0.000398	0.000292	0.000657	0.00298	0.00167	0.000020	8275630
Total Barium (Ba)	mg/L	0.0451	0.0372	0.0721	0.0532	0.0570	0.00010	8275630
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8275630
Total Bismuth (Bi)	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	8275630
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8275630
Total Cadmium (Cd)	mg/L	0.0000270	0.0000200	0.0000310	0.0000110	0.0000190	0.0000050	8275630
Total Chromium (Cr)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8275630
Total Cobalt (Co)	mg/L	0.000042	0.000036	0.000034	0.000074	0.000057	0.000010	8275630
Total Copper (Cu)	mg/L	0.00098	0.00094	0.00061	0.00070	0.00087	0.00020	8275630
Total Iron (Fe)	mg/L	0.108	0.0677	0.122	0.620	0.336	0.0050	8275630
Total Lead (Pb)	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8275630
Total Lithium (Li)	mg/L	0.00146	0.00097	0.00341	0.00471	0.00341	0.00050	8275630
Total Manganese (Mn)	mg/L	0.0150	0.00789	0.0221	0.0333	0.0238	0.00010	8275630
Total Molybdenum (Mo)	mg/L	0.000654	0.000363	0.00179	0.00207	0.00130	0.000050	8275630
Total Nickel (Ni)	mg/L	0.00058	0.00047	0.00078	0.00239	0.00125	0.00010	8275630
Total Phosphorus (P)	mg/L	<0.010	<0.010	<0.010	0.017	0.011	0.010	8275630
Total Selenium (Se)	mg/L	0.000434	0.000321	0.000841	0.000344	0.000479	0.000040	8275630
Total Silicon (Si)	mg/L	2.49	2.15	3.41	3.49	3.02	0.10	8275630
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8275630
Total Strontium (Sr)	mg/L	0.115	0.0951	0.189	0.178	0.164	0.000050	8275630
Total Thallium (Tl)	mg/L	0.0000030	0.0000030	0.0000030	0.0000030	<0.0000020	0.0000020	8275630
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8275630
Total Titanium (Ti)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8275630
Total Uranium (U)	mg/L	0.00134	0.000664	0.00387	0.00251	0.00229	0.0000050	8275630
Total Vanadium (V)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8275630
Total Zinc (Zn)	mg/L	0.0018	<0.0010	0.0040	0.0012	0.0013	0.0010	8275630

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OQ7201	OQ7202	OQ7203	OQ7204	OQ7205		
Sampling Date		2016/05/15 17:02	2016/05/15 17:50	2016/05/15 17:29	2016/05/15 16:10	2016/05/15 15:37		
COC Number		08421149	08421149	08421149	08421149	08421149		
	UNITS	KZ-15	KZ-16	KZ-17	KZ-21	KZ-22	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00012	<0.00010	0.00010	8275630
Total Calcium (Ca)	mg/L	37.6	29.8	61.5	54.6	51.6	0.25	8272444
Total Magnesium (Mg)	mg/L	6.69	4.82	12.6	19.4	14.6	0.25	8272444
Total Potassium (K)	mg/L	1.02	0.88	1.48	1.62	1.34	0.25	8272444
Total Sodium (Na)	mg/L	0.81	0.66	1.29	1.53	1.29	0.25	8272444
Total Sulphur (S)	mg/L	<15	<15	<15	<15	<15	15	8272444

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OQ7206		
Sampling Date		2016/05/14 18:17		
COC Number		08421149		
	UNITS	KZ-26	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	215	0.50	8272394
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8275530
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.0064	0.0030	8275630
Total Antimony (Sb)	mg/L	0.000078	0.000050	8275630
Total Arsenic (As)	mg/L	0.000725	0.000020	8275630
Total Barium (Ba)	mg/L	0.0576	0.00010	8275630
Total Beryllium (Be)	mg/L	<0.000010	0.000010	8275630
Total Bismuth (Bi)	mg/L	<0.000020	0.000020	8275630
Total Boron (B)	mg/L	<0.050	0.050	8275630
Total Cadmium (Cd)	mg/L	0.0000110	0.0000050	8275630
Total Chromium (Cr)	mg/L	<0.00050	0.00050	8275630
Total Cobalt (Co)	mg/L	0.000027	0.000010	8275630
Total Copper (Cu)	mg/L	0.00067	0.00020	8275630
Total Iron (Fe)	mg/L	0.0937	0.0050	8275630
Total Lead (Pb)	mg/L	<0.000050	0.000050	8275630
Total Lithium (Li)	mg/L	0.00406	0.00050	8275630
Total Manganese (Mn)	mg/L	0.00556	0.00010	8275630
Total Molybdenum (Mo)	mg/L	0.00105	0.000050	8275630
Total Nickel (Ni)	mg/L	0.00089	0.00010	8275630
Total Phosphorus (P)	mg/L	<0.010	0.010	8275630
Total Selenium (Se)	mg/L	0.000543	0.000040	8275630
Total Silicon (Si)	mg/L	3.36	0.10	8275630
Total Silver (Ag)	mg/L	<0.0000050	0.0000050	8275630
Total Strontium (Sr)	mg/L	0.183	0.000050	8275630
Total Thallium (Tl)	mg/L	0.0000030	0.0000020	8275630
Total Tin (Sn)	mg/L	<0.00020	0.00020	8275630
Total Titanium (Ti)	mg/L	<0.0050	0.0050	8275630
Total Uranium (U)	mg/L	0.00245	0.0000050	8275630
Total Vanadium (V)	mg/L	<0.00050	0.00050	8275630
Total Zinc (Zn)	mg/L	<0.0010	0.0010	8275630
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OQ7206		
Sampling Date		2016/05/14 18:17		
COC Number		08421149		
	UNITS	KZ-26	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8275630
Total Calcium (Ca)	mg/L	59.0	0.25	8272444
Total Magnesium (Mg)	mg/L	16.5	0.25	8272444
Total Potassium (K)	mg/L	1.28	0.25	8272444
Total Sodium (Na)	mg/L	1.56	0.25	8272444
Total Sulphur (S)	mg/L	<15	15	8272444
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OQ7198
Sample ID: KZ-6
Matrix: Water

Collected: 2016/05/14
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8274251	N/A	2016/05/19	Name Redacted
Alkalinity - Water	AT/ALK	8274287	2016/05/19	2016/05/20	
Chloride by Automated Colourimetry	KONE/COL	8274752	N/A	2016/05/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8277533	N/A	2016/05/24	
Cyanide WAD (weak acid dissociable)	TECH/COL	8277538	N/A	2016/05/24	
Colour (True) by Kone Lab	KONE	8274675	N/A	2016/05/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8276144	N/A	2016/05/20	
Conductance - water	AT/ALK	8274291	N/A	2016/05/20	
Fluoride	ISE/ISE	8275672	N/A	2016/05/19	
Hardness Total (calculated as CaCO3)	CALC	8272394	N/A	2016/05/24	
Hardness (calculated as CaCO3)	CALC	8272442	N/A	2016/05/24	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8275424	N/A	2016/05/20	
Mercury (Total-LowLevel) by CVAF	CV/AF	8275459	2016/05/20	2016/05/20	
Ion Balance	CALC	8273223	N/A	2016/05/25	
Sum of cations, anions	CALC	8273224	N/A	2016/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8272825	N/A	2016/05/24	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8275057	N/A	2016/05/20	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8274504	2016/05/19	2016/05/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8272444	N/A	2016/05/24	
Ammonia-N (Unpreserved)	KONE/COL	8274771	N/A	2016/05/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8276016	N/A	2016/05/19	
Nitrite (N) (low level)	TRAA/COL	8276017	N/A	2016/05/19	
Nitrogen - Nitrate (as N)	CALC	8273090	N/A	2016/05/24	
Filter and HNO3 Preserve for Metals	ICP	8274227	N/A	2016/05/19	
pH Water	AT/ALK	8274293	N/A	2016/05/20	
Sulphate by Automated Colourimetry	KONE/COL	8275948	N/A	2016/05/20	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8274694	2016/05/19	2016/05/19	
Total Phosphorus - unpreserved	KONE/COL	8274697	N/A	2016/05/19	
Total Suspended Solids-Low Level	BAL/BAL	8273554	2016/05/19	2016/05/20	

Maxxam ID: OQ7198 Dup
Sample ID: KZ-6
Matrix: Water

Collected: 2016/05/14
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8277533	N/A	2016/05/24	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8277538	N/A	2016/05/24	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8275057	N/A	2016/05/20	

Maxxam ID: OQ7199
Sample ID: KZ-7
Matrix: Water

Collected: 2016/05/14
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8274251	N/A	2016/05/19	Name ed

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OQ7199
Sample ID: KZ-7
Matrix: Water

Collected: 2016/05/14
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8274287	2016/05/19	2016/05/20	Name Redacted
Chloride by Automated Colourimetry	KONE/COL	8274752	N/A	2016/05/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8277533	N/A	2016/05/24	
Cyanide WAD (weak acid dissociable)	TECH/COL	8277538	N/A	2016/05/24	
Colour (True) by Kone Lab	KONE	8274675	N/A	2016/05/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8276144	N/A	2016/05/20	
Conductance - water	AT/ALK	8274291	N/A	2016/05/20	
Fluoride	ISE/ISE	8275672	N/A	2016/05/19	
Hardness Total (calculated as CaCO3)	CALC	8272394	N/A	2016/05/24	
Hardness (calculated as CaCO3)	CALC	8272442	N/A	2016/05/24	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8275424	N/A	2016/05/20	
Mercury (Total-LowLevel) by CVAF	CV/AF	8275530	2016/05/20	2016/05/20	
Ion Balance	CALC	8273223	N/A	2016/05/25	
Sum of cations, anions	CALC	8273224	N/A	2016/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8272825	N/A	2016/05/24	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8275057	N/A	2016/05/20	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8274504	2016/05/19	2016/05/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8272444	N/A	2016/05/24	
Ammonia-N (Unpreserved)	KONE/COL	8274771	N/A	2016/05/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8276016	N/A	2016/05/19	
Nitrite (N) (low level)	TRAA/COL	8276017	N/A	2016/05/19	
Nitrogen - Nitrate (as N)	CALC	8273090	N/A	2016/05/24	
Filter and HNO3 Preserve for Metals	ICP	8274227	N/A	2016/05/19	
pH Water	AT/ALK	8274293	N/A	2016/05/20	
Sulphate by Automated Colourimetry	KONE/COL	8275948	N/A	2016/05/20	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8274694	2016/05/19	2016/05/19	
Total Phosphorus - unpreserved	KONE/COL	8274697	N/A	2016/05/19	
Total Suspended Solids-Low Level	BAL/BAL	8273554	2016/05/19	2016/05/20	

Maxxam ID: OQ7200
Sample ID: KZ-13
Matrix: Water

Collected: 2016/05/16
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8274251	N/A	2016/05/19	Name Redacted
Alkalinity - Water	AT/ALK	8274287	2016/05/19	2016/05/20	
Chloride by Automated Colourimetry	KONE/COL	8274752	N/A	2016/05/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8277533	N/A	2016/05/24	
Cyanide WAD (weak acid dissociable)	TECH/COL	8277538	N/A	2016/05/24	
Colour (True) by Kone Lab	KONE	8274675	N/A	2016/05/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8276144	N/A	2016/05/20	
Conductance - water	AT/ALK	8274291	N/A	2016/05/20	
Fluoride	ISE/ISE	8275672	N/A	2016/05/19	
Hardness Total (calculated as CaCO3)	CALC	8272394	N/A	2016/05/24	
Hardness (calculated as CaCO3)	CALC	8272442	N/A	2016/05/24	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OQ7200
Sample ID: KZ-13
Matrix: Water

Collected: 2016/05/16
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8275424	N/A	2016/05/20	Name
Mercury (Total-LowLevel) by CVAF	CV/AF	8275530	2016/05/20	2016/05/20	Redacted
Ion Balance	CALC	8273223	N/A	2016/05/25	
Sum of cations, anions	CALC	8273224	N/A	2016/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8272825	N/A	2016/05/24	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8275057	N/A	2016/05/20	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8274504	2016/05/19	2016/05/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8272444	N/A	2016/05/24	
Ammonia-N (Unpreserved)	KONE/COL	8274771	N/A	2016/05/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8276016	N/A	2016/05/19	
Nitrite (N) (low level)	TRAA/COL	8276017	N/A	2016/05/19	
Nitrogen - Nitrate (as N)	CALC	8273090	N/A	2016/05/24	
Filter and HNO3 Preserve for Metals	ICP	8274227	N/A	2016/05/19	
pH Water	AT/ALK	8274293	N/A	2016/05/20	
Sulphate by Automated Colourimetry	KONE/COL	8274755	N/A	2016/05/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8274694	2016/05/19	2016/05/19	
Total Phosphorus - unpreserved	KONE/COL	8274697	N/A	2016/05/19	
Total Suspended Solids-Low Level	BAL/BAL	8273554	2016/05/19	2016/05/20	

Maxxam ID: OQ7201
Sample ID: KZ-15
Matrix: Water

Collected: 2016/05/15
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8274251	N/A	2016/05/19	Name Redacted
Alkalinity - Water	AT/ALK	8274287	2016/05/19	2016/05/20	
Chloride by Automated Colourimetry	KONE/COL	8274752	N/A	2016/05/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8277533	N/A	2016/05/24	
Cyanide WAD (weak acid dissociable)	TECH/COL	8277538	N/A	2016/05/24	
Colour (True) by Kone Lab	KONE	8274675	N/A	2016/05/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8276144	N/A	2016/05/20	
Conductance - water	AT/ALK	8274291	N/A	2016/05/20	
Fluoride	ISE/ISE	8275672	N/A	2016/05/19	
Hardness Total (calculated as CaCO3)	CALC	8272394	N/A	2016/05/24	
Hardness (calculated as CaCO3)	CALC	8272442	N/A	2016/05/24	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8275424	N/A	2016/05/20	
Mercury (Total-LowLevel) by CVAF	CV/AF	8275530	2016/05/20	2016/05/20	
Ion Balance	CALC	8273223	N/A	2016/05/25	
Sum of cations, anions	CALC	8273224	N/A	2016/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8272825	N/A	2016/05/24	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8275057	N/A	2016/05/20	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8275630	2016/05/20	2016/05/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8272444	N/A	2016/05/24	
Ammonia-N (Unpreserved)	KONE/COL	8274773	N/A	2016/05/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8276016	N/A	2016/05/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OQ7201
Sample ID: KZ-15
Matrix: Water

Collected: 2016/05/15
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8276017	N/A	2016/05/19	Name Redacted
Nitrogen - Nitrate (as N)	CALC	8273090	N/A	2016/05/24	
Filter and HNO3 Preserve for Metals	ICP	8274227	N/A	2016/05/19	
pH Water	AT/ALK	8274293	N/A	2016/05/20	
Sulphate by Automated Colourimetry	KONE/COL	8275948	N/A	2016/05/20	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8274694	2016/05/19	2016/05/19	
Total Phosphorus - unpreserved	KONE/COL	8274697	N/A	2016/05/19	
Total Suspended Solids-Low Level	BAL/BAL	8273554	2016/05/19	2016/05/20	

Maxxam ID: OQ7201 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2016/05/15
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8274251	N/A	2016/05/19	Name Redacted
Ammonia-N (Unpreserved)	KONE/COL	8274773	N/A	2016/05/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8274694	2016/05/19	2016/05/19	
Total Phosphorus - unpreserved	KONE/COL	8274697	N/A	2016/05/19	

Maxxam ID: OQ7202
Sample ID: KZ-16
Matrix: Water

Collected: 2016/05/15
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8274251	N/A	2016/05/19	Name Redacted
Alkalinity - Water	AT/ALK	8274287	2016/05/19	2016/05/20	
Chloride by Automated Colourimetry	KONE/COL	8274752	N/A	2016/05/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8277533	N/A	2016/05/24	
Cyanide WAD (weak acid dissociable)	TECH/COL	8277538	N/A	2016/05/24	
Colour (True) by Kone Lab	KONE	8274675	N/A	2016/05/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8276144	N/A	2016/05/20	
Conductance - water	AT/ALK	8274291	N/A	2016/05/20	
Fluoride	ISE/ISE	8275672	N/A	2016/05/19	
Hardness Total (calculated as CaCO3)	CALC	8272394	N/A	2016/05/24	
Hardness (calculated as CaCO3)	CALC	8272442	N/A	2016/05/24	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8275424	N/A	2016/05/20	
Mercury (Total-LowLevel) by CVAF	CV/AF	8275530	2016/05/20	2016/05/20	
Ion Balance	CALC	8273223	N/A	2016/05/25	
Sum of cations, anions	CALC	8273224	N/A	2016/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8272825	N/A	2016/05/24	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8275057	N/A	2016/05/20	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8275630	2016/05/20	2016/05/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8272444	N/A	2016/05/24	
Ammonia-N (Unpreserved)	KONE/COL	8274771	N/A	2016/05/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8276016	N/A	2016/05/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OQ7202
Sample ID: KZ-16
Matrix: Water

Collected: 2016/05/15
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8276017	N/A	2016/05/19	Name Redacted
Nitrogen - Nitrate (as N)	CALC	8273090	N/A	2016/05/24	
Filter and HNO3 Preserve for Metals	ICP	8274227	N/A	2016/05/19	
pH Water	AT/ALK	8274293	N/A	2016/05/20	
Sulphate by Automated Colourimetry	KONE/COL	8275967	N/A	2016/05/20	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8274694	2016/05/19	2016/05/19	
Total Phosphorus - unpreserved	KONE/COL	8274697	N/A	2016/05/19	
Total Suspended Solids-Low Level	BAL/BAL	8273554	2016/05/19	2016/05/20	

Maxxam ID: OQ7203
Sample ID: KZ-17
Matrix: Water

Collected: 2016/05/15
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8274251	N/A	2016/05/19	Name Redacted
Alkalinity - Water	AT/ALK	8274287	2016/05/19	2016/05/20	
Chloride by Automated Colourimetry	KONE/COL	8274762	N/A	2016/05/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8277533	N/A	2016/05/24	
Cyanide WAD (weak acid dissociable)	TECH/COL	8277538	N/A	2016/05/24	
Colour (True) by Kone Lab	KONE	8274675	N/A	2016/05/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8276144	N/A	2016/05/20	
Conductance - water	AT/ALK	8274291	N/A	2016/05/20	
Fluoride	ISE/ISE	8275675	N/A	2016/05/19	
Hardness Total (calculated as CaCO3)	CALC	8272394	N/A	2016/05/24	
Hardness (calculated as CaCO3)	CALC	8272442	N/A	2016/05/24	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8275424	N/A	2016/05/20	
Mercury (Total-LowLevel) by CVAF	CV/AF	8275530	2016/05/20	2016/05/20	
Ion Balance	CALC	8273223	N/A	2016/05/25	
Sum of cations, anions	CALC	8273224	N/A	2016/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8272825	N/A	2016/05/24	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8275057	N/A	2016/05/20	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8275630	2016/05/20	2016/05/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8272444	N/A	2016/05/24	
Ammonia-N (Unpreserved)	KONE/COL	8274773	N/A	2016/05/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8276016	N/A	2016/05/19	
Nitrite (N) (low level)	TRAA/COL	8276017	N/A	2016/05/19	
Nitrogen - Nitrate (as N)	CALC	8273090	N/A	2016/05/24	
Filter and HNO3 Preserve for Metals	ICP	8274227	N/A	2016/05/19	
pH Water	AT/ALK	8274293	N/A	2016/05/20	
Sulphate by Automated Colourimetry	KONE/COL	8274778	N/A	2016/05/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8274694	2016/05/19	2016/05/19	
Total Phosphorus - unpreserved	KONE/COL	8274697	N/A	2016/05/19	
Total Suspended Solids-Low Level	BAL/BAL	8273554	2016/05/19	2016/05/20	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OQ7203 Dup
Sample ID: KZ-17
Matrix: Water

Collected: 2016/05/15
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8276016	N/A	2016/05/19	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8276017	N/A	2016/05/19	

Maxxam ID: OQ7204
Sample ID: KZ-21
Matrix: Water

Collected: 2016/05/15
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8274251	N/A	2016/05/19	Name Redacted
Alkalinity - Water	AT/ALK	8274287	2016/05/19	2016/05/20	
Chloride by Automated Colourimetry	KONE/COL	8274762	N/A	2016/05/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8277533	N/A	2016/05/24	
Cyanide WAD (weak acid dissociable)	TECH/COL	8277538	N/A	2016/05/24	
Colour (True) by Kone Lab	KONE	8274675	N/A	2016/05/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8276144	N/A	2016/05/20	
Conductance - water	AT/ALK	8274291	N/A	2016/05/20	
Fluoride	ISE/ISE	8275675	N/A	2016/05/19	
Hardness Total (calculated as CaCO3)	CALC	8272394	N/A	2016/05/24	
Hardness (calculated as CaCO3)	CALC	8272442	N/A	2016/05/24	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8275424	N/A	2016/05/20	
Mercury (Total-LowLevel) by CVAF	CV/AF	8275530	2016/05/20	2016/05/20	
Ion Balance	CALC	8273223	N/A	2016/05/25	
Sum of cations, anions	CALC	8273224	N/A	2016/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8272825	N/A	2016/05/24	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8275057	N/A	2016/05/20	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8275630	2016/05/20	2016/05/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8272444	N/A	2016/05/24	
Ammonia-N (Unpreserved)	KONE/COL	8274773	N/A	2016/05/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8276016	N/A	2016/05/19	
Nitrite (N) (low level)	TRAA/COL	8276017	N/A	2016/05/19	
Nitrogen - Nitrate (as N)	CALC	8273090	N/A	2016/05/24	
Filter and HNO3 Preserve for Metals	ICP	8274227	N/A	2016/05/19	
pH Water	AT/ALK	8274293	N/A	2016/05/20	
Sulphate by Automated Colourimetry	KONE/COL	8274778	N/A	2016/05/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8274694	2016/05/19	2016/05/19	
Total Phosphorus - unpreserved	KONE/COL	8274697	N/A	2016/05/19	
Total Suspended Solids-Low Level	BAL/BAL	8273554	2016/05/19	2016/05/20	

Maxxam ID: OQ7204 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2016/05/15
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8274762	N/A	2016/05/19	Name Redacted
Sulphate by Automated Colourimetry	KONE/COL	8274778	N/A	2016/05/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OQ7205
Sample ID: KZ-22
Matrix: Water

Collected: 2016/05/15
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8274251	N/A	2016/05/19	Name Redacted
Alkalinity - Water	AT/ALK	8274287	2016/05/19	2016/05/20	
Chloride by Automated Colourimetry	KONE/COL	8274762	N/A	2016/05/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8277533	N/A	2016/05/24	
Cyanide WAD (weak acid dissociable)	TECH/COL	8277538	N/A	2016/05/24	
Colour (True) by Kone Lab	KONE	8274675	N/A	2016/05/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8276144	N/A	2016/05/20	
Conductance - water	AT/ALK	8274291	N/A	2016/05/20	
Fluoride	ISE/ISE	8275675	N/A	2016/05/19	
Hardness Total (calculated as CaCO3)	CALC	8272394	N/A	2016/05/24	
Hardness (calculated as CaCO3)	CALC	8272442	N/A	2016/05/24	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8275424	N/A	2016/05/20	
Mercury (Total-LowLevel) by CVAF	CV/AF	8275530	2016/05/20	2016/05/20	
Ion Balance	CALC	8273223	N/A	2016/05/25	
Sum of cations, anions	CALC	8273224	N/A	2016/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8272825	N/A	2016/05/24	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8275057	N/A	2016/05/20	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8275630	2016/05/20	2016/05/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8272444	N/A	2016/05/24	
Ammonia-N (Unpreserved)	KONE/COL	8274773	N/A	2016/05/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8276016	N/A	2016/05/19	
Nitrite (N) (low level)	TRAA/COL	8276017	N/A	2016/05/19	
Nitrogen - Nitrate (as N)	CALC	8273090	N/A	2016/05/24	
Filter and HNO3 Preserve for Metals	ICP	8274227	N/A	2016/05/19	
pH Water	AT/ALK	8274293	N/A	2016/05/20	
Sulphate by Automated Colourimetry	KONE/COL	8274778	N/A	2016/05/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8274694	2016/05/19	2016/05/19	
Total Phosphorus - unpreserved	KONE/COL	8274697	N/A	2016/05/19	
Total Suspended Solids-Low Level	BAL/BAL	8273554	2016/05/19	2016/05/20	

Maxxam ID: OQ7206
Sample ID: KZ-26
Matrix: Water

Collected: 2016/05/14
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8274251	N/A	2016/05/19	Name Redacted
Alkalinity - Water	AT/ALK	8274287	2016/05/19	2016/05/20	
Chloride by Automated Colourimetry	KONE/COL	8274752	N/A	2016/05/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8277533	N/A	2016/05/24	
Cyanide WAD (weak acid dissociable)	TECH/COL	8277538	N/A	2016/05/24	
Colour (True) by Kone Lab	KONE	8274675	N/A	2016/05/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8276144	N/A	2016/05/20	
Conductance - water	AT/ALK	8274291	N/A	2016/05/20	
Fluoride	ISE/ISE	8275672	N/A	2016/05/19	
Hardness Total (calculated as CaCO3)	CALC	8272394	N/A	2016/05/24	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OQ7206
Sample ID: KZ-26
Matrix: Water

Collected: 2016/05/14
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8272442	N/A	2016/05/24	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8275424	N/A	2016/05/20	
Mercury (Total-LowLevel) by CVAF	CV/AF	8275530	2016/05/20	2016/05/20	
Ion Balance	CALC	8273223	N/A	2016/05/25	
Sum of cations, anions	CALC	8273224	N/A	2016/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8272825	N/A	2016/05/24	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8275057	N/A	2016/05/20	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8275630	2016/05/20	2016/05/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8272444	N/A	2016/05/24	
Ammonia-N (Unpreserved)	KONE/COL	8274771	N/A	2016/05/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8276016	N/A	2016/05/19	
Nitrite (N) (low level)	TRAA/COL	8276017	N/A	2016/05/19	
Nitrogen - Nitrate (as N)	CALC	8273090	N/A	2016/05/24	
Filter and HNO3 Preserve for Metals	ICP	8274227	N/A	2016/05/19	
pH Water	AT/ALK	8274293	N/A	2016/05/20	
Sulphate by Automated Colourimetry	KONE/COL	8275967	N/A	2016/05/20	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8274694	2016/05/19	2016/05/19	
Total Phosphorus - unpreserved	KONE/COL	8274697	N/A	2016/05/19	
Total Suspended Solids-Low Level	BAL/BAL	8273554	2016/05/19	2016/05/20	

Maxxam ID: OQ7206 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2016/05/14
Shipped:
Received: 2016/05/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Digested LL (total)	ICP/CRCM	8275630	2016/05/20	2016/05/20	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.3°C
Package 2	4.0°C
Package 3	5.3°C
Package 4	5.0°C
Package 5	7.0°C
Package 6	5.3°C

Sample OQ7198-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OQ7199-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OQ7200-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OQ7201-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OQ7202-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OQ7203-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OQ7204-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OQ7205-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OQ7206-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OQ7198, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8273554	Total Suspended Solids	2016/05/20			97	80 - 120	<1.0	mg/L		
8274251	Acidity (pH 4.5)	2016/05/19					<0.50	mg/L	NC	20
8274251	Acidity (pH 8.3)	2016/05/19			101	80 - 120	<0.50	mg/L	NC	20
8274287	Alkalinity (PP as CaCO3)	2016/05/20					<0.50	mg/L	NC	20
8274287	Alkalinity (Total as CaCO3)	2016/05/20	NC	80 - 120	103	80 - 120	<0.50	mg/L	0.60	20
8274287	Bicarbonate (HCO3)	2016/05/20					<0.50	mg/L	0.60	20
8274287	Carbonate (CO3)	2016/05/20					<0.50	mg/L	NC	20
8274287	Hydroxide (OH)	2016/05/20					<0.50	mg/L	NC	20
8274291	Conductivity	2016/05/20			101	80 - 120	<1.0	uS/cm	0.22	20
8274293	pH	2016/05/20			101	97 - 103			1.0	N/A
8274504	Total Aluminum (Al)	2016/05/20	NC	80 - 120	107	80 - 120	<0.0030	mg/L	24 (1)	20
8274504	Total Antimony (Sb)	2016/05/20	96	80 - 120	106	80 - 120	<0.000050	mg/L	NC	20
8274504	Total Arsenic (As)	2016/05/20	110	80 - 120	104	80 - 120	<0.000020	mg/L	3.7	20
8274504	Total Barium (Ba)	2016/05/20	NC	80 - 120	106	80 - 120	<0.00010	mg/L	3.1	20
8274504	Total Beryllium (Be)	2016/05/20	105	80 - 120	105	80 - 120	<0.000010	mg/L	5.0	20
8274504	Total Bismuth (Bi)	2016/05/20	108	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
8274504	Total Boron (B)	2016/05/20	104	80 - 120	101	80 - 120	<0.050	mg/L	NC	20
8274504	Total Cadmium (Cd)	2016/05/20	101	80 - 120	110	80 - 120	<0.0000050	mg/L	2.3	20
8274504	Total Chromium (Cr)	2016/05/20	112	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8274504	Total Cobalt (Co)	2016/05/20	109	80 - 120	106	80 - 120	<0.000010	mg/L	0.28	20
8274504	Total Copper (Cu)	2016/05/20	109	80 - 120	107	80 - 120	<0.00020	mg/L	3.2	20
8274504	Total Iron (Fe)	2016/05/20	NC	80 - 120	110	80 - 120	<0.0050	mg/L	9.2	20
8274504	Total Lead (Pb)	2016/05/20	114	80 - 120	106	80 - 120	<0.000050	mg/L	4.0	20
8274504	Total Lithium (Li)	2016/05/20	103	80 - 120	107	80 - 120	<0.00050	mg/L	NC	20
8274504	Total Manganese (Mn)	2016/05/20	NC	80 - 120	104	80 - 120	<0.00010	mg/L	1.2	20
8274504	Total Molybdenum (Mo)	2016/05/20	112	80 - 120	101	80 - 120	<0.000050	mg/L	3.7	20
8274504	Total Nickel (Ni)	2016/05/20	109	80 - 120	104	80 - 120	<0.00010	mg/L	2.2	20
8274504	Total Phosphorus (P)	2016/05/20					<0.010	mg/L	NC	20
8274504	Total Selenium (Se)	2016/05/20	95	80 - 120	111	80 - 120	<0.000040	mg/L	4.7	20
8274504	Total Silicon (Si)	2016/05/20					<0.10	mg/L	4.9	20
8274504	Total Silver (Ag)	2016/05/20	129 (1)	80 - 120	95	80 - 120	<0.0000050	mg/L	5.0	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8274504	Total Strontium (Sr)	2016/05/20	NC	80 - 120	107	80 - 120	<0.000050	mg/L	1.2	20
8274504	Total Thallium (Tl)	2016/05/20	97	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8274504	Total Tin (Sn)	2016/05/20	101	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20
8274504	Total Titanium (Ti)	2016/05/20	NC	80 - 120	101	80 - 120	<0.0050	mg/L	NC	20
8274504	Total Uranium (U)	2016/05/20	114	80 - 120	106	80 - 120	<0.0000050	mg/L	4.8	20
8274504	Total Vanadium (V)	2016/05/20	113	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8274504	Total Zinc (Zn)	2016/05/20	NC	80 - 120	110	80 - 120	<0.0010	mg/L	1.0	20
8274504	Total Zirconium (Zr)	2016/05/20					<0.00010	mg/L	13	20
8274675	True Colour	2016/05/19			115	80 - 120	<5.0	Col. Unit	NC	20
8274694	Dissolved Phosphorus (P)	2016/05/19	93	80 - 120	105	80 - 120	<0.0020	mg/L	0.85	20
8274697	Total Phosphorus (P)	2016/05/19	92	80 - 120	98	80 - 120	<0.0020	mg/L	NC	20
8274752	Dissolved Chloride (Cl)	2016/05/19			99	80 - 120	<0.50	mg/L		
8274755	Dissolved Sulphate (SO4)	2016/05/19	NC	80 - 120	100	80 - 120	<0.50	mg/L	1.7	20
8274762	Dissolved Chloride (Cl)	2016/05/19	103	80 - 120	98	80 - 120	0.60, RDL=0.50	mg/L	NC	20
8274771	Total Ammonia (N)	2016/05/19	97	80 - 120	95	80 - 120	<0.0050	mg/L	NC	20
8274773	Total Ammonia (N)	2016/05/19	95	80 - 120	93	80 - 120	<0.0050	mg/L	NC	20
8274778	Dissolved Sulphate (SO4)	2016/05/19	NC	80 - 120	100	80 - 120	<0.50	mg/L	17	20
8275057	Dissolved Aluminum (Al)	2016/05/20	104	80 - 120	105	80 - 120	<0.00050	mg/L	5.0	20
8275057	Dissolved Antimony (Sb)	2016/05/20	95	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8275057	Dissolved Arsenic (As)	2016/05/20	102	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8275057	Dissolved Barium (Ba)	2016/05/20	NC	80 - 120	101	80 - 120	<0.000020	mg/L	1.2	20
8275057	Dissolved Beryllium (Be)	2016/05/20	99	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
8275057	Dissolved Bismuth (Bi)	2016/05/20	98	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8275057	Dissolved Boron (B)	2016/05/20	93	80 - 120	94	80 - 120	<0.010	mg/L	NC	20
8275057	Dissolved Cadmium (Cd)	2016/05/20	100	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8275057	Dissolved Chromium (Cr)	2016/05/20	96	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8275057	Dissolved Cobalt (Co)	2016/05/20	96	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8275057	Dissolved Copper (Cu)	2016/05/20	94	80 - 120	102	80 - 120	<0.000050	mg/L	6.0	20
8275057	Dissolved Iron (Fe)	2016/05/20	111	80 - 120	118	80 - 120	<0.0010	mg/L	16	20
8275057	Dissolved Lead (Pb)	2016/05/20	100	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8275057	Dissolved Lithium (Li)	2016/05/20	98	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8275057	Dissolved Manganese (Mn)	2016/05/20	98	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8275057	Dissolved Molybdenum (Mo)	2016/05/20	NC	80 - 120	96	80 - 120	<0.000050	mg/L	3.8	20
8275057	Dissolved Nickel (Ni)	2016/05/20	94	80 - 120	102	80 - 120	<0.000020	mg/L		
8275057	Dissolved Phosphorus (P)	2016/05/20					0.0024, RDL=0.0020	mg/L	NC	20
8275057	Dissolved Selenium (Se)	2016/05/20	97	80 - 120	97	80 - 120	<0.000040	mg/L	14	20
8275057	Dissolved Silicon (Si)	2016/05/20					<0.050	mg/L	4.9	20
8275057	Dissolved Silver (Ag)	2016/05/20	99	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8275057	Dissolved Strontium (Sr)	2016/05/20	NC	80 - 120	104	80 - 120	<0.000050	mg/L	4.8	20
8275057	Dissolved Thallium (Tl)	2016/05/20	113	80 - 120	106	80 - 120	0.0000020, RDL=0.0000020	mg/L	NC	20
8275057	Dissolved Tin (Sn)	2016/05/20	102	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8275057	Dissolved Titanium (Ti)	2016/05/20	98	80 - 120	93	80 - 120	<0.00050	mg/L	NC	20
8275057	Dissolved Uranium (U)	2016/05/20	101	80 - 120	98	80 - 120	<0.0000020	mg/L	4.4	20
8275057	Dissolved Vanadium (V)	2016/05/20	99	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8275057	Dissolved Zinc (Zn)	2016/05/20	102	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8275057	Dissolved Zirconium (Zr)	2016/05/20					<0.00010	mg/L	NC	20
8275424	Dissolved Mercury (Hg)	2016/05/20	90	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	20
8275459	Total Mercury (Hg)	2016/05/20	99	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8275530	Total Mercury (Hg)	2016/05/20	99	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8275630	Total Aluminum (Al)	2016/05/20	100	80 - 120	106	80 - 120	<0.0030	mg/L	NC	20
8275630	Total Antimony (Sb)	2016/05/20	101	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8275630	Total Arsenic (As)	2016/05/20	101	80 - 120	104	80 - 120	<0.000020	mg/L	0.82	20
8275630	Total Barium (Ba)	2016/05/20	NC	80 - 120	103	80 - 120	<0.00010	mg/L	1.7	20
8275630	Total Beryllium (Be)	2016/05/20	98	80 - 120	101	80 - 120	<0.000010	mg/L	NC	20
8275630	Total Bismuth (Bi)	2016/05/20	97	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8275630	Total Boron (B)	2016/05/20	96	80 - 120	98	80 - 120	<0.050	mg/L	NC	20
8275630	Total Cadmium (Cd)	2016/05/20	102	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8275630	Total Chromium (Cr)	2016/05/20	98	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8275630	Total Cobalt (Co)	2016/05/20	96	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8275630	Total Copper (Cu)	2016/05/20	93	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8275630	Total Iron (Fe)	2016/05/20	NC	80 - 120	122 (2)	80 - 120	<0.0050	mg/L	6.3	20

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8275630	Total Lead (Pb)	2016/05/20	100	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8275630	Total Lithium (Li)	2016/05/20	97	80 - 120	97	80 - 120	<0.00050	mg/L	8.5	20
8275630	Total Manganese (Mn)	2016/05/20	NC	80 - 120	102	80 - 120	0.00013, RDL=0.00010	mg/L	4.0	20
8275630	Total Molybdenum (Mo)	2016/05/20	NC	80 - 120	97	80 - 120	<0.000050	mg/L	0.57	20
8275630	Total Nickel (Ni)	2016/05/20	94	80 - 120	102	80 - 120	<0.00010	mg/L	6.2	20
8275630	Total Phosphorus (P)	2016/05/20					<0.010	mg/L	NC	20
8275630	Total Selenium (Se)	2016/05/20	94	80 - 120	96	80 - 120	<0.000040	mg/L	7.3	20
8275630	Total Silicon (Si)	2016/05/20					<0.10	mg/L	5.0	20
8275630	Total Silver (Ag)	2016/05/20	90	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8275630	Total Strontium (Sr)	2016/05/20	NC	80 - 120	102	80 - 120	<0.000050	mg/L	2.8	20
8275630	Total Thallium (Tl)	2016/05/20	85	80 - 120	94	80 - 120	<0.0000020	mg/L	NC	20
8275630	Total Tin (Sn)	2016/05/20	104	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8275630	Total Titanium (Ti)	2016/05/20	92	80 - 120	109	80 - 120	<0.0050	mg/L	NC	20
8275630	Total Uranium (U)	2016/05/20	103	80 - 120	99	80 - 120	<0.0000050	mg/L	2.9	20
8275630	Total Vanadium (V)	2016/05/20	99	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8275630	Total Zinc (Zn)	2016/05/20	92	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
8275630	Total Zirconium (Zr)	2016/05/20					<0.00010	mg/L	NC	20
8275672	Fluoride (F)	2016/05/19	98	80 - 120	100	80 - 120	<0.010	mg/L	3.6	20
8275675	Fluoride (F)	2016/05/19	NC	80 - 120	102	80 - 120	0.010, RDL=0.010	mg/L	0	20
8275948	Dissolved Sulphate (SO4)	2016/05/20	NC	80 - 120	99	80 - 120	0.62, RDL=0.50	mg/L	0.45	20
8275967	Dissolved Sulphate (SO4)	2016/05/20	111	80 - 120	97	80 - 120	<0.50	mg/L		
8276016	Nitrate plus Nitrite (N)	2016/05/19	106	80 - 120	108	80 - 120	<0.0020	mg/L	2.5	25
8276017	Nitrite (N)	2016/05/19	101	80 - 120	101	80 - 120	<0.0020	mg/L	NC	25
8276144	Dissolved Organic Carbon (C)	2016/05/20	106	80 - 120	118	80 - 120	<0.50	mg/L		
8277533	Strong Acid Dissoc. Cyanide (CN)	2016/05/24	101	80 - 120	103	80 - 120	0.00050, RDL=0.00050	mg/L	NC	20
8277538	Weak Acid Dissoc. Cyanide (CN)	2016/05/24	102	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8279202	Dissolved Nickel (Ni)	2016/05/26			101	80 - 120	<0.000020	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) Blank Spike outside acceptance criteria (10% of analytes failure allowed).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B638452
Report Date: 2016/05/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Andy Lu, Ph.D., P.Chem., Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

BY: Slymo@1300

2016 -05- 17

TEMP: 3 3 4 / 4 4 4 / 6 5 5 / 4 5 5

cooler 1 } ground
" 2 } water
" 3 } (MW samples)
" 4

cooler 5 → 7 / 7 / 7 } content COC
" 6 → 6 / 5 / 5 }

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC 08421149

BBY FCD-00077/05

Page 1

Invoice Information		Report Information (if differs from invoice)		Project Information (whe...		...ound Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:
						Rush Confirmation #:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-6		16-May-14	10:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10	
3	KZ-7		16-May-14	10:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10	
4	KZ-13		16-May-16	8:22	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10	
5	KZ-15		16-May-15	17:02	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10	
6	KZ-16		16-May-15	17:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10	
7	KZ-17		16-May-15	17:29	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10	
8	KZ-21		16-May-15	16:10	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10	
9	KZ-22		16-May-15	15:37	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10	
10	KZ-26		16-May-14	18:17	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		445
NA		333

COOLING MEDIA PRESENT Y / N

COMMENTS

please send copy of report to: crystalb@equityexploration.com

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Crystal Beaudry	16/05/2016	20:42	Signature Redacted	2016/05/18	14:00

MAXXAM JOB #

B638452_COC

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08421243

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2016/06/02
Report #: R2190444
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B639571
Received: 2016/05/21, 09:50

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	5	N/A	2016/05/25	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	5	2016/05/25	2016/05/25	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	5	N/A	2016/05/24	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	5	N/A	2016/05/27	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	5	N/A	2016/05/27	BBY6SOP-00004	SM 22 4500-CN O m
Colour (True) by Kone Lab	5	N/A	2016/05/21	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	4	N/A	2016/05/24	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2016/05/24	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	5	N/A	2016/05/25	BBY6SOP-00026	SM 22 2510 B m
Fluoride	5	N/A	2016/05/24	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	4	N/A	2016/05/30	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	1	N/A	2016/06/01	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	3	N/A	2016/05/30	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	2	N/A	2016/06/01	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	5	N/A	2016/05/30	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	5	2016/05/30	2016/05/30	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	5	N/A	2016/05/30	BBY WI-00033	SM 22 1030E
Sum of cations, anions	5	N/A	2016/05/30	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	3	N/A	2016/05/30	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	2	N/A	2016/06/01	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	5	N/A	2016/05/29	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	1	2016/05/26	2016/05/27	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2016/05/27	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	4	N/A	2016/05/30	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	4	N/A	2016/05/29	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Unpreserved)	1	N/A	2016/05/24	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	4	N/A	2016/05/25	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	5	N/A	2016/05/21	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	5	N/A	2016/05/21	BBY6SOP-00010	SM 22 4500-NO3- I m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08421243

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, BC
Canada Y1A 2V3

Report Date: 2016/06/02
Report #: R2190444
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B639571
Received: 2016/05/21, 09:50

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrogen - Nitrate (as N)	5	N/A	2016/05/25	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	4	N/A	2016/05/24	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	5	N/A	2016/05/25	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	5	N/A	2016/05/24	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	5	2016/05/25	2016/05/25	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	5	N/A	2016/05/25	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	5	2016/05/25	2016/05/26	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax Redacted

==========
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OR3139		OR3143	OR3144		OR3145		
Sampling Date		2016/05/19 11:10		2016/05/19 12:12	2016/05/19 11:20		2016/05/19 11:30		
COC Number		08421243		08421243	08421243		08421243		
	UNITS	KZ-2	QC Batch	KZ-9	KZ-SWFB	QC Batch	KZ-SWDUP	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	1.3	8276508	2.5	0.00070	8276508	1.3	N/A	8276508
Cation Sum	meq/L	1.4	8276508	2.5	0.0074	8276508	1.3	N/A	8276508
Filter and HNO3 Preservation	N/A	LAB	8277063	LAB	LAB	8277063	LAB	N/A	8277063
Ion Balance	N/A	1.1	8276507	1.0	NC	8276507	1.1	0.010	8276507
Nitrate (N)	mg/L	0.110	8276511	0.0355	<0.0020	8276511	0.111	0.0020	8276511
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00063	8281267	0.00057	<0.00050	8281267	0.00061	0.00050	8281267
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8281274	<0.00050	<0.00050	8281274	0.00062	0.00050	8281274
Fluoride (F)	mg/L	0.039	8279057	0.070	0.014	8279055	0.037	0.010	8279057
Dissolved Organic Carbon (C)	mg/L	2.49	8278599	1.25	<0.50	8278599	2.57	0.50	8278599
Acidity (pH 4.5)	mg/L	<0.50	8278484	<0.50	<0.50	8278484	<0.50	0.50	8278484
Alkalinity (Total as CaCO3)	mg/L	43.2	8278658	101	<0.50	8278658	41.3	0.50	8278658
Acidity (pH 8.3)	mg/L	<0.50	8278484	<0.50	0.54	8278484	<0.50	0.50	8278484
Alkalinity (PP as CaCO3)	mg/L	<0.50	8278658	<0.50	<0.50	8278658	<0.50	0.50	8278658
Bicarbonate (HCO3)	mg/L	52.7	8278658	124	<0.50	8278658	50.4	0.50	8278658
Carbonate (CO3)	mg/L	<0.50	8278658	<0.50	<0.50	8278658	<0.50	0.50	8278658
Hydroxide (OH)	mg/L	<0.50	8278658	<0.50	<0.50	8278658	<0.50	0.50	8278658
Anions									
Dissolved Sulphate (SO4)	mg/L	19.8	8277816	22.1	<0.50	8277816	21.0	0.50	8277816
Dissolved Chloride (Cl)	mg/L	<0.50	8277815	0.53	<0.50	8277815	<0.50	0.50	8277815
MISCELLANEOUS									
True Colour	Col. Unit	18.3	8276688	16.3	<5.0	8276688	18.9	5.0	8276688
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0039 (1)	8278323	0.0034 (1)	<0.0020 (1)	8278323	0.0030 (1)	0.0020	8278323
Total Ammonia (N)	mg/L	0.018	8278887	0.021	0.011	8278887	0.018	0.0050	8278887
Nitrate plus Nitrite (N)	mg/L	0.110	8277614	0.0355	<0.0020	8277614	0.111	0.0020	8277614
Nitrite (N)	mg/L	<0.0020	8277621	<0.0020	<0.0020	8277621	<0.0020	0.0020	8277621
Total Phosphorus (P)	mg/L	0.0036 (1)	8278338	0.0042 (1)	<0.0020 (1)	8278338	0.0039 (1)	0.0020	8278338
Physical Properties									
Conductivity	uS/cm	131	8278659	236	1.1	8278659	131	1.0	8278659

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OR3139		OR3143	OR3144		OR3145		
Sampling Date		2016/05/19 11:10		2016/05/19 12:12	2016/05/19 11:20		2016/05/19 11:30		
COC Number		08421243		08421243	08421243		08421243		
	UNITS	KZ-2	QC Batch	KZ-9	KZ-SWFB	QC Batch	KZ-SWDUP	RDL	QC Batch
pH	pH	7.82	8278661	8.16	5.18	8278661	7.83		8278661
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8277647	13.8	<1.0	8277647	1.9	1.0	8277647
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OR3146		
Sampling Date		2016/05/21 09:50		
COC Number		08421243		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Anion Sum	meq/L	0.011	N/A	8276508
Cation Sum	meq/L	0.0018	N/A	8276508
Ion Balance	N/A	0.17	0.010	8276507
Nitrate (N)	mg/L	<0.0020	0.0020	8276511
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8281267
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8281274
Fluoride (F)	mg/L	0.013	0.010	8279057
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8276684
Acidity (pH 4.5)	mg/L	<0.50	0.50	8278484
Alkalinity (Total as CaCO3)	mg/L	0.50	0.50	8278658
Acidity (pH 8.3)	mg/L	0.83	0.50	8278484
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8278658
Bicarbonate (HCO3)	mg/L	0.61	0.50	8278658
Carbonate (CO3)	mg/L	<0.50	0.50	8278658
Hydroxide (OH)	mg/L	<0.50	0.50	8278658
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8277816
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8277815
MISCELLANEOUS				
True Colour	Col. Unit	<5.0	5.0	8276688
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	0.0020	8278323
Total Ammonia (N)	mg/L	<0.0050	0.0050	8277814
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	8277614
Nitrite (N)	mg/L	<0.0020	0.0020	8277621
Total Phosphorus (P)	mg/L	<0.0020 (1)	0.0020	8278338
Physical Properties				
Conductivity	uS/cm	1.1	1.0	8278659
pH	pH	5.74		8278661

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OR3146		
Sampling Date		2016/05/21 09:50		
COC Number		08421243		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8277647
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OR3139		OR3143		OR3144		
Sampling Date		2016/05/19 11:10		2016/05/19 12:12		2016/05/19 11:20		
COC Number		08421243		08421243		08421243		
	UNITS	KZ-2	QC Batch	KZ-9	QC Batch	KZ-SWFB	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	65.3	8276303	122	8283518	<0.50	0.50	8276303
Elements								
Dissolved Mercury (Hg)	mg/L	0.0000030	8282955	<0.0000020	8282955	<0.0000020	0.0000020	8282955
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0103	8278568	0.00437	8284499	<0.00050	0.00050	8278568
Dissolved Antimony (Sb)	mg/L	0.000027	8278568	0.000058	8284499	<0.000020	0.000020	8278568
Dissolved Arsenic (As)	mg/L	0.000087	8278568	0.000219	8284499	<0.000020	0.000020	8278568
Dissolved Barium (Ba)	mg/L	0.0386	8278568	0.0608	8284499	<0.000020	0.000020	8278568
Dissolved Beryllium (Be)	mg/L	<0.000010	8278568	<0.000010	8284499	<0.000010	0.000010	8278568
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8278568	<0.0000050	8284499	<0.0000050	0.0000050	8278568
Dissolved Boron (B)	mg/L	<0.010	8278568	<0.010	8284499	<0.010	0.010	8278568
Dissolved Cadmium (Cd)	mg/L	0.000144	8278568	0.0000360	8284499	0.0000050	0.0000050	8278568
Dissolved Chromium (Cr)	mg/L	<0.00010	8278568	<0.00010	8284499	<0.00010	0.00010	8278568
Dissolved Cobalt (Co)	mg/L	0.0000150	8278568	0.0000150	8284499	<0.0000050	0.0000050	8278568
Dissolved Copper (Cu)	mg/L	0.00241	8278568	0.000644	8284499	<0.000050	0.000050	8278568
Dissolved Iron (Fe)	mg/L	0.0068	8278568	0.113	8284499	<0.0010	0.0010	8278568
Dissolved Lead (Pb)	mg/L	0.0000480	8278568	0.0000480	8284499	0.0000070	0.0000050	8278568
Dissolved Lithium (Li)	mg/L	0.00089	8278568	0.00176	8284499	<0.00050	0.00050	8278568
Dissolved Manganese (Mn)	mg/L	0.000300	8278568	0.0173	8284499	<0.000050	0.000050	8278568
Dissolved Molybdenum (Mo)	mg/L	0.000457	8278568	0.000533 (1)	8278568	<0.000050	0.000050	8278568
Dissolved Nickel (Ni)	mg/L	0.000459	8278568	0.000340	8284499	<0.000020	0.000020	8278568
Dissolved Phosphorus (P)	mg/L	<0.0020	8278568	0.0028	8284499	<0.0020	0.0020	8278568
Dissolved Selenium (Se)	mg/L	0.000425	8278568	0.000626	8284499	<0.000040	0.000040	8278568
Dissolved Silicon (Si)	mg/L	1.73	8278568	2.26	8284499	<0.050	0.050	8278568
Dissolved Silver (Ag)	mg/L	<0.0000050	8278568	<0.0000050	8284499	<0.0000050	0.0000050	8278568
Dissolved Strontium (Sr)	mg/L	0.0640	8278568	0.136	8284499	<0.000050	0.000050	8278568
Dissolved Thallium (Tl)	mg/L	0.0000050	8278568	<0.0000020	8284499	<0.0000020	0.0000020	8278568
Dissolved Tin (Sn)	mg/L	<0.00020	8278568	<0.00020	8284499	<0.00020	0.00020	8278568
Dissolved Titanium (Ti)	mg/L	<0.00050	8278568	<0.00050	8284499	<0.00050	0.00050	8278568
Dissolved Uranium (U)	mg/L	0.00112	8278568	0.000729	8284499	0.0000020	0.0000020	8278568
Dissolved Vanadium (V)	mg/L	<0.00020	8278568	<0.00020	8284499	<0.00020	0.00020	8278568

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OR3139		OR3143		OR3144		
Sampling Date		2016/05/19 11:10		2016/05/19 12:12		2016/05/19 11:20		
COC Number		08421243		08421243		08421243		
	UNITS	KZ-2	QC Batch	KZ-9	QC Batch	KZ-SWFB	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0235	8278568	0.00565	8284499	<0.00010 (1)	0.00010	8278568
Dissolved Zirconium (Zr)	mg/L	<0.00010	8278568	<0.00010	8284499	<0.00010	0.00010	8278568
Dissolved Calcium (Ca)	mg/L	22.3	8276509	40.8	8283891	<0.050	0.050	8276509
Dissolved Magnesium (Mg)	mg/L	2.31	8276509	4.79	8283891	<0.050	0.050	8276509
Dissolved Potassium (K)	mg/L	1.50	8276509	1.39	8283891	<0.050	0.050	8276509
Dissolved Sodium (Na)	mg/L	0.376	8276509	0.782	8283891	<0.050	0.050	8276509
Dissolved Sulphur (S)	mg/L	6.9	8276509	7.7	8283891	<3.0	3.0	8276509

RDL = Reportable Detection Limit
(1) Matrix Spike outside acceptance criteria (10% of analytes failure allowed).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OR3145		OR3146		
Sampling Date		2016/05/19 11:30		2016/05/21 09:50		
COC Number		08421243		08421243		
	UNITS	KZ-SWDUP	QC Batch	TRIP BLANK	RDL	QC Batch
Misc. Inorganics						
Dissolved Hardness (CaCO3)	mg/L	61.4	8283518	<0.50	0.50	8276303
Elements						
Dissolved Mercury (Hg)	mg/L	0.0000031	8282955	<0.0000020	0.0000020	8282955
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	0.0105	8278568	<0.00050	0.00050	8278568
Dissolved Antimony (Sb)	mg/L	0.000024	8278568	<0.000020	0.000020	8278568
Dissolved Arsenic (As)	mg/L	0.000104	8278568	<0.000020	0.000020	8278568
Dissolved Barium (Ba)	mg/L	0.0386	8278568	<0.000020	0.000020	8278568
Dissolved Beryllium (Be)	mg/L	<0.000010	8278568	<0.000010	0.000010	8278568
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8278568	<0.0000050	0.0000050	8278568
Dissolved Boron (B)	mg/L	<0.010	8278568	<0.010	0.010	8278568
Dissolved Cadmium (Cd)	mg/L	0.000155	8278568	<0.0000050	0.0000050	8278568
Dissolved Chromium (Cr)	mg/L	<0.00010	8278568	<0.00010	0.00010	8278568
Dissolved Cobalt (Co)	mg/L	0.0000120	8278568	<0.0000050	0.0000050	8278568
Dissolved Copper (Cu)	mg/L	0.00235	8278568	<0.000050	0.000050	8278568
Dissolved Iron (Fe)	mg/L	0.0071	8278568	<0.0010	0.0010	8278568
Dissolved Lead (Pb)	mg/L	0.0000500	8278568	<0.0000050	0.0000050	8278568
Dissolved Lithium (Li)	mg/L	0.00098	8278568	<0.00050	0.00050	8278568
Dissolved Manganese (Mn)	mg/L	0.000225	8278568	<0.000050	0.000050	8278568
Dissolved Molybdenum (Mo)	mg/L	0.000452	8278568	<0.000050	0.000050	8278568
Dissolved Nickel (Ni)	mg/L	0.000452	8278568	<0.000020	0.000020	8278568
Dissolved Phosphorus (P)	mg/L	<0.0020	8278568	<0.0020	0.0020	8278568
Dissolved Selenium (Se)	mg/L	0.000422	8278568	<0.000040	0.000040	8278568
Dissolved Silicon (Si)	mg/L	1.74	8278568	<0.050	0.050	8278568
Dissolved Silver (Ag)	mg/L	<0.0000050	8278568	<0.0000050	0.0000050	8278568
Dissolved Strontium (Sr)	mg/L	0.0644	8278568	<0.000050	0.000050	8278568
Dissolved Thallium (Tl)	mg/L	0.0000040	8278568	<0.0000020	0.0000020	8278568
Dissolved Tin (Sn)	mg/L	<0.00020	8278568	<0.00020	0.00020	8278568
Dissolved Titanium (Ti)	mg/L	<0.00050	8278568	<0.00050	0.00050	8278568
Dissolved Uranium (U)	mg/L	0.00114	8278568	<0.0000020	0.0000020	8278568
Dissolved Vanadium (V)	mg/L	<0.00020	8278568	<0.00020	0.00020	8278568
Dissolved Zinc (Zn)	mg/L	0.0241	8278568	<0.00010	0.00010	8278568
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OR3145		OR3146		
Sampling Date		2016/05/19 11:30		2016/05/21 09:50		
COC Number		08421243		08421243		
	UNITS	**KZ-SWDUP**	**QC Batch**	**TRIP BLANK**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	<0.00010	8278568	<0.00010	0.00010	8278568
Dissolved Calcium (Ca)	mg/L	21.2	8283891	<0.050	0.050	8276509
Dissolved Magnesium (Mg)	mg/L	2.06	8283891	<0.050	0.050	8276509
Dissolved Potassium (K)	mg/L	1.34	8283891	<0.050	0.050	8276509
Dissolved Sodium (Na)	mg/L	0.379	8283891	<0.050	0.050	8276509
Dissolved Sulphur (S)	mg/L	6.8	8283891	<3.0	3.0	8276509
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OR3139	OR3144	OR3145	OR3146		
Sampling Date		2016/05/19 11:10	2016/05/19 11:20	2016/05/19 11:30	2016/05/21 09:50		
COC Number		08421243	08421243	08421243	08421243		
	UNITS	KZ-2	KZ-SWFB	KZ-SWDUP	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	64.9	<0.50	65.0	<0.50	0.50	8276322
Elements							
Total Mercury (Hg)	mg/L	0.0000024	<0.0000020	0.0000028	<0.0000020	0.0000020	8282908
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0475	<0.00050	0.0283	<0.00050	0.00050	8279151
Total Antimony (Sb)	mg/L	0.000031	<0.000020	0.000028	<0.000020	0.000020	8279151
Total Arsenic (As)	mg/L	0.000122	<0.000020	0.000095	<0.000020	0.000020	8279151
Total Barium (Ba)	mg/L	0.0405	<0.000020	0.0404	<0.000020	0.000020	8279151
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8279151
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8279151
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8279151
Total Cadmium (Cd)	mg/L	0.000172	<0.0000050	0.000174	<0.0000050	0.0000050	8279151
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8279151
Total Cobalt (Co)	mg/L	0.0000490	<0.0000050	0.0000380	<0.0000050	0.0000050	8279151
Total Copper (Cu)	mg/L	0.00289	0.000546	0.00273	<0.000050	0.000050	8279151
Total Iron (Fe)	mg/L	0.0820	<0.0010	0.0411	<0.0010	0.0010	8279151
Total Lead (Pb)	mg/L	0.000375	0.0000250	0.000214	<0.0000050	0.0000050	8279151
Total Lithium (Li)	mg/L	0.00052	<0.00050	<0.00050	<0.00050	0.00050	8279151
Total Manganese (Mn)	mg/L	0.00235	<0.000050	0.00130	<0.000050	0.000050	8279151
Total Molybdenum (Mo)	mg/L	0.000498	<0.000050	0.000515	<0.000050	0.000050	8279151
Total Nickel (Ni)	mg/L	0.000581	<0.000020	0.000530	<0.000020	0.000020	8279151
Total Phosphorus (P)	mg/L	0.0089	0.0029	0.0069	<0.0020	0.0020	8279151
Total Selenium (Se)	mg/L	0.000448	<0.000040	0.000451	<0.000040	0.000040	8279151
Total Silicon (Si)	mg/L	1.53	<0.050	1.55	<0.050	0.050	8279151
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8279151
Total Strontium (Sr)	mg/L	0.0694	<0.000050	0.0673	<0.000050	0.000050	8279151
Total Thallium (Tl)	mg/L	0.0000050	<0.0000020	0.0000060	<0.0000020	0.0000020	8279151
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8279151
Total Titanium (Ti)	mg/L	0.00259	<0.00050	0.00142	<0.00050	0.00050	8279151
Total Uranium (U)	mg/L	0.00114	<0.0000020	0.00111	<0.0000020	0.0000020	8279151
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8279151
Total Zinc (Zn)	mg/L	0.0279	0.00011	0.0268	<0.00010	0.00010	8279151

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OR3139	OR3144	OR3145	OR3146		
Sampling Date		2016/05/19 11:10	2016/05/19 11:20	2016/05/19 11:30	2016/05/21 09:50		
COC Number		08421243	08421243	08421243	08421243		
	UNITS	KZ-2	KZ-SWFB	KZ-SWDUP	TRIP BLANK	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8279151
Total Calcium (Ca)	mg/L	22.9	<0.050	22.9	<0.050	0.050	8276510
Total Magnesium (Mg)	mg/L	1.90	<0.050	1.91	<0.050	0.050	8276510
Total Potassium (K)	mg/L	1.28	<0.050	1.27	<0.050	0.050	8276510
Total Sodium (Na)	mg/L	0.321	<0.050	0.326	<0.050	0.050	8276510
Total Sulphur (S)	mg/L	6.1	<3.0	6.3	<3.0	3.0	8276510
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OR3143		
Sampling Date		2016/05/19 12:12		
COC Number		08421243		
	UNITS	KZ-9	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	105	0.50	8283517
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8282908
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.175	0.0030	8283897
Total Antimony (Sb)	mg/L	0.000054	0.000050	8283897
Total Arsenic (As)	mg/L	0.000483	0.000020	8283897
Total Barium (Ba)	mg/L	0.0534	0.00010	8283897
Total Beryllium (Be)	mg/L	0.000013	0.000010	8283897
Total Bismuth (Bi)	mg/L	<0.000020	0.000020	8283897
Total Boron (B)	mg/L	<0.050	0.050	8283897
Total Cadmium (Cd)	mg/L	0.0000760	0.0000050	8283897
Total Chromium (Cr)	mg/L	<0.00050	0.00050	8283897
Total Cobalt (Co)	mg/L	0.000258	0.000010	8283897
Total Copper (Cu)	mg/L	0.00174	0.00020	8283897
Total Iron (Fe)	mg/L	0.671	0.0050	8283897
Total Lead (Pb)	mg/L	0.000585	0.000050	8283897
Total Lithium (Li)	mg/L	0.00195	0.00050	8283897
Total Manganese (Mn)	mg/L	0.0402	0.00010	8283897
Total Molybdenum (Mo)	mg/L	0.000415	0.000050	8279986
Total Nickel (Ni)	mg/L	0.00083	0.00010	8283897
Total Phosphorus (P)	mg/L	0.017	0.010	8283897
Total Selenium (Se)	mg/L	0.000529	0.000040	8283897
Total Silicon (Si)	mg/L	2.15	0.10	8283897
Total Silver (Ag)	mg/L	<0.000010	0.000010	8283897
Total Strontium (Sr)	mg/L	0.114	0.000050	8283897
Total Thallium (Tl)	mg/L	0.0000030	0.0000020	8283897
Total Tin (Sn)	mg/L	<0.00020	0.00020	8283897
Total Titanium (Ti)	mg/L	0.0102	0.0050	8283897
Total Uranium (U)	mg/L	0.000635	0.0000050	8283897
Total Vanadium (V)	mg/L	<0.00050	0.00050	8283897
Total Zinc (Zn)	mg/L	0.0157	0.0010	8283897
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OR3143		
Sampling Date		2016/05/19 12:12		
COC Number		08421243		
	UNITS	KZ-9	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8283897
Total Calcium (Ca)	mg/L	35.4	0.25	8284035
Total Magnesium (Mg)	mg/L	3.99	0.25	8284035
Total Potassium (K)	mg/L	1.17	0.25	8284035
Total Sodium (Na)	mg/L	0.67	0.25	8276510
Total Sulphur (S)	mg/L	<15	15	8284035
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OR3139
Sample ID: KZ-2
Matrix: Water

Collected: 2016/05/19
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8278484	N/A	2016/05/25	Name Redacted
Alkalinity - Water	AT/ALK	8278658	2016/05/25	2016/05/25	
Chloride by Automated Colourimetry	KONE/COL	8277815	N/A	2016/05/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8281267	N/A	2016/05/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8281274	N/A	2016/05/27	
Colour (True) by Kone Lab	KONE	8276688	N/A	2016/05/21	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8278599	N/A	2016/05/24	
Conductance - water	AT/ALK	8278659	N/A	2016/05/25	
Fluoride	ISE/ISE	8279057	N/A	2016/05/24	
Hardness Total (calculated as CaCO3)	CALC	8276322	N/A	2016/05/30	
Hardness (calculated as CaCO3)	CALC	8276303	N/A	2016/05/30	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8282955	N/A	2016/05/30	
Mercury (Total-LowLevel) by CVAF	CV/AF	8282908	2016/05/30	2016/05/30	
Ion Balance	CALC	8276507	N/A	2016/05/30	
Sum of cations, anions	CALC	8276508	N/A	2016/05/30	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8276509	N/A	2016/05/30	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8278568	N/A	2016/05/29	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8276510	N/A	2016/05/30	
Elements by ICPMS Low Level (total)	ICP/CRCM	8279151	N/A	2016/05/29	
Ammonia-N (Preserved)	KONE/COL	8278887	N/A	2016/05/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8277614	N/A	2016/05/21	
Nitrite (N) (low level)	TRAA/COL	8277621	N/A	2016/05/21	
Nitrogen - Nitrate (as N)	CALC	8276511	N/A	2016/05/25	
Filter and HNO3 Preserve for Metals	ICP	8277063	N/A	2016/05/24	
pH Water	AT/ALK	8278661	N/A	2016/05/25	
Sulphate by Automated Colourimetry	KONE/COL	8277816	N/A	2016/05/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8278323	2016/05/25	2016/05/25	
Total Phosphorus - unpreserved	KONE/COL	8278338	N/A	2016/05/25	
Total Suspended Solids-Low Level	BAL/BAL	8277647	2016/05/25	2016/05/26	

Maxxam ID: OR3139 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2016/05/19
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8281267	N/A	2016/05/27	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8281274	N/A	2016/05/27	
Mercury (Total-LowLevel) by CVAF	CV/AF	8282908	2016/05/30	2016/05/30	

Maxxam ID: OR3143
Sample ID: KZ-9
Matrix: Water

Collected: 2016/05/19
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8278484	N/A	2016/05/25	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OR3143
Sample ID: KZ-9
Matrix: Water

Collected: 2016/05/19
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8278658	2016/05/25	2016/05/25	Name Redacted
Chloride by Automated Colourimetry	KONE/COL	8277815	N/A	2016/05/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8281267	N/A	2016/05/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8281274	N/A	2016/05/27	
Colour (True) by Kone Lab	KONE	8276688	N/A	2016/05/21	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8278599	N/A	2016/05/24	
Conductance - water	AT/ALK	8278659	N/A	2016/05/25	
Fluoride	ISE/ISE	8279055	N/A	2016/05/24	
Hardness Total (calculated as CaCO3)	CALC	8283517	N/A	2016/06/01	
Hardness (calculated as CaCO3)	CALC	8283518	N/A	2016/06/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8282955	N/A	2016/05/30	
Mercury (Total-LowLevel) by CVAF	CV/AF	8282908	2016/05/30	2016/05/30	
Ion Balance	CALC	8276507	N/A	2016/05/30	
Sum of cations, anions	CALC	8276508	N/A	2016/05/30	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8283891	N/A	2016/06/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8284499	N/A	2016/06/01	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8283897	2016/05/31	2016/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8284035	N/A	2016/06/01	
Ammonia-N (Preserved)	KONE/COL	8278887	N/A	2016/05/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8277614	N/A	2016/05/21	
Nitrite (N) (low level)	TRAA/COL	8277621	N/A	2016/05/21	
Nitrogen - Nitrate (as N)	CALC	8276511	N/A	2016/05/25	
Filter and HNO3 Preserve for Metals	ICP	8277063	N/A	2016/05/24	
pH Water	AT/ALK	8278661	N/A	2016/05/25	
Sulphate by Automated Colourimetry	KONE/COL	8277816	N/A	2016/05/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8278323	2016/05/25	2016/05/25	
Total Phosphorus - unpreserved	KONE/COL	8278338	N/A	2016/05/25	
Total Suspended Solids-Low Level	BAL/BAL	8277647	2016/05/25	2016/05/26	

Maxxam ID: OR3143 Dup
Sample ID: KZ-9
Matrix: Water

Collected: 2016/05/19
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Colour (True) by Kone Lab	KONE	8276688	N/A	2016/05/21	Name Redacted
Elements by ICPMS Digested LL (total)	ICP/CRCM	8279986	2016/05/26	2016/05/27	

Maxxam ID: OR3144
Sample ID: KZ-SWFB
Matrix: Water

Collected: 2016/05/19
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8278484	N/A	2016/05/25	Name Redacted
Alkalinity - Water	AT/ALK	8278658	2016/05/25	2016/05/25	
Chloride by Automated Colourimetry	KONE/COL	8277815	N/A	2016/05/24	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OR3144
Sample ID: KZ-SWFB
Matrix: Water

Collected: 2016/05/19
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8281267	N/A	2016/05/27	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8281274	N/A	2016/05/27	
Colour (True) by Kone Lab	KONE	8276688	N/A	2016/05/21	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8278599	N/A	2016/05/24	
Conductance - water	AT/ALK	8278659	N/A	2016/05/25	
Fluoride	ISE/ISE	8279055	N/A	2016/05/24	
Hardness Total (calculated as CaCO3)	CALC	8276322	N/A	2016/05/30	
Hardness (calculated as CaCO3)	CALC	8276303	N/A	2016/05/30	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8282955	N/A	2016/05/30	
Mercury (Total-LowLevel) by CVAF	CV/AF	8282908	2016/05/30	2016/05/30	
Ion Balance	CALC	8276507	N/A	2016/05/30	
Sum of cations, anions	CALC	8276508	N/A	2016/05/30	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8276509	N/A	2016/05/30	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8278568	N/A	2016/05/29	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8276510	N/A	2016/05/30	
Elements by ICPMS Low Level (total)	ICP/CRCM	8279151	N/A	2016/05/29	
Ammonia-N (Preserved)	KONE/COL	8278887	N/A	2016/05/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8277614	N/A	2016/05/21	
Nitrite (N) (low level)	TRAA/COL	8277621	N/A	2016/05/21	
Nitrogen - Nitrate (as N)	CALC	8276511	N/A	2016/05/25	
Filter and HNO3 Preserve for Metals	ICP	8277063	N/A	2016/05/24	
pH Water	AT/ALK	8278661	N/A	2016/05/25	
Sulphate by Automated Colourimetry	KONE/COL	8277816	N/A	2016/05/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8278323	2016/05/25	2016/05/25	
Total Phosphorus - unpreserved	KONE/COL	8278338	N/A	2016/05/25	
Total Suspended Solids-Low Level	BAL/BAL	8277647	2016/05/25	2016/05/26	

Maxxam ID: OR3144 Dup
Sample ID: KZ-SWFB
Matrix: Water

Collected: 2016/05/19
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8277815	N/A	2016/05/24	Name Redacted
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8278568	N/A	2016/05/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8279151	N/A	2016/05/29	
Sulphate by Automated Colourimetry	KONE/COL	8277816	N/A	2016/05/24	

Maxxam ID: OR3145
Sample ID: KZ-SWDUP
Matrix: Water

Collected: 2016/05/19
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8278484	N/A	2016/05/25	Name Redacted
Alkalinity - Water	AT/ALK	8278658	2016/05/25	2016/05/25	
Chloride by Automated Colourimetry	KONE/COL	8277815	N/A	2016/05/24	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OR3145
Sample ID: KZ-SWDUP
Matrix: Water

Collected: 2016/05/19
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8281267	N/A	2016/05/27	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8281274	N/A	2016/05/27	
Colour (True) by Kone Lab	KONE	8276688	N/A	2016/05/21	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8278599	N/A	2016/05/24	
Conductance - water	AT/ALK	8278659	N/A	2016/05/25	
Fluoride	ISE/ISE	8279057	N/A	2016/05/24	
Hardness Total (calculated as CaCO3)	CALC	8276322	N/A	2016/05/30	
Hardness (calculated as CaCO3)	CALC	8283518	N/A	2016/06/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8282955	N/A	2016/05/30	
Mercury (Total-LowLevel) by CVAF	CV/AF	8282908	2016/05/30	2016/05/30	
Ion Balance	CALC	8276507	N/A	2016/05/30	
Sum of cations, anions	CALC	8276508	N/A	2016/05/30	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8283891	N/A	2016/06/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8278568	N/A	2016/05/29	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8276510	N/A	2016/05/30	
Elements by ICPMS Low Level (total)	ICP/CRCM	8279151	N/A	2016/05/29	
Ammonia-N (Preserved)	KONE/COL	8278887	N/A	2016/05/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8277614	N/A	2016/05/21	
Nitrite (N) (low level)	TRAA/COL	8277621	N/A	2016/05/21	
Nitrogen - Nitrate (as N)	CALC	8276511	N/A	2016/05/25	
Filter and HNO3 Preserve for Metals	ICP	8277063	N/A	2016/05/24	
pH Water	AT/ALK	8278661	N/A	2016/05/25	
Sulphate by Automated Colourimetry	KONE/COL	8277816	N/A	2016/05/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8278323	2016/05/25	2016/05/25	
Total Phosphorus - unpreserved	KONE/COL	8278338	N/A	2016/05/25	
Total Suspended Solids-Low Level	BAL/BAL	8277647	2016/05/25	2016/05/26	

Maxxam ID: OR3146
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/05/21
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8278484	N/A	2016/05/25	Name Redacted
Alkalinity - Water	AT/ALK	8278658	2016/05/25	2016/05/25	
Chloride by Automated Colourimetry	KONE/COL	8277815	N/A	2016/05/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8281267	N/A	2016/05/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8281274	N/A	2016/05/27	
Colour (True) by Kone Lab	KONE	8276688	N/A	2016/05/21	
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8276684	N/A	2016/05/24	
Conductance - water	AT/ALK	8278659	N/A	2016/05/25	
Fluoride	ISE/ISE	8279057	N/A	2016/05/24	
Hardness Total (calculated as CaCO3)	CALC	8276322	N/A	2016/05/30	
Hardness (calculated as CaCO3)	CALC	8276303	N/A	2016/05/30	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8282955	N/A	2016/05/30	
Mercury (Total-LowLevel) by CVAF	CV/AF	8282908	2016/05/30	2016/05/30	

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OR3146
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/05/21
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance	CALC	8276507	N/A	2016/05/30	Name Redacted
Sum of cations, anions	CALC	8276508	N/A	2016/05/30	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8276509	N/A	2016/05/30	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8278568	N/A	2016/05/29	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8276510	N/A	2016/05/30	
Elements by ICPMS Low Level (total)	ICP/CRCM	8279151	N/A	2016/05/29	
Ammonia-N (Unpreserved)	KONE/COL	8277814	N/A	2016/05/24	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8277614	N/A	2016/05/21	
Nitrite (N) (low level)	TRAA/COL	8277621	N/A	2016/05/21	
Nitrogen - Nitrate (as N)	CALC	8276511	N/A	2016/05/25	
pH Water	AT/ALK	8278661	N/A	2016/05/25	
Sulphate by Automated Colourimetry	KONE/COL	8277816	N/A	2016/05/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8278323	2016/05/25	2016/05/25	
Total Phosphorus - unpreserved	KONE/COL	8278338	N/A	2016/05/25	
Total Suspended Solids-Low Level	BAL/BAL	8277647	2016/05/25	2016/05/26	

Maxxam ID: OR3146 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/05/21
Shipped:
Received: 2016/05/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8282955	N/A	2016/05/30	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.7°C
Package 2	4.0°C
Package 3	1.3°C

Sample OR3143-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OR3144-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].
Sample OR3143, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample OR3143, Elements by ICPMS Digested LL (total): Test repeated.
Sample OR3143, Na, K, Ca, Mg, S by CRC ICPMS (total): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8276684	Dissolved Organic Carbon (C)	2016/05/24	93	80 - 120	112	80 - 120	<0.50	mg/L	8.1	20
8276688	True Colour	2016/05/21			104	80 - 120	<5.0	Col. Unit	NC	20
8277614	Nitrate plus Nitrite (N)	2016/05/21			116	80 - 120	<0.0020	mg/L		
8277621	Nitrite (N)	2016/05/21			100	80 - 120	<0.0020	mg/L		
8277647	Total Suspended Solids	2016/05/26			99	80 - 120	<1.0	mg/L		
8277814	Total Ammonia (N)	2016/05/24	110	80 - 120	97	80 - 120	<0.0050	mg/L	NC	20
8277815	Dissolved Chloride (Cl)	2016/05/24	NC	80 - 120	99	80 - 120	<0.50	mg/L	1.1	20
8277816	Dissolved Sulphate (SO4)	2016/05/24	NC	80 - 120	94	80 - 120	<0.50	mg/L	0.62	20
8278323	Dissolved Phosphorus (P)	2016/05/25	95	80 - 120	101	80 - 120	<0.0020	mg/L	NC	20
8278338	Total Phosphorus (P)	2016/05/25	96	80 - 120	98	80 - 120	<0.0020	mg/L	NC	20
8278484	Acidity (pH 4.5)	2016/05/25					<0.50	mg/L	NC	20
8278484	Acidity (pH 8.3)	2016/05/25			97	80 - 120	<0.50	mg/L	0.91	20
8278568	Dissolved Aluminum (Al)	2016/05/29	102	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8278568	Dissolved Antimony (Sb)	2016/05/29	99	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8278568	Dissolved Arsenic (As)	2016/05/29	105	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8278568	Dissolved Barium (Ba)	2016/05/29	96	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8278568	Dissolved Beryllium (Be)	2016/05/29	100	80 - 120	95	80 - 120	<0.000010	mg/L	NC	20
8278568	Dissolved Bismuth (Bi)	2016/05/29	92	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8278568	Dissolved Boron (B)	2016/05/29	104	80 - 120	100	80 - 120	<0.010	mg/L	NC	20
8278568	Dissolved Cadmium (Cd)	2016/05/29	98	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8278568	Dissolved Chromium (Cr)	2016/05/29	102	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8278568	Dissolved Cobalt (Co)	2016/05/29	102	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8278568	Dissolved Copper (Cu)	2016/05/29	103	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8278568	Dissolved Iron (Fe)	2016/05/29	103	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20
8278568	Dissolved Lead (Pb)	2016/05/29	93	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8278568	Dissolved Lithium (Li)	2016/05/29	97	80 - 120	92	80 - 120	<0.00050	mg/L	NC	20
8278568	Dissolved Manganese (Mn)	2016/05/29	100	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8278568	Dissolved Molybdenum (Mo)	2016/05/29	90	80 - 120	93	80 - 120	<0.000050	mg/L	NC	20
8278568	Dissolved Nickel (Ni)	2016/05/29	101	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8278568	Dissolved Phosphorus (P)	2016/05/29					<0.0020	mg/L	NC	20
8278568	Dissolved Selenium (Se)	2016/05/29	105	80 - 120	101	80 - 120	<0.000040	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8278568	Dissolved Silicon (Si)	2016/05/29					<0.050	mg/L	NC	20
8278568	Dissolved Silver (Ag)	2016/05/29	103	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8278568	Dissolved Strontium (Sr)	2016/05/29	95	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8278568	Dissolved Thallium (Tl)	2016/05/29	98	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8278568	Dissolved Tin (Sn)	2016/05/29	97	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8278568	Dissolved Titanium (Ti)	2016/05/29	102	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8278568	Dissolved Uranium (U)	2016/05/29	97	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8278568	Dissolved Vanadium (V)	2016/05/29	106	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8278568	Dissolved Zinc (Zn)	2016/05/29	123 (1)	80 - 120	113	80 - 120	<0.00010	mg/L	NC	20
8278568	Dissolved Zirconium (Zr)	2016/05/29					<0.00010	mg/L	NC	20
8278599	Dissolved Organic Carbon (C)	2016/05/24	NC	80 - 120	110	80 - 120	0.65, RDL=0.50	mg/L	2.4	20
8278658	Alkalinity (PP as CaCO3)	2016/05/25					<0.50	mg/L	NC	20
8278658	Alkalinity (Total as CaCO3)	2016/05/25	NC	80 - 120	97	80 - 120	<0.50	mg/L	0.59	20
8278658	Bicarbonate (HCO3)	2016/05/25					<0.50	mg/L	0.59	20
8278658	Carbonate (CO3)	2016/05/25					<0.50	mg/L	NC	20
8278658	Hydroxide (OH)	2016/05/25					<0.50	mg/L	NC	20
8278659	Conductivity	2016/05/25			101	80 - 120	<1.0	uS/cm	3.4	20
8278661	pH	2016/05/25			101	97 - 103			0.13	N/A
8278887	Total Ammonia (N)	2016/05/25	NC	80 - 120	100	80 - 120	<0.0050	mg/L	3.2	20
8279055	Fluoride (F)	2016/05/24	100	80 - 120	102	80 - 120	0.016, RDL=0.010	mg/L	1.9	20
8279057	Fluoride (F)	2016/05/24	102	80 - 120	102	80 - 120	0.012, RDL=0.010	mg/L	0	20
8279151	Total Aluminum (Al)	2016/05/29	113	80 - 120	111	80 - 120	<0.00050	mg/L	NC	20
8279151	Total Antimony (Sb)	2016/05/29	108	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8279151	Total Arsenic (As)	2016/05/29	105	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8279151	Total Barium (Ba)	2016/05/29	107	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
8279151	Total Beryllium (Be)	2016/05/29	100	80 - 120	92	80 - 120	<0.000010	mg/L	NC	20
8279151	Total Bismuth (Bi)	2016/05/29	101	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8279151	Total Boron (B)	2016/05/29	114	80 - 120	112	80 - 120	<0.010	mg/L	NC	20
8279151	Total Cadmium (Cd)	2016/05/29	107	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8279151	Total Chromium (Cr)	2016/05/29	104	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8279151	Total Cobalt (Co)	2016/05/29	105	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8279151	Total Copper (Cu)	2016/05/29	107	80 - 120	106	80 - 120	<0.000050	mg/L	5.7	20
8279151	Total Iron (Fe)	2016/05/29	108	80 - 120	110	80 - 120	<0.0010	mg/L	NC	20
8279151	Total Lead (Pb)	2016/05/29	90	80 - 120	93	80 - 120	<0.0000050	mg/L	NC	20
8279151	Total Lithium (Li)	2016/05/29	93	80 - 120	80	80 - 120	<0.00050	mg/L	NC	20
8279151	Total Manganese (Mn)	2016/05/29	104	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8279151	Total Molybdenum (Mo)	2016/05/29	100	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8279151	Total Nickel (Ni)	2016/05/29	105	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8279151	Total Phosphorus (P)	2016/05/29					0.0024, RDL=0.0020	mg/L	NC	20
8279151	Total Selenium (Se)	2016/05/29	116	80 - 120	106	80 - 120	<0.000040	mg/L	NC	20
8279151	Total Silicon (Si)	2016/05/29					<0.050	mg/L	NC	20
8279151	Total Silver (Ag)	2016/05/29	112	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8279151	Total Strontium (Sr)	2016/05/29	98	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8279151	Total Thallium (Tl)	2016/05/29	106	80 - 120	110	80 - 120	<0.0000020	mg/L	NC	20
8279151	Total Tin (Sn)	2016/05/29	110	80 - 120	113	80 - 120	<0.00020	mg/L	NC	20
8279151	Total Titanium (Ti)	2016/05/29	105	80 - 120	108	80 - 120	<0.00050	mg/L	NC	20
8279151	Total Uranium (U)	2016/05/29	97	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8279151	Total Vanadium (V)	2016/05/29	104	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8279151	Total Zinc (Zn)	2016/05/29	119	80 - 120	113	80 - 120	<0.00010	mg/L	NC	20
8279151	Total Zirconium (Zr)	2016/05/29					<0.00010	mg/L	NC	20
8279986	Total Molybdenum (Mo)	2016/05/27	100	80 - 120	98	80 - 120	<0.000050	mg/L	1.2	20
8281267	Strong Acid Dissoc. Cyanide (CN)	2016/05/27	101	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8281274	Weak Acid Dissoc. Cyanide (CN)	2016/05/27	112	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8282908	Total Mercury (Hg)	2016/05/30	94	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8282955	Dissolved Mercury (Hg)	2016/05/30	114	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	20
8283897	Total Aluminum (Al)	2016/06/01	NC	80 - 120	115	80 - 120	<0.0030	mg/L	4.9	20
8283897	Total Antimony (Sb)	2016/06/01	103	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8283897	Total Arsenic (As)	2016/06/01	104	80 - 120	106	80 - 120	<0.000020	mg/L	8.0	20
8283897	Total Barium (Ba)	2016/06/01	NC	80 - 120	100	80 - 120	<0.00010	mg/L	4.4	20
8283897	Total Beryllium (Be)	2016/06/01	106	80 - 120	106	80 - 120	<0.000010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8283897	Total Bismuth (Bi)	2016/06/01	101	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8283897	Total Boron (B)	2016/06/01	111	80 - 120	102	80 - 120	<0.050	mg/L	NC	20
8283897	Total Cadmium (Cd)	2016/06/01	104	80 - 120	102	80 - 120	<0.0000050	mg/L	3.4	20
8283897	Total Chromium (Cr)	2016/06/01	101	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8283897	Total Cobalt (Co)	2016/06/01	100	80 - 120	99	80 - 120	<0.000010	mg/L	7.1	20
8283897	Total Copper (Cu)	2016/06/01	NC	80 - 120	104	80 - 120	<0.00020	mg/L	4.3	20
8283897	Total Iron (Fe)	2016/06/01	NC	80 - 120	109	80 - 120	<0.0050	mg/L	3.5	20
8283897	Total Lead (Pb)	2016/06/01	100	80 - 120	98	80 - 120	<0.000050	mg/L	6.1	20
8283897	Total Lithium (Li)	2016/06/01	95	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
8283897	Total Manganese (Mn)	2016/06/01	NC	80 - 120	102	80 - 120	<0.00010	mg/L	1.7	20
8283897	Total Nickel (Ni)	2016/06/01	99	80 - 120	101	80 - 120	<0.00010	mg/L	2.2	20
8283897	Total Phosphorus (P)	2016/06/01					<0.010	mg/L	0.68	20
8283897	Total Selenium (Se)	2016/06/01	105	80 - 120	112	80 - 120	<0.000040	mg/L	NC	20
8283897	Total Silicon (Si)	2016/06/01					<0.10	mg/L	1.3	20
8283897	Total Silver (Ag)	2016/06/01	121 (1)	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20
8283897	Total Strontium (Sr)	2016/06/01	NC	80 - 120	106	80 - 120	<0.000050	mg/L	0.053	20
8283897	Total Thallium (Tl)	2016/06/01	97	80 - 120	90	80 - 120	<0.0000020	mg/L	NC	20
8283897	Total Tin (Sn)	2016/06/01	104	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
8283897	Total Titanium (Ti)	2016/06/01	NC	80 - 120	91	80 - 120	<0.0050	mg/L	NC	20
8283897	Total Uranium (U)	2016/06/01	99	80 - 120	94	80 - 120	<0.0000050	mg/L	4.7	20
8283897	Total Vanadium (V)	2016/06/01	106	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8283897	Total Zinc (Zn)	2016/06/01	NC	80 - 120	113	80 - 120	<0.0010	mg/L	2.1	20
8283897	Total Zirconium (Zr)	2016/06/01					<0.00010	mg/L	NC	20
8284499	Dissolved Aluminum (Al)	2016/06/01			111	80 - 120	<0.00050	mg/L		
8284499	Dissolved Antimony (Sb)	2016/06/01			104	80 - 120	<0.000020	mg/L		
8284499	Dissolved Arsenic (As)	2016/06/01			104	80 - 120	<0.000020	mg/L		
8284499	Dissolved Barium (Ba)	2016/06/01			100	80 - 120	<0.000020	mg/L		
8284499	Dissolved Beryllium (Be)	2016/06/01			104	80 - 120	<0.000010	mg/L		
8284499	Dissolved Bismuth (Bi)	2016/06/01			97	80 - 120	<0.0000050	mg/L		
8284499	Dissolved Boron (B)	2016/06/01			102	80 - 120	<0.010	mg/L		
8284499	Dissolved Cadmium (Cd)	2016/06/01			104	80 - 120	<0.0000050	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8284499	Dissolved Chromium (Cr)	2016/06/01			101	80 - 120	<0.00010	mg/L		
8284499	Dissolved Cobalt (Co)	2016/06/01			104	80 - 120	<0.0000050	mg/L		
8284499	Dissolved Copper (Cu)	2016/06/01			103	80 - 120	<0.000050	mg/L		
8284499	Dissolved Iron (Fe)	2016/06/01			108	80 - 120	<0.0010	mg/L		
8284499	Dissolved Lead (Pb)	2016/06/01			97	80 - 120	<0.0000050	mg/L		
8284499	Dissolved Lithium (Li)	2016/06/01			101	80 - 120	<0.00050	mg/L		
8284499	Dissolved Manganese (Mn)	2016/06/01			103	80 - 120	<0.000050	mg/L		
8284499	Dissolved Nickel (Ni)	2016/06/01			104	80 - 120	<0.000020	mg/L		
8284499	Dissolved Phosphorus (P)	2016/06/01					<0.0020	mg/L		
8284499	Dissolved Selenium (Se)	2016/06/01			104	80 - 120	<0.000040	mg/L		
8284499	Dissolved Silicon (Si)	2016/06/01					<0.050	mg/L		
8284499	Dissolved Silver (Ag)	2016/06/01			110	80 - 120	<0.0000050	mg/L		
8284499	Dissolved Strontium (Sr)	2016/06/01			95	80 - 120	<0.000050	mg/L		
8284499	Dissolved Thallium (Tl)	2016/06/01			103	80 - 120	<0.0000020	mg/L		
8284499	Dissolved Tin (Sn)	2016/06/01			103	80 - 120	<0.00020	mg/L		
8284499	Dissolved Titanium (Ti)	2016/06/01			107	80 - 120	<0.00050	mg/L		
8284499	Dissolved Uranium (U)	2016/06/01			94	80 - 120	<0.0000020	mg/L		
8284499	Dissolved Vanadium (V)	2016/06/01			103	80 - 120	<0.00020	mg/L		
8284499	Dissolved Zinc (Zn)	2016/06/01			106	80 - 120	<0.00010	mg/L		
8284499	Dissolved Zirconium (Zr)	2016/06/01					<0.00010	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B639571
Report Date: 2016/06/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Andy Lu, Ph.D., P.Chem., Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC 08421243

BBY FCD-00077/05

Page 1

Invoice Information		Report Information (if differs from invoice)		Project Information (wher		ound Time (TAT) Required	
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	AB	x Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS	
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)	
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	Same Day / 2 Days / 1 Day / 3 Days	
Phone:		Phone:	(867) 668-6463	Site #:			
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:	

Regulatory Criteria	Special Instructions
BC CSR Soil / BC CSR Water	Return Cooler
CCME (Specify) / Other (Specify)	Ship Sample Bottles (Please Specify)
Drinking Water / BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	TRUE COLOR	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-2		19-May-16	11:10	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
3	KZ-9		19-May-16	12:12	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
4	KZ-SWFB		19-May-16	11:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
5	KZ-SWDUP		19-May-16	11:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
6	Trip Blank		19-May-16		Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
7					Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
8					Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
9					Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		
10					Water	x	x	x	x	x	x	x	x	x	x	x	x	x				10		

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL Y / (N) Present	CUSTODY SEAL Y / (N) Intact	COOLER TEMPERATURES
NA	NA	1,3,1
NA	NA	3,5,2
NA	NA	1,2,1

COOLING MEDIA PRESENT (Y) / N

B639571_COC

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	20/5/2016	12:00	Signature Redacted	2016/05/21	9:50	B639571

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08423166

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/06/22
Report #: R2204041
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B647873
Received: 2016/06/14, 16:30

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	7	N/A	2016/06/16	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	5	2016/06/16	2016/06/16	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	2	2016/06/16	2016/06/17	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	7	N/A	2016/06/16	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	7	N/A	2016/06/16	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	7	N/A	2016/06/16	BBY6SOP-00004	SM 22 4500-CN O m
Colour (True) by Kone Lab	7	N/A	2016/06/16	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	7	N/A	2016/06/17	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	5	N/A	2016/06/16	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	2	N/A	2016/06/17	BBY6SOP-00026	SM 22 2510 B m
Fluoride	7	N/A	2016/06/16	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	7	N/A	2016/06/17	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	7	N/A	2016/06/17	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	7	N/A	2016/06/16	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	7	2016/06/16	2016/06/16	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	7	N/A	2016/06/17	BBY WI-00033	SM 22 1030E
Sum of cations, anions	7	N/A	2016/06/17	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	7	N/A	2016/06/17	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	7	N/A	2016/06/16	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	6	2016/06/16	2016/06/17	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	7	N/A	2016/06/17	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	1	N/A	2016/06/17	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	7	N/A	2016/06/16	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	7	N/A	2016/06/16	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	7	N/A	2016/06/16	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	7	N/A	2016/06/17	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	7	N/A	2016/06/16	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	6	N/A	2016/06/16	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (2)	1	N/A	2016/06/17	BBY6SOP-00026	SM 22 4500-H+ B m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08423166

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/06/22
Report #: R2204041
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B647873
Received: 2016/06/14, 16:30

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Sulphate by Automated Colourimetry	7	N/A	2016/06/16	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	6	2016/06/16	2016/06/16	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2016/06/21	2016/06/21	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	6	N/A	2016/06/16	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	1	N/A	2016/06/21	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	7	2016/06/16	2016/06/17	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.

(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OV5240		OV5361		OV5382		
Sampling Date		2016/06/13 13:20		2016/06/13 12:00		2016/06/13 09:30		
COC Number		08423166		08423166		08423166		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	5.0	8299904	3.8	8299904	4.2	N/A	8299904
Cation Sum	meq/L	4.9	8299904	3.7	8299904	4.1	N/A	8299904
Filter and HNO3 Preservation	N/A	LAB	8300992	LAB	8300992	LAB	N/A	8300992
Ion Balance	N/A	0.97	8299902	0.97	8299902	0.98	0.010	8299902
Nitrate (N)	mg/L	0.0073	8300282	0.0112	8300282	0.0303	0.0020	8300282
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00069	8301635	0.00066	8301635	0.00073	0.00050	8301635
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00063	8301641	0.00071	8301641	0.00060	0.00050	8301641
Fluoride (F)	mg/L	0.180	8301933	0.110	8301933	0.120	0.010	8301933
Dissolved Organic Carbon (C)	mg/L	3.86	8303633	2.74	8303633	2.35	0.50	8303633
Acidity (pH 4.5)	mg/L	<0.50	8301670	<0.50	8301670	<0.50	0.50	8301670
Alkalinity (Total as CaCO3)	mg/L	213	8301171	161	8301171	176	0.50	8301105
Acidity (pH 8.3)	mg/L	<0.50	8301670	<0.50	8301670	<0.50	0.50	8301670
Alkalinity (PP as CaCO3)	mg/L	3.84	8301171	2.06	8301171	<0.50	0.50	8301105
Bicarbonate (HCO3)	mg/L	251	8301171	191	8301171	215	0.50	8301105
Carbonate (CO3)	mg/L	4.61	8301171	2.47	8301171	<0.50	0.50	8301105
Hydroxide (OH)	mg/L	<0.50	8301171	<0.50	8301171	<0.50	0.50	8301105
Anions								
Dissolved Sulphate (SO4)	mg/L	35.5	8302055	28.6	8302055	30.9	0.50	8302055
Dissolved Chloride (Cl)	mg/L	0.87	8302042	0.87	8302042	0.80	0.50	8302042
MISCELLANEOUS								
True Colour	Col. Unit	16.6	8302111	8.8	8302111	7.2	5.0	8302111
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0050 (1)	8306782	0.0040	8302122	0.0029	0.0020	8302122
Total Ammonia (N)	mg/L	0.011	8301563	0.011	8301565	0.019	0.0050	8301565
Nitrate plus Nitrite (N)	mg/L	0.0073	8302073	0.0112	8302073	0.0325	0.0020	8302073
Nitrite (N)	mg/L	<0.0020	8302076	<0.0020	8302076	0.0022	0.0020	8302076
Total Phosphorus (P)	mg/L	0.0151 (1)	8306821	0.0038	8302121	0.0036	0.0020	8302121
Physical Properties								
Conductivity	uS/cm	445	8301169	348	8301169	380	1.0	8301103

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample was originally analysed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OV5240		OV5361		OV5382		
Sampling Date		2016/06/13 13:20		2016/06/13 12:00		2016/06/13 09:30		
COC Number		08423166		08423166		08423166		
	UNITS	**KZ-21**	**QC Batch**	**KZ-22**	**QC Batch**	**KZ-26**	**RDL**	**QC Batch**
pH	pH	8.39	8301168	8.33	8301168	8.29		8301097
Physical Properties								
Total Suspended Solids	mg/L	1.3	8301206	1.2	8301206	1.1	1.0	8301206
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OV5383		OV5384	OV5385	OV5386		
Sampling Date		2016/06/13 14:50		2016/06/13 16:10	2016/06/13 17:30	2016/06/13 09:45		
COC Number		08423166		08423166	08423166	08423166		
	UNITS	KZ-15	QC Batch	KZ-16	KZ-17	KZ-19	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.8	8299904	2.4	3.3	4.3	N/A	8299904
Cation Sum	meq/L	2.7	8299904	2.4	3.2	3.7	N/A	8299904
Filter and HNO3 Preservation	N/A	LAB	8300992	LAB	LAB	LAB	N/A	8300992
Ion Balance	N/A	0.98	8299902	0.99	0.97	0.86	0.010	8299902
Nitrate (N)	mg/L	0.0123	8300282	0.0139	0.0149	0.0301	0.0020	8300282
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00068	8301635	0.00063	0.00064	0.00070	0.00050	8301635
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00053	8301641	0.00063	0.00071	<0.00050	0.00050	8301641
Fluoride (F)	mg/L	0.075	8301917	0.068	0.087	0.110	0.010	8301933
Dissolved Organic Carbon (C)	mg/L	1.68	8303633	1.36	1.47	2.84	0.50	8303633
Acidity (pH 4.5)	mg/L	<0.50	8301670	<0.50	<0.50	<0.50	0.50	8301670
Alkalinity (Total as CaCO3)	mg/L	114	8301105	101	132	179	0.50	8301171
Acidity (pH 8.3)	mg/L	<0.50	8301670	<0.50	<0.50	<0.50	0.50	8301670
Alkalinity (PP as CaCO3)	mg/L	<0.50	8301105	<0.50	1.60	3.65	0.50	8301171
Bicarbonate (HCO3)	mg/L	139	8301105	124	158	210	0.50	8301171
Carbonate (CO3)	mg/L	<0.50	8301105	<0.50	1.92	4.38	0.50	8301171
Hydroxide (OH)	mg/L	<0.50	8301105	<0.50	<0.50	<0.50	0.50	8301171
Anions								
Dissolved Sulphate (SO4)	mg/L	22.5	8302055	16.4	28.9	30.8	0.50	8302055
Dissolved Chloride (Cl)	mg/L	0.74	8302042	0.69	<0.50	0.77	0.50	8302042
MISCELLANEOUS								
True Colour	Col. Unit	5.6	8302111	5.9	6.9	7.8	5.0	8302111
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0023	8302122	<0.0020	0.0039	0.0032	0.0020	8302122
Total Ammonia (N)	mg/L	0.015	8301565	0.0063	0.011	0.0070	0.0050	8301563
Nitrate plus Nitrite (N)	mg/L	0.0123	8302073	0.0139	0.0149	0.0301	0.0020	8302073
Nitrite (N)	mg/L	<0.0020	8302076	<0.0020	<0.0020	<0.0020	0.0020	8302076
Total Phosphorus (P)	mg/L	0.0023	8302121	<0.0020	0.0037	0.0058	0.0020	8302121
Physical Properties								
Conductivity	uS/cm	259	8301103	226	302	379	1.0	8301169
pH	pH	8.09	8301097	8.22	8.31	8.42		8301168

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OV5383		OV5384	OV5385	OV5386		
Sampling Date		2016/06/13 14:50		2016/06/13 16:10	2016/06/13 17:30	2016/06/13 09:45		
COC Number		08423166		08423166	08423166	08423166		
	UNITS	**KZ-15**	**QC Batch**	**KZ-16**	**KZ-17**	**KZ-19**	**RDL**	**QC Batch**
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8301206	<1.0	<1.0	1.1	1.0	8301206
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OV5240	OV5361	OV5382	OV5383	OV5384		
Sampling Date		2016/06/13 13:20	2016/06/13 12:00	2016/06/13 09:30	2016/06/13 14:50	2016/06/13 16:10		
COC Number		08423166	08423166	08423166	08423166	08423166		
	UNITS	KZ-21	KZ-22	KZ-26	KZ-15	KZ-16	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	238	183	202	132	115	0.50	8300559
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8301333
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00096	0.00107	0.00085	0.00164	0.00161	0.00050	8301267
Dissolved Antimony (Sb)	mg/L	0.000081	0.000053	0.000074	0.000039	<0.000020	0.000020	8301267
Dissolved Arsenic (As)	mg/L	0.00131	0.000788	0.000582	0.000336	0.000217	0.000020	8301267
Dissolved Barium (Ba)	mg/L	0.0564	0.0565	0.0640	0.0541	0.0493	0.000020	8301267
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8301267
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8301267
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8301267
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.0000088	0.0000061	0.0000131	0.0000090	0.0000050	8301267
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8301267
Dissolved Cobalt (Co)	mg/L	0.0000289	0.0000251	0.0000123	0.0000137	0.0000126	0.0000050	8301267
Dissolved Copper (Cu)	mg/L	0.000415	0.000440	0.000530	0.000465	0.000464	0.000050	8301267
Dissolved Iron (Fe)	mg/L	0.0747	0.0336	0.0124	0.0138	0.0035	0.0010	8301267
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8301267
Dissolved Lithium (Li)	mg/L	0.00547	0.00369	0.00473	0.00188	0.00154	0.00050	8301267
Dissolved Manganese (Mn)	mg/L	0.00310	0.00363	0.00141	0.00688	0.00214	0.000050	8301267
Dissolved Molybdenum (Mo)	mg/L	0.00176	0.00118	0.00106	0.000826	0.000495	0.000050	8301267
Dissolved Nickel (Ni)	mg/L	0.00179	0.000842	0.000716	0.000363	0.000273	0.000020	8301267
Dissolved Phosphorus (P)	mg/L	0.0029	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8301267
Dissolved Selenium (Se)	mg/L	0.000347	0.000503	0.000539	0.000539	0.000380	0.000040	8301267
Dissolved Silicon (Si)	mg/L	3.62	3.17	3.46	2.67	2.28	0.050	8301267
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8301267
Dissolved Strontium (Sr)	mg/L	0.180	0.163	0.174	0.130	0.118	0.000050	8301267
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8301267
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8301267
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8301267
Dissolved Uranium (U)	mg/L	0.00253	0.00186	0.00224	0.00141	0.000833	0.0000020	8301267
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8301267
Dissolved Zinc (Zn)	mg/L	0.00033	0.00054	0.00030	0.00116	0.00031	0.00010	8301267
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OV5240	OV5361	OV5382	OV5383	OV5384		
Sampling Date		2016/06/13 13:20	2016/06/13 12:00	2016/06/13 09:30	2016/06/13 14:50	2016/06/13 16:10		
COC Number		08423166	08423166	08423166	08423166	08423166		
	UNITS	**KZ-21**	**KZ-22**	**KZ-26**	**KZ-15**	**KZ-16**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8301267
Dissolved Calcium (Ca)	mg/L	60.4	50.6	54.5	41.3	36.8	0.050	8299845
Dissolved Magnesium (Mg)	mg/L	21.1	13.6	15.9	6.90	5.64	0.050	8299845
Dissolved Potassium (K)	mg/L	1.57	1.35	1.34	1.18	1.10	0.050	8299845
Dissolved Sodium (Na)	mg/L	1.60	1.26	1.45	0.859	0.743	0.050	8299845
Dissolved Sulphur (S)	mg/L	11.9	10.1	10.7	7.8	5.7	3.0	8299845
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OV5385	OV5386		
Sampling Date		2016/06/13 17:30	2016/06/13 09:45		
COC Number		08423166	08423166		
	UNITS	KZ-17	KZ-19	RDL	QC Batch
Misc. Inorganics					
Dissolved Hardness (CaCO3)	mg/L	155	178	0.50	8300559
Elements					
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8301333
Dissolved Metals by ICPMS					
Dissolved Aluminum (Al)	mg/L	0.00182	0.00093	0.00050	8301267
Dissolved Antimony (Sb)	mg/L	0.000064	0.000077	0.000020	8301267
Dissolved Arsenic (As)	mg/L	0.000518	0.000572	0.000020	8301267
Dissolved Barium (Ba)	mg/L	0.0640	0.0638	0.000020	8301267
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	8301267
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	0.0000050	8301267
Dissolved Boron (B)	mg/L	<0.010	<0.010	0.010	8301267
Dissolved Cadmium (Cd)	mg/L	0.0000213	0.0000081	0.0000050	8301267
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00010	8301267
Dissolved Cobalt (Co)	mg/L	0.0000161	0.0000144	0.0000050	8301267
Dissolved Copper (Cu)	mg/L	0.000504	0.000525	0.000050	8301267
Dissolved Iron (Fe)	mg/L	0.0339	0.0100	0.0010	8301267
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000050	8301267
Dissolved Lithium (Li)	mg/L	0.00230	0.00466	0.00050	8301267
Dissolved Manganese (Mn)	mg/L	0.0144	0.00122	0.000050	8301267
Dissolved Molybdenum (Mo)	mg/L	0.00121	0.00111	0.000050	8301267
Dissolved Nickel (Ni)	mg/L	0.000490	0.000697	0.000020	8301267
Dissolved Phosphorus (P)	mg/L	<0.0020	<0.0020	0.0020	8301267
Dissolved Selenium (Se)	mg/L	0.000705	0.000468	0.000040	8301267
Dissolved Silicon (Si)	mg/L	2.70	3.77	0.050	8301267
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	0.0000050	8301267
Dissolved Strontium (Sr)	mg/L	0.153	0.170	0.000050	8301267
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	8301267
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8301267
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00050	8301267
Dissolved Uranium (U)	mg/L	0.00194	0.00207	0.0000020	8301267
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	0.00020	8301267
Dissolved Zinc (Zn)	mg/L	0.00239	0.00030	0.00010	8301267
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OV5385	OV5386		
Sampling Date		2016/06/13 17:30	2016/06/13 09:45		
COC Number		08423166	08423166		
	UNITS	KZ-17	KZ-19	RDL	QC Batch
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8301267
Dissolved Calcium (Ca)	mg/L	48.0	46.4	0.050	8299845
Dissolved Magnesium (Mg)	mg/L	8.48	15.1	0.050	8299845
Dissolved Potassium (K)	mg/L	1.25	1.31	0.050	8299845
Dissolved Sodium (Na)	mg/L	0.915	1.38	0.050	8299845
Dissolved Sulphur (S)	mg/L	10.0	10.5	3.0	8299845
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OV5384		
Sampling Date		2016/06/13 16:10		
COC Number		08423166		
	UNITS	KZ-16	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	114	0.50	8300609
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8301653
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.00219	0.00050	8301426
Total Antimony (Sb)	mg/L	0.000022	0.000020	8301426
Total Arsenic (As)	mg/L	0.000234	0.000020	8301426
Total Barium (Ba)	mg/L	0.0470	0.000020	8301426
Total Beryllium (Be)	mg/L	<0.000010	0.000010	8301426
Total Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8301426
Total Boron (B)	mg/L	<0.010	0.010	8301426
Total Cadmium (Cd)	mg/L	0.0000120	0.0000050	8301426
Total Chromium (Cr)	mg/L	<0.00010	0.00010	8301426
Total Cobalt (Co)	mg/L	0.0000130	0.0000050	8301426
Total Copper (Cu)	mg/L	0.000476	0.000050	8301426
Total Iron (Fe)	mg/L	0.0079	0.0010	8301426
Total Lead (Pb)	mg/L	<0.0000050	0.0000050	8301426
Total Lithium (Li)	mg/L	0.00142	0.00050	8301426
Total Manganese (Mn)	mg/L	0.00286	0.000050	8301426
Total Molybdenum (Mo)	mg/L	0.000460	0.000050	8301426
Total Nickel (Ni)	mg/L	0.000288	0.000020	8301426
Total Phosphorus (P)	mg/L	0.0021	0.0020	8301426
Total Selenium (Se)	mg/L	0.000397	0.000040	8301426
Total Silicon (Si)	mg/L	2.31	0.050	8301426
Total Silver (Ag)	mg/L	<0.0000050	0.0000050	8301426
Total Strontium (Sr)	mg/L	0.121	0.000050	8301426
Total Thallium (Tl)	mg/L	<0.0000020	0.0000020	8301426
Total Tin (Sn)	mg/L	<0.00020	0.00020	8301426
Total Titanium (Ti)	mg/L	<0.00050	0.00050	8301426
Total Uranium (U)	mg/L	0.000718	0.0000020	8301426
Total Vanadium (V)	mg/L	<0.00020	0.00020	8301426
Total Zinc (Zn)	mg/L	0.00039	0.00010	8301426
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OV5384		
Sampling Date		2016/06/13 16:10		
COC Number		08423166		
	UNITS	KZ-16	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8301426
Total Calcium (Ca)	mg/L	36.8	0.050	8299907
Total Magnesium (Mg)	mg/L	5.41	0.050	8299907
Total Potassium (K)	mg/L	1.06	0.050	8299907
Total Sodium (Na)	mg/L	0.720	0.050	8299907
Total Sulphur (S)	mg/L	5.9	3.0	8299907
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OV5240	OV5361	OV5382	OV5383	OV5385		
Sampling Date		2016/06/13 13:20	2016/06/13 12:00	2016/06/13 09:30	2016/06/13 14:50	2016/06/13 17:30		
COC Number		08423166	08423166	08423166	08423166	08423166		
	UNITS	KZ-21	KZ-22	KZ-26	KZ-15	KZ-17	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	236	183	201	131	160	0.50	8300609
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8301653
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0040	0.0072	0.0081	0.0055	0.0073	0.0030	8301259
Total Antimony (Sb)	mg/L	0.000086	0.000055	0.000067	<0.000050	0.000060	0.000050	8301259
Total Arsenic (As)	mg/L	0.00212	0.00114	0.000743	0.000408	0.000689	0.000020	8301259
Total Barium (Ba)	mg/L	0.0620	0.0604	0.0664	0.0563	0.0689	0.00010	8301259
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8301259
Total Bismuth (Bi)	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000020	8301259
Total Boron (B)	mg/L	<0.050	<0.050	<0.050	<0.050	<0.050	0.050	8301259
Total Cadmium (Cd)	mg/L	0.0000050	0.0000150	0.0000130	0.0000190	0.0000410	0.0000050	8301259
Total Chromium (Cr)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8301259
Total Cobalt (Co)	mg/L	0.000052	0.000055	0.000025	0.000018	0.000030	0.000010	8301259
Total Copper (Cu)	mg/L	0.00073	0.00082	0.00070	0.00070	0.00068	0.00020	8301259
Total Iron (Fe)	mg/L	0.363	0.174	0.0687	0.0554	0.124	0.0050	8301259
Total Lead (Pb)	mg/L	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	0.000050	8301259
Total Lithium (Li)	mg/L	0.00573	0.00382	0.00433	0.00174	0.00219	0.00050	8301259
Total Manganese (Mn)	mg/L	0.0224	0.0168	0.00667	0.0107	0.0235	0.00010	8301259
Total Molybdenum (Mo)	mg/L	0.00182	0.00113	0.00104	0.000842	0.00119	0.000050	8301259
Total Nickel (Ni)	mg/L	0.00191	0.00092	0.00080	0.00038	0.00056	0.00010	8301259
Total Phosphorus (P)	mg/L	0.014	<0.010	<0.010	0.010	<0.010	0.010	8301259
Total Selenium (Se)	mg/L	0.000327	0.000466	0.000496	0.000485	0.000671	0.000040	8301259
Total Silicon (Si)	mg/L	3.80	3.30	3.60	2.56	2.84	0.10	8301259
Total Silver (Ag)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8301259
Total Strontium (Sr)	mg/L	0.206	0.177	0.193	0.142	0.168	0.000050	8301259
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8301259
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8301259
Total Titanium (Ti)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8301259
Total Uranium (U)	mg/L	0.00237	0.00186	0.00205	0.00132	0.00205	0.0000050	8301259
Total Vanadium (V)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8301259
Total Zinc (Zn)	mg/L	<0.0010	0.0013	<0.0010	0.0020	0.0040	0.0010	8301259

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OV5240	OV5361	OV5382	OV5383	OV5385		
Sampling Date		2016/06/13 13:20	2016/06/13 12:00	2016/06/13 09:30	2016/06/13 14:50	2016/06/13 17:30		
COC Number		08423166	08423166	08423166	08423166	08423166		
	UNITS	KZ-21	KZ-22	KZ-26	KZ-15	KZ-17	RDL	QC Batch
Total Zirconium (Zr)	mg/L	0.00012	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8301259
Total Calcium (Ca)	mg/L	59.6	51.1	54.8	41.2	49.8	0.25	8299907
Total Magnesium (Mg)	mg/L	21.3	13.5	15.7	6.81	8.72	0.25	8299907
Total Potassium (K)	mg/L	1.55	1.31	1.29	1.14	1.22	0.25	8299907
Total Sodium (Na)	mg/L	1.52	1.16	1.35	0.78	0.86	0.25	8299907
Total Sulphur (S)	mg/L	<15	<15	<15	<15	<15	15	8299907

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OV5386		
Sampling Date		2016/06/13 09:45		
COC Number		08423166		
	UNITS	KZ-19	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	204	0.50	8300609
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8301653
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.0095	0.0030	8301259
Total Antimony (Sb)	mg/L	0.000077	0.000050	8301259
Total Arsenic (As)	mg/L	0.000722	0.000020	8301259
Total Barium (Ba)	mg/L	0.0673	0.00010	8301259
Total Beryllium (Be)	mg/L	0.000010	0.000010	8301259
Total Bismuth (Bi)	mg/L	<0.000020	0.000020	8301259
Total Boron (B)	mg/L	<0.050	0.050	8301259
Total Cadmium (Cd)	mg/L	0.0000110	0.0000050	8301259
Total Chromium (Cr)	mg/L	<0.00050	0.00050	8301259
Total Cobalt (Co)	mg/L	0.000026	0.000010	8301259
Total Copper (Cu)	mg/L	0.00081	0.00020	8301259
Total Iron (Fe)	mg/L	0.0727	0.0050	8301259
Total Lead (Pb)	mg/L	<0.000050	0.000050	8301259
Total Lithium (Li)	mg/L	0.00442	0.00050	8301259
Total Manganese (Mn)	mg/L	0.00667	0.00010	8301259
Total Molybdenum (Mo)	mg/L	0.00106	0.000050	8301259
Total Nickel (Ni)	mg/L	0.00078	0.00010	8301259
Total Phosphorus (P)	mg/L	<0.010	0.010	8301259
Total Selenium (Se)	mg/L	0.000501	0.000040	8301259
Total Silicon (Si)	mg/L	3.63	0.10	8301259
Total Silver (Ag)	mg/L	<0.000010	0.000010	8301259
Total Strontium (Sr)	mg/L	0.193	0.000050	8301259
Total Thallium (Tl)	mg/L	0.0000030	0.0000020	8301259
Total Tin (Sn)	mg/L	<0.00020	0.00020	8301259
Total Titanium (Ti)	mg/L	<0.0050	0.0050	8301259
Total Uranium (U)	mg/L	0.00204	0.0000050	8301259
Total Vanadium (V)	mg/L	<0.00050	0.00050	8301259
Total Zinc (Zn)	mg/L	<0.0010	0.0010	8301259
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OV5386		
Sampling Date		2016/06/13 09:45		
COC Number		08423166		
	UNITS	KZ-19	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8301259
Total Calcium (Ca)	mg/L	55.5	0.25	8299907
Total Magnesium (Mg)	mg/L	16.0	0.25	8299907
Total Potassium (K)	mg/L	1.30	0.25	8299907
Total Sodium (Na)	mg/L	1.34	0.25	8299907
Total Sulphur (S)	mg/L	<15	15	8299907
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OV5240
Sample ID: KZ-21
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8301670	N/A	2016/06/16	Name Redacted
Alkalinity - Water	AT/ALK	8301171	2016/06/16	2016/06/16	
Chloride by Automated Colourimetry	KONE/COL	8302042	N/A	2016/06/16	
Cyanide SAD (strong acid dissociable)	TECH/COL	8301635	N/A	2016/06/16	
Cyanide WAD (weak acid dissociable)	TECH/COL	8301641	N/A	2016/06/16	
Colour (True) by Kone Lab	KONE	8302111	N/A	2016/06/16	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8303633	N/A	2016/06/17	
Conductance - water	AT/ALK	8301169	N/A	2016/06/16	
Fluoride	ISE/ISE	8301933	N/A	2016/06/16	
Hardness Total (calculated as CaCO3)	CALC	8300609	N/A	2016/06/17	
Hardness (calculated as CaCO3)	CALC	8300559	N/A	2016/06/17	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8301333	N/A	2016/06/16	
Mercury (Total-LowLevel) by CVAF	CV/AF	8301653	2016/06/16	2016/06/16	
Ion Balance	CALC	8299902	N/A	2016/06/17	
Sum of cations, anions	CALC	8299904	N/A	2016/06/17	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8299845	N/A	2016/06/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8301267	N/A	2016/06/16	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8301259	2016/06/16	2016/06/17	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8299907	N/A	2016/06/17	
Ammonia-N (Preserved)	KONE/COL	8301563	N/A	2016/06/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8302073	N/A	2016/06/16	
Nitrite (N) (low level)	TRAA/COL	8302076	N/A	2016/06/16	
Nitrogen - Nitrate (as N)	CALC	8300282	N/A	2016/06/17	
Filter and HNO3 Preserve for Metals	ICP	8300992	N/A	2016/06/16	
pH Water	AT/ALK	8301168	N/A	2016/06/16	
Sulphate by Automated Colourimetry	KONE/COL	8302055	N/A	2016/06/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306782	2016/06/21	2016/06/21	
Total Phosphorus - unpreserved	KONE/COL	8306821	N/A	2016/06/21	
Total Suspended Solids-Low Level	BAL/BAL	8301206	2016/06/16	2016/06/17	

Maxxam ID: OV5361
Sample ID: KZ-22
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8301670	N/A	2016/06/16	Name Redacted
Alkalinity - Water	AT/ALK	8301171	2016/06/16	2016/06/17	
Chloride by Automated Colourimetry	KONE/COL	8302042	N/A	2016/06/16	
Cyanide SAD (strong acid dissociable)	TECH/COL	8301635	N/A	2016/06/16	
Cyanide WAD (weak acid dissociable)	TECH/COL	8301641	N/A	2016/06/16	
Colour (True) by Kone Lab	KONE	8302111	N/A	2016/06/16	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8303633	N/A	2016/06/17	
Conductance - water	AT/ALK	8301169	N/A	2016/06/17	
Fluoride	ISE/ISE	8301933	N/A	2016/06/16	
Hardness Total (calculated as CaCO3)	CALC	8300609	N/A	2016/06/17	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OV5361
Sample ID: KZ-22
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8300559	N/A	2016/06/17	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8301333	N/A	2016/06/16	
Mercury (Total-LowLevel) by CVAF	CV/AF	8301653	2016/06/16	2016/06/16	
Ion Balance	CALC	8299902	N/A	2016/06/17	
Sum of cations, anions	CALC	8299904	N/A	2016/06/17	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8299845	N/A	2016/06/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8301267	N/A	2016/06/16	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8301259	2016/06/16	2016/06/17	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8299907	N/A	2016/06/17	
Ammonia-N (Preserved)	KONE/COL	8301565	N/A	2016/06/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8302073	N/A	2016/06/16	
Nitrite (N) (low level)	TRAA/COL	8302076	N/A	2016/06/16	
Nitrogen - Nitrate (as N)	CALC	8300282	N/A	2016/06/17	
Filter and HNO3 Preserve for Metals	ICP	8300992	N/A	2016/06/16	
pH Water	AT/ALK	8301168	N/A	2016/06/17	
Sulphate by Automated Colourimetry	KONE/COL	8302055	N/A	2016/06/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8302122	2016/06/16	2016/06/16	
Total Phosphorus - unpreserved	KONE/COL	8302121	N/A	2016/06/16	
Total Suspended Solids-Low Level	BAL/BAL	8301206	2016/06/16	2016/06/17	

Maxxam ID: OV5361 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8301933	N/A	2016/06/16	Name Redacted
Ammonia-N (Preserved)	KONE/COL	8301565	N/A	2016/06/16	

Maxxam ID: OV5382
Sample ID: KZ-26
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8301670	N/A	2016/06/16	Name Redacted
Alkalinity - Water	AT/ALK	8301105	2016/06/16	2016/06/16	
Chloride by Automated Colourimetry	KONE/COL	8302042	N/A	2016/06/16	
Cyanide SAD (strong acid dissociable)	TECH/COL	8301635	N/A	2016/06/16	
Cyanide WAD (weak acid dissociable)	TECH/COL	8301641	N/A	2016/06/16	
Colour (True) by Kone Lab	KONE	8302111	N/A	2016/06/16	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8303633	N/A	2016/06/17	
Conductance - water	AT/ALK	8301103	N/A	2016/06/16	
Fluoride	ISE/ISE	8301933	N/A	2016/06/16	
Hardness Total (calculated as CaCO3)	CALC	8300609	N/A	2016/06/17	
Hardness (calculated as CaCO3)	CALC	8300559	N/A	2016/06/17	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8301333	N/A	2016/06/16	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OV5382
Sample ID: KZ-26
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8301653	2016/06/16	2016/06/16	Name Redacted
Ion Balance	CALC	8299902	N/A	2016/06/17	
Sum of cations, anions	CALC	8299904	N/A	2016/06/17	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8299845	N/A	2016/06/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8301267	N/A	2016/06/16	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8301259	2016/06/16	2016/06/17	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8299907	N/A	2016/06/17	
Ammonia-N (Preserved)	KONE/COL	8301565	N/A	2016/06/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8302073	N/A	2016/06/16	
Nitrite (N) (low level)	TRAA/COL	8302076	N/A	2016/06/16	
Nitrogen - Nitrate (as N)	CALC	8300282	N/A	2016/06/17	
Filter and HNO3 Preserve for Metals	ICP	8300992	N/A	2016/06/16	
pH Water	AT/ALK	8301097	N/A	2016/06/16	
Sulphate by Automated Colourimetry	KONE/COL	8302055	N/A	2016/06/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8302122	2016/06/16	2016/06/16	
Total Phosphorus - unpreserved	KONE/COL	8302121	N/A	2016/06/16	
Total Suspended Solids-Low Level	BAL/BAL	8301206	2016/06/16	2016/06/17	

Maxxam ID: OV5383
Sample ID: KZ-15
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8301670	N/A	2016/06/16	Name Redacted
Alkalinity - Water	AT/ALK	8301105	2016/06/16	2016/06/16	
Chloride by Automated Colourimetry	KONE/COL	8302042	N/A	2016/06/16	
Cyanide SAD (strong acid dissociable)	TECH/COL	8301635	N/A	2016/06/16	
Cyanide WAD (weak acid dissociable)	TECH/COL	8301641	N/A	2016/06/16	
Colour (True) by Kone Lab	KONE	8302111	N/A	2016/06/16	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8303633	N/A	2016/06/17	
Conductance - water	AT/ALK	8301103	N/A	2016/06/16	
Fluoride	ISE/ISE	8301917	N/A	2016/06/16	
Hardness Total (calculated as CaCO3)	CALC	8300609	N/A	2016/06/17	
Hardness (calculated as CaCO3)	CALC	8300559	N/A	2016/06/17	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8301333	N/A	2016/06/16	
Mercury (Total-LowLevel) by CVAF	CV/AF	8301653	2016/06/16	2016/06/16	
Ion Balance	CALC	8299902	N/A	2016/06/17	
Sum of cations, anions	CALC	8299904	N/A	2016/06/17	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8299845	N/A	2016/06/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8301267	N/A	2016/06/16	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8301259	2016/06/16	2016/06/17	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8299907	N/A	2016/06/17	
Ammonia-N (Preserved)	KONE/COL	8301565	N/A	2016/06/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8302073	N/A	2016/06/16	
Nitrite (N) (low level)	TRAA/COL	8302076	N/A	2016/06/16	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OV5383
Sample ID: KZ-15
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8300282	N/A	2016/06/17	Name Redacted
Filter and HNO3 Preserve for Metals	ICP	8300992	N/A	2016/06/16	
pH Water	AT/ALK	8301097	N/A	2016/06/16	
Sulphate by Automated Colourimetry	KONE/COL	8302055	N/A	2016/06/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8302122	2016/06/16	2016/06/16	
Total Phosphorus - unpreserved	KONE/COL	8302121	N/A	2016/06/16	
Total Suspended Solids-Low Level	BAL/BAL	8301206	2016/06/16	2016/06/17	

Maxxam ID: OV5383 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Colour (True) by Kone Lab	KONE	8302111	N/A	2016/06/16	Name Redacted

Maxxam ID: OV5384
Sample ID: KZ-16
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8301670	N/A	2016/06/16	Name Redacted
Alkalinity - Water	AT/ALK	8301171	2016/06/16	2016/06/17	
Chloride by Automated Colourimetry	KONE/COL	8302042	N/A	2016/06/16	
Cyanide SAD (strong acid dissociable)	TECH/COL	8301635	N/A	2016/06/16	
Cyanide WAD (weak acid dissociable)	TECH/COL	8301641	N/A	2016/06/16	
Colour (True) by Kone Lab	KONE	8302111	N/A	2016/06/16	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8303633	N/A	2016/06/17	
Conductance - water	AT/ALK	8301169	N/A	2016/06/17	
Fluoride	ISE/ISE	8301933	N/A	2016/06/16	
Hardness Total (calculated as CaCO3)	CALC	8300609	N/A	2016/06/17	
Hardness (calculated as CaCO3)	CALC	8300559	N/A	2016/06/17	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8301333	N/A	2016/06/16	
Mercury (Total-LowLevel) by CVAF	CV/AF	8301653	2016/06/16	2016/06/16	
Ion Balance	CALC	8299902	N/A	2016/06/17	
Sum of cations, anions	CALC	8299904	N/A	2016/06/17	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8299845	N/A	2016/06/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8301267	N/A	2016/06/16	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8299907	N/A	2016/06/17	
Elements by ICPMS Low Level (total)	ICP/CRCM	8301426	N/A	2016/06/17	
Ammonia-N (Preserved)	KONE/COL	8301563	N/A	2016/06/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8302073	N/A	2016/06/16	
Nitrite (N) (low level)	TRAA/COL	8302076	N/A	2016/06/16	
Nitrogen - Nitrate (as N)	CALC	8300282	N/A	2016/06/17	
Filter and HNO3 Preserve for Metals	ICP	8300992	N/A	2016/06/16	
pH Water	AT/ALK	8301168	N/A	2016/06/16	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OV5384
Sample ID: KZ-16
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate by Automated Colourimetry	KONE/COL	8302055	N/A	2016/06/16	Name Redacted
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8302122	2016/06/16	2016/06/16	
Total Phosphorus - unpreserved	KONE/COL	8302121	N/A	2016/06/16	
Total Suspended Solids-Low Level	BAL/BAL	8301206	2016/06/16	2016/06/17	

Maxxam ID: OV5385
Sample ID: KZ-17
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8301670	N/A	2016/06/16	Name Redacted
Alkalinity - Water	AT/ALK	8301171	2016/06/16	2016/06/16	
Chloride by Automated Colourimetry	KONE/COL	8302042	N/A	2016/06/16	
Cyanide SAD (strong acid dissociable)	TECH/COL	8301635	N/A	2016/06/16	
Cyanide WAD (weak acid dissociable)	TECH/COL	8301641	N/A	2016/06/16	
Colour (True) by Kone Lab	KONE	8302111	N/A	2016/06/16	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8303633	N/A	2016/06/17	
Conductance - water	AT/ALK	8301169	N/A	2016/06/16	
Fluoride	ISE/ISE	8301933	N/A	2016/06/16	
Hardness Total (calculated as CaCO3)	CALC	8300609	N/A	2016/06/17	
Hardness (calculated as CaCO3)	CALC	8300559	N/A	2016/06/17	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8301333	N/A	2016/06/16	
Mercury (Total-LowLevel) by CVAF	CV/AF	8301653	2016/06/16	2016/06/16	
Ion Balance	CALC	8299902	N/A	2016/06/17	
Sum of cations, anions	CALC	8299904	N/A	2016/06/17	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8299845	N/A	2016/06/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8301267	N/A	2016/06/16	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8301259	2016/06/16	2016/06/17	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8299907	N/A	2016/06/17	
Ammonia-N (Preserved)	KONE/COL	8301563	N/A	2016/06/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8302073	N/A	2016/06/16	
Nitrite (N) (low level)	TRAA/COL	8302076	N/A	2016/06/16	
Nitrogen - Nitrate (as N)	CALC	8300282	N/A	2016/06/17	
Filter and HNO3 Preserve for Metals	ICP	8300992	N/A	2016/06/16	
pH Water	AT/ALK	8301168	N/A	2016/06/16	
Sulphate by Automated Colourimetry	KONE/COL	8302055	N/A	2016/06/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8302122	2016/06/16	2016/06/16	
Total Phosphorus - unpreserved	KONE/COL	8302121	N/A	2016/06/16	
Total Suspended Solids-Low Level	BAL/BAL	8301206	2016/06/16	2016/06/17	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OV5386
Sample ID: KZ-19
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8301670	N/A	2016/06/16	Name Redacted
Alkalinity - Water	AT/ALK	8301171	2016/06/16	2016/06/16	
Chloride by Automated Colourimetry	KONE/COL	8302042	N/A	2016/06/16	
Cyanide SAD (strong acid dissociable)	TECH/COL	8301635	N/A	2016/06/16	
Cyanide WAD (weak acid dissociable)	TECH/COL	8301641	N/A	2016/06/16	
Colour (True) by Kone Lab	KONE	8302111	N/A	2016/06/16	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8303633	N/A	2016/06/17	
Conductance - water	AT/ALK	8301169	N/A	2016/06/16	
Fluoride	ISE/ISE	8301933	N/A	2016/06/16	
Hardness Total (calculated as CaCO3)	CALC	8300609	N/A	2016/06/17	
Hardness (calculated as CaCO3)	CALC	8300559	N/A	2016/06/17	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8301333	N/A	2016/06/16	
Mercury (Total-LowLevel) by CVAF	CV/AF	8301653	2016/06/16	2016/06/16	
Ion Balance	CALC	8299902	N/A	2016/06/17	
Sum of cations, anions	CALC	8299904	N/A	2016/06/17	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8299845	N/A	2016/06/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8301267	N/A	2016/06/16	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8301259	2016/06/16	2016/06/17	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8299907	N/A	2016/06/17	
Ammonia-N (Preserved)	KONE/COL	8301563	N/A	2016/06/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8302073	N/A	2016/06/16	
Nitrite (N) (low level)	TRAA/COL	8302076	N/A	2016/06/16	
Nitrogen - Nitrate (as N)	CALC	8300282	N/A	2016/06/17	
Filter and HNO3 Preserve for Metals	ICP	8300992	N/A	2016/06/16	
pH Water	AT/ALK	8301168	N/A	2016/06/16	
Sulphate by Automated Colourimetry	KONE/COL	8302055	N/A	2016/06/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8302122	2016/06/16	2016/06/16	
Total Phosphorus - unpreserved	KONE/COL	8302121	N/A	2016/06/16	
Total Suspended Solids-Low Level	BAL/BAL	8301206	2016/06/16	2016/06/17	

Maxxam ID: OV5386 Dup
Sample ID: KZ-19
Matrix: Water

Collected: 2016/06/13
Shipped:
Received: 2016/06/14

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8301635	N/A	2016/06/16	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8301641	N/A	2016/06/16	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	7.7°C
Package 2	8.3°C
Package 3	7.3°C

Sample OV5240-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OV5361-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OV5382-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OV5383-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OV5385-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OV5386-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8301097	pH	2016/06/16			102	97 - 103			0.15	N/A
8301103	Conductivity	2016/06/16			99	80 - 120	<1.0	uS/cm	0.37	20
8301105	Alkalinity (PP as CaCO3)	2016/06/16					<0.50	mg/L	NC	20
8301105	Alkalinity (Total as CaCO3)	2016/06/16	NC	80 - 120	98	80 - 120	<0.50	mg/L	0.63	20
8301105	Bicarbonate (HCO3)	2016/06/16					<0.50	mg/L	0.63	20
8301105	Carbonate (CO3)	2016/06/16					<0.50	mg/L	NC	20
8301105	Hydroxide (OH)	2016/06/16					<0.50	mg/L	NC	20
8301168	pH	2016/06/16			102	97 - 103			0.24	N/A
8301169	Conductivity	2016/06/16			100	80 - 120	<1.0	uS/cm		
8301171	Alkalinity (PP as CaCO3)	2016/06/16					<0.50	mg/L	NC	20
8301171	Alkalinity (Total as CaCO3)	2016/06/16	NC	80 - 120	98	80 - 120	<0.50	mg/L	0.17	20
8301171	Bicarbonate (HCO3)	2016/06/16					<0.50	mg/L	0.66	20
8301171	Carbonate (CO3)	2016/06/16					<0.50	mg/L	NC	20
8301171	Hydroxide (OH)	2016/06/16					<0.50	mg/L	NC	20
8301206	Total Suspended Solids	2016/06/17			99	80 - 120	<1.0	mg/L		
8301259	Total Aluminum (Al)	2016/06/17	117	80 - 120	115	80 - 120	<0.0030	mg/L		
8301259	Total Antimony (Sb)	2016/06/17	103	80 - 120	105	80 - 120	<0.000050	mg/L		
8301259	Total Arsenic (As)	2016/06/17	105	80 - 120	109	80 - 120	<0.000020	mg/L	13	20
8301259	Total Barium (Ba)	2016/06/17	NC	80 - 120	102	80 - 120	<0.00010	mg/L		
8301259	Total Beryllium (Be)	2016/06/17	104	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8301259	Total Bismuth (Bi)	2016/06/17	102	80 - 120	103	80 - 120	<0.000020	mg/L		
8301259	Total Boron (B)	2016/06/17	105	80 - 120	101	80 - 120	<0.050	mg/L		
8301259	Total Cadmium (Cd)	2016/06/17	106	80 - 120	110	80 - 120	<0.0000050	mg/L		
8301259	Total Chromium (Cr)	2016/06/17	104	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
8301259	Total Cobalt (Co)	2016/06/17	102	80 - 120	106	80 - 120	<0.000010	mg/L	3.6	20
8301259	Total Copper (Cu)	2016/06/17	104	80 - 120	110	80 - 120	0.00035, RDL=0.00020	mg/L	NC	20
8301259	Total Iron (Fe)	2016/06/17	NC	80 - 120	112	80 - 120	<0.0050	mg/L	1.9	20
8301259	Total Lead (Pb)	2016/06/17	104	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8301259	Total Lithium (Li)	2016/06/17	NC	80 - 120	98	80 - 120	<0.00050	mg/L	5.7	20
8301259	Total Manganese (Mn)	2016/06/17	NC	80 - 120	106	80 - 120	<0.00010	mg/L	1.9	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8301259	Total Molybdenum (Mo)	2016/06/17	106	80 - 120	95	80 - 120	<0.000050	mg/L		
8301259	Total Nickel (Ni)	2016/06/17	99	80 - 120	105	80 - 120	<0.00010	mg/L	NC	20
8301259	Total Phosphorus (P)	2016/06/17					<0.010	mg/L		
8301259	Total Selenium (Se)	2016/06/17	101	80 - 120	107	80 - 120	<0.000040	mg/L	NC	20
8301259	Total Silicon (Si)	2016/06/17					<0.10	mg/L		
8301259	Total Silver (Ag)	2016/06/17	110	80 - 120	99	80 - 120	<0.000010	mg/L		
8301259	Total Strontium (Sr)	2016/06/17	NC	80 - 120	105	80 - 120	<0.000050	mg/L	0.42	20
8301259	Total Thallium (Tl)	2016/06/17	93	80 - 120	90	80 - 120	0.0000020, RDL=0.0000020	mg/L		
8301259	Total Tin (Sn)	2016/06/17	104	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8301259	Total Titanium (Ti)	2016/06/17	101	80 - 120	105	80 - 120	<0.0050	mg/L		
8301259	Total Uranium (U)	2016/06/17	103	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8301259	Total Vanadium (V)	2016/06/17	110	80 - 120	109	80 - 120	<0.00050	mg/L		
8301259	Total Zinc (Zn)	2016/06/17	105	80 - 120	119	80 - 120	<0.0010	mg/L		
8301259	Total Zirconium (Zr)	2016/06/17					<0.00010	mg/L	NC	20
8301267	Dissolved Aluminum (Al)	2016/06/16	98	80 - 120	112	80 - 120	<0.00050	mg/L	NC	20
8301267	Dissolved Antimony (Sb)	2016/06/16	102	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8301267	Dissolved Arsenic (As)	2016/06/16	104	80 - 120	98	80 - 120	<0.000020	mg/L	6.6	20
8301267	Dissolved Barium (Ba)	2016/06/16	NC	80 - 120	98	80 - 120	<0.000020	mg/L	4.3	20
8301267	Dissolved Beryllium (Be)	2016/06/16	99	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8301267	Dissolved Bismuth (Bi)	2016/06/16	96	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8301267	Dissolved Boron (B)	2016/06/16	91	80 - 120	98	80 - 120	<0.010	mg/L	NC	20
8301267	Dissolved Cadmium (Cd)	2016/06/16	101	80 - 120	111	80 - 120	<0.0000050	mg/L	NC	20
8301267	Dissolved Chromium (Cr)	2016/06/16	100	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8301267	Dissolved Cobalt (Co)	2016/06/16	97	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8301267	Dissolved Copper (Cu)	2016/06/16	97	80 - 120	105	80 - 120	<0.000050	mg/L	NC	20
8301267	Dissolved Iron (Fe)	2016/06/16	98	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
8301267	Dissolved Lead (Pb)	2016/06/16	95	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8301267	Dissolved Lithium (Li)	2016/06/16	NC	80 - 120	100	80 - 120	<0.00050	mg/L	1.2	20
8301267	Dissolved Manganese (Mn)	2016/06/16	NC	80 - 120	100	80 - 120	<0.000050	mg/L	1.3	20
8301267	Dissolved Molybdenum (Mo)	2016/06/16	96	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8301267	Dissolved Nickel (Ni)	2016/06/16	93	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8301267	Dissolved Phosphorus (P)	2016/06/16					<0.0020	mg/L	NC	20
8301267	Dissolved Selenium (Se)	2016/06/16	115	80 - 120	95	80 - 120	<0.000040	mg/L	NC	20
8301267	Dissolved Silicon (Si)	2016/06/16					<0.050	mg/L	4.2	20
8301267	Dissolved Silver (Ag)	2016/06/16	92	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8301267	Dissolved Strontium (Sr)	2016/06/16	NC	80 - 120	94	80 - 120	<0.000050	mg/L	3.6	20
8301267	Dissolved Thallium (Tl)	2016/06/16	88	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8301267	Dissolved Tin (Sn)	2016/06/16	98	80 - 120	91	80 - 120	<0.00020	mg/L	NC	20
8301267	Dissolved Titanium (Ti)	2016/06/16	99	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8301267	Dissolved Uranium (U)	2016/06/16	99	80 - 120	106	80 - 120	<0.0000020	mg/L	0.50	20
8301267	Dissolved Vanadium (V)	2016/06/16	101	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8301267	Dissolved Zinc (Zn)	2016/06/16	97	80 - 120	99	80 - 120	<0.00010	mg/L	2.6	20
8301267	Dissolved Zirconium (Zr)	2016/06/16					<0.00010	mg/L	NC	20
8301333	Dissolved Mercury (Hg)	2016/06/16	96	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8301426	Total Aluminum (Al)	2016/06/17	107	80 - 120	113	80 - 120	<0.00050	mg/L	NC	20
8301426	Total Antimony (Sb)	2016/06/17	93	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8301426	Total Arsenic (As)	2016/06/17	97	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
8301426	Total Barium (Ba)	2016/06/17	92	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8301426	Total Beryllium (Be)	2016/06/17	92	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8301426	Total Bismuth (Bi)	2016/06/17	94	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8301426	Total Boron (B)	2016/06/17	93	80 - 120	103	80 - 120	<0.010	mg/L	NC	20
8301426	Total Cadmium (Cd)	2016/06/17	99	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8301426	Total Chromium (Cr)	2016/06/17	94	80 - 120	105	80 - 120	<0.00010	mg/L	NC	20
8301426	Total Cobalt (Co)	2016/06/17	95	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8301426	Total Copper (Cu)	2016/06/17	95	80 - 120	107	80 - 120	<0.000050	mg/L	NC	20
8301426	Total Iron (Fe)	2016/06/17	102	80 - 120	116	80 - 120	<0.0010	mg/L	NC	20
8301426	Total Lead (Pb)	2016/06/17	94	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8301426	Total Lithium (Li)	2016/06/17	89	80 - 120	94	80 - 120	<0.00050	mg/L	NC	20
8301426	Total Manganese (Mn)	2016/06/17	94	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20
8301426	Total Molybdenum (Mo)	2016/06/17	91	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8301426	Total Nickel (Ni)	2016/06/17	94	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8301426	Total Phosphorus (P)	2016/06/17					<0.0020	mg/L		
8301426	Total Selenium (Se)	2016/06/17	97	80 - 120	100	80 - 120	<0.000040	mg/L	NC	20
8301426	Total Silicon (Si)	2016/06/17					<0.050	mg/L	NC	20
8301426	Total Silver (Ag)	2016/06/17	85	80 - 120	103	80 - 120	0.0000050, RDL=0.0000050	mg/L	NC	20
8301426	Total Strontium (Sr)	2016/06/17	92	80 - 120	110	80 - 120	<0.000050	mg/L	NC	20
8301426	Total Thallium (Tl)	2016/06/17	101	80 - 120	109	80 - 120	<0.0000020	mg/L	NC	20
8301426	Total Tin (Sn)	2016/06/17	94	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8301426	Total Titanium (Ti)	2016/06/17	73 (1)	80 - 120	110	80 - 120	<0.00050	mg/L	NC	20
8301426	Total Uranium (U)	2016/06/17	90	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8301426	Total Vanadium (V)	2016/06/17	91	80 - 120	109	80 - 120	<0.00020	mg/L	NC	20
8301426	Total Zinc (Zn)	2016/06/17	103	80 - 120	109	80 - 120	<0.00010	mg/L	NC	20
8301426	Total Zirconium (Zr)	2016/06/17					<0.00010	mg/L	NC	20
8301563	Total Ammonia (N)	2016/06/16	103	80 - 120	96	80 - 120	<0.0050	mg/L	NC	20
8301565	Total Ammonia (N)	2016/06/16	100	80 - 120	99	80 - 120	<0.0050	mg/L	NC	20
8301635	Strong Acid Dissoc. Cyanide (CN)	2016/06/16	104	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8301641	Weak Acid Dissoc. Cyanide (CN)	2016/06/16	112	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
8301653	Total Mercury (Hg)	2016/06/16	96	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8301670	Acidity (pH 4.5)	2016/06/16					<0.50	mg/L	NC	20
8301670	Acidity (pH 8.3)	2016/06/16			100	80 - 120	<0.50	mg/L	NC	20
8301917	Fluoride (F)	2016/06/16	99	80 - 120	100	80 - 120	0.016, RDL=0.010	mg/L	0	20
8301933	Fluoride (F)	2016/06/16	98	80 - 120	100	80 - 120	0.013, RDL=0.010	mg/L	0	20
8302042	Dissolved Chloride (Cl)	2016/06/16	116	80 - 120	102	80 - 120	<0.50	mg/L	NC	20
8302055	Dissolved Sulphate (SO4)	2016/06/16	111	80 - 120	93	80 - 120	0.74, RDL=0.50	mg/L	NC	20
8302073	Nitrate plus Nitrite (N)	2016/06/16	110	80 - 120	106	80 - 120	<0.0020	mg/L	NC	25
8302076	Nitrite (N)	2016/06/16	99	80 - 120	93	80 - 120	<0.0020	mg/L	NC	25
8302111	True Colour	2016/06/16			98	80 - 120	<5.0	Col. Unit	NC	20
8302121	Total Phosphorus (P)	2016/06/16	NC	80 - 120	105	80 - 120	<0.0020	mg/L	2.0	20
8302122	Dissolved Phosphorus (P)	2016/06/16	94	80 - 120	104	80 - 120	<0.0020	mg/L	0.98	20
8303633	Dissolved Organic Carbon (C)	2016/06/17	NC	80 - 120	111	80 - 120	<0.50	mg/L	1.7	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8306782	Dissolved Phosphorus (P)	2016/06/21	NC	80 - 120	108	80 - 120	<0.0020	mg/L	0.34	20
8306821	Total Phosphorus (P)	2016/06/21	95	80 - 120	104	80 - 120	<0.0020	mg/L	NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B647873
Report Date: 2016/06/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

RECEIVED IN WHITE...
BY: Sayond @ 1630
2016 -06- 14

Maxxam
A Bureau Veritas Group Company
TEMP: 8 8 9 9 / 6 / 7 2 cooler

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY R...

08423166

COC #:

BBY FCD-00077/05
Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:
						Rush Confirmation #:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1																							
3																							
4	KZ-21		13-Jun-16	13:20	Water	x	x	x	x	x	x	x	x	x	x	x	x				12		
5	KZ-22		13-Jun-16	12:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				12		
6	KZ-26		13-Jun-16	9:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				12		
7	KZ-15		13-Jun-16	14:50	Water	x	x	x	x	x	x	x	x	x	x	x	x				12		
8	KZ-16		13-Jun-16	16:10	Water	x	x	x	x	x	x	x	x	x	x	x	x				12		
9	KZ-17		13-Jun-16	17:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				12		
10	KZ-19		13-Jun-16	9:45	Water	x	x	x	x	x	x	x	x	x	x	x	x				12		

LABORATORY USE ONLY

CUSTODY SEAL Y / N Present	Intact	COOLER TEMPERATURES
N/A	—	3, 3, 3
		6, 4, 4
		4, 4, 3

COOLING MEDIA PRESENT (Y) / N

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	13/06/2016	16:00	Signature Redacted	2016/06/15	12:30	B647873

Your Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08423306

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/06/28
Report #: R2207760
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B649484
Received: 2016/06/17, 15:30

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	7	N/A	2016/06/22	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	7	2016/06/21	2016/06/21	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	7	N/A	2016/06/21	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	5	N/A	2016/06/22	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide SAD (strong acid dissociable)	2	N/A	2016/06/27	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	1	N/A	2016/06/22	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	6	N/A	2016/06/27	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	6	N/A	2016/06/21	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2016/06/21	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	7	N/A	2016/06/21	BBY6SOP-00026	SM 22 2510 B m
Fluoride	7	N/A	2016/06/22	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	1	N/A	2016/06/22	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	6	N/A	2016/06/23	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	7	N/A	2016/06/22	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	7	N/A	2016/06/23	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	7	2016/06/23	2016/06/23	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	7	N/A	2016/06/22	BBY WI-00033	SM 22 1030E
Sum of cations, anions	7	N/A	2016/06/22	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	7	N/A	2016/06/22	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	7	N/A	2016/06/21	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2016/06/22	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	6	N/A	2016/06/23	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	7	N/A	2016/06/22	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Unpreserved)	1	N/A	2016/06/21	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	6	N/A	2016/06/21	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	7	N/A	2016/06/21	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	7	N/A	2016/06/21	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	7	N/A	2016/06/22	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	6	N/A	2016/06/21	BBY7 WI-00004	BCMOE Reqs 08/14

Your Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08423306

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/06/28
Report #: R2207760
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B649484
Received: 2016/06/17, 15:30

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
pH Water (2)	7	N/A	2016/06/21	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	7	N/A	2016/06/21	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	7	2016/06/21	2016/06/21	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	7	N/A	2016/06/21	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	7	2016/06/21	2016/06/22	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OW2139		OW3580		OW3628	OW3632		
Sampling Date		2016/06/17 15:30		2016/06/14 17:00		2016/06/14 14:00	2016/06/14 12:35		
COC Number		08423306		08423306		08423306	08423306		
	UNITS	TRIP BLANK	QC Batch	KZ-28	QC Batch	KZ-2	KZ-6	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	0.0000	8305592	0.017	8305592	1.6	2.7	N/A	8305592
Cation Sum	meq/L	0.0046	8305592	0.0014	8305592	1.4	2.6	N/A	8305592
Filter and HNO3 Preservation	N/A		8305638	LAB	8305638	LAB	LAB	N/A	8305638
Ion Balance	N/A	NC	8304864	0.083	8304864	0.90	0.94	0.010	8304864
Nitrate (N)	mg/L	<0.0020	8305594	<0.0020	8305594	0.0829	0.0120	0.0020	8305594
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8311832	<0.00050	8311832	0.00099	0.00108	0.00050	8307163
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8311837	<0.00050	8311837	<0.00050	0.00059	0.00050	8311837
Fluoride (F)	mg/L	<0.010	8308097	<0.010	8308097	0.035	0.054	0.010	8308097
Dissolved Organic Carbon (C)	mg/L	<0.50	8307433	<0.50	8307437	<0.50	1.12	0.50	8307437
Acidity (pH 4.5)	mg/L	<0.50	8308968	<0.50	8308968	<0.50	<0.50	0.50	8308968
Alkalinity (Total as CaCO3)	mg/L	<0.50	8306445	<0.50	8306445	43.3	117	0.50	8306442
Acidity (pH 8.3)	mg/L	<0.50	8308968	<0.50	8308968	<0.50	<0.50	0.50	8308968
Alkalinity (PP as CaCO3)	mg/L	<0.50	8306445	<0.50	8306445	<0.50	<0.50	0.50	8306442
Bicarbonate (HCO3)	mg/L	<0.50	8306445	<0.50	8306445	52.9	143	0.50	8306442
Carbonate (CO3)	mg/L	<0.50	8306445	<0.50	8306445	<0.50	<0.50	0.50	8306442
Hydroxide (OH)	mg/L	<0.50	8306445	<0.50	8306445	<0.50	<0.50	0.50	8306442
Anions									
Dissolved Sulphate (SO4)	mg/L	<0.50	8306778	<0.50	8306778	31.6	17.6	0.50	8306778
Dissolved Chloride (Cl)	mg/L	<0.50	8306771	0.60	8306771	0.68	0.74	0.50	8306771
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020	8306895	<0.0020 (1)	8306895	<0.0020 (1)	0.0035 (1)	0.0020	8306895
Total Ammonia (N)	mg/L	<0.0050	8306390	<0.0050	8306381	0.0099	0.0077	0.0050	8306381
Nitrate plus Nitrite (N)	mg/L	<0.0020	8307350	<0.0020 (1)	8307350	0.0829 (1)	0.0120 (1)	0.0020	8307350
Nitrite (N)	mg/L	<0.0020	8307354	0.0020 (1)	8307354	<0.0020 (1)	<0.0020 (1)	0.0020	8307354
Total Phosphorus (P)	mg/L	<0.0020	8306896	<0.0020 (1)	8306896	<0.0020 (1)	0.0039 (1)	0.0020	8306896
Physical Properties									
Conductivity	uS/cm	<1.0	8306448	1.1	8306448	153	252	1.0	8306440
pH	pH	5.34	8306450	5.84	8306450	7.85	8.25		8306438

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OW2139		OW3580		OW3628	OW3632		
Sampling Date		2016/06/17 15:30		2016/06/14 17:00		2016/06/14 14:00	2016/06/14 12:35		
COC Number		08423306		08423306		08423306	08423306		
	UNITS	TRIP BLANK	QC Batch	KZ-28	QC Batch	KZ-2	KZ-6	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8305800	<1.0	8305800	<1.0	1.2	1.0	8305800
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OW3633		OW3634		OW3635		
Sampling Date		2016/06/14 11:25		2016/06/14 08:35		2016/06/14 16:40		
COC Number		08423306		08423306		08423306		
	UNITS	KZ-7	QC Batch	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.6	8305592	2.7	8305592	1.4	N/A	8305592
Cation Sum	meq/L	2.4	8305592	2.6	8305592	1.3	N/A	8305592
Filter and HNO3 Preservation	N/A	LAB	8305638	LAB	8305638	LAB	N/A	8305638
Ion Balance	N/A	0.94	8304864	0.96	8304864	0.95	0.010	8304864
Nitrate (N)	mg/L	0.0209	8305594	0.0274	8305594	0.0404	0.0020	8305594
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00102	8307163	0.00107	8307163	0.00107	0.00050	8307163
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00093	8311837	0.00144	8307200	0.00065	0.00050	8311837
Fluoride (F)	mg/L	0.045	8308097	0.056	8308097	0.042	0.010	8308097
Dissolved Organic Carbon (C)	mg/L	1.62	8307434	0.96	8307437	2.50	0.50	8307437
Acidity (pH 4.5)	mg/L	<0.50	8308968	<0.50	8308968	<0.50	0.50	8308968
Alkalinity (Total as CaCO3)	mg/L	95.7	8306445	106	8306445	55.3	0.50	8306445
Acidity (pH 8.3)	mg/L	<0.50	8308968	<0.50	8308968	<0.50	0.50	8308968
Alkalinity (PP as CaCO3)	mg/L	<0.50	8306445	<0.50	8306445	<0.50	0.50	8306445
Bicarbonate (HCO3)	mg/L	117	8306445	129	8306445	67.5	0.50	8306445
Carbonate (CO3)	mg/L	<0.50	8306445	<0.50	8306445	<0.50	0.50	8306445
Hydroxide (OH)	mg/L	<0.50	8306445	<0.50	8306445	<0.50	0.50	8306445
Anions								
Dissolved Sulphate (SO4)	mg/L	31.6	8306778	29.5	8306778	11.4	0.50	8306778
Dissolved Chloride (Cl)	mg/L	0.71	8306771	<0.50	8306771	0.54	0.50	8306771
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	8306895	0.0024 (1)	8306895	0.0090 (1)	0.0020	8306895
Total Ammonia (N)	mg/L	0.023	8306381	0.022	8306381	0.0073	0.0050	8306381
Nitrate plus Nitrite (N)	mg/L	0.0209 (1)	8307350	0.0274 (1)	8307350	0.0404 (1)	0.0020	8307350
Nitrite (N)	mg/L	<0.0020 (1)	8307354	<0.0020 (1)	8307354	<0.0020 (1)	0.0020	8307354
Total Phosphorus (P)	mg/L	<0.0020 (1)	8306896	0.0030 (1)	8306896	0.0036 (1)	0.0020	8306896
Physical Properties								
Conductivity	uS/cm	243	8306448	257	8306448	130	1.0	8306448
pH	pH	8.10	8306450	8.07	8306450	7.98		8306450

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OW3633		OW3634		OW3635		
Sampling Date		2016/06/14 11:25		2016/06/14 08:35		2016/06/14 16:40		
COC Number		08423306		08423306		08423306		
	UNITS	KZ-7	QC Batch	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	1.0	8305800	2.1	8305800	1.6	1.0	8305800
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OW2139	OW3580	OW3628	OW3632	OW3633		
Sampling Date		2016/06/17 15:30	2016/06/14 17:00	2016/06/14 14:00	2016/06/14 12:35	2016/06/14 11:25		
COC Number		08423306	08423306	08423306	08423306	08423306		
	UNITS	TRIP BLANK	KZ-28	KZ-2	KZ-6	KZ-7	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	<0.50	<0.50	67.1	126	119	0.50	8304581
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8309019
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	<0.00050	<0.00050	0.00349	0.00367	0.00192	0.00050	8306582
Dissolved Antimony (Sb)	mg/L	<0.000020	<0.000020	0.000023	<0.000020	0.000058	0.000020	8306582
Dissolved Arsenic (As)	mg/L	<0.000020	<0.000020	0.000064	0.000079	0.000195	0.000020	8306582
Dissolved Barium (Ba)	mg/L	<0.000020	<0.000020	0.0387	0.0366	0.0471	0.000020	8306582
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8306582
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8306582
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8306582
Dissolved Cadmium (Cd)	mg/L	<0.0000050	<0.0000050	0.000205	0.0000100	0.0000690	0.0000050	8306582
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8306582
Dissolved Cobalt (Co)	mg/L	<0.0000050	<0.0000050	0.0000070	0.0000090	0.0000100	0.0000050	8306582
Dissolved Copper (Cu)	mg/L	<0.000050	<0.000050	0.000632	0.000195	0.000533	0.000050	8306582
Dissolved Iron (Fe)	mg/L	<0.0010	<0.0010	0.0012	0.0073	0.0440	0.0010	8306582
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000100	0.0000090	0.0000150	0.0000050	8306582
Dissolved Lithium (Li)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8306582
Dissolved Manganese (Mn)	mg/L	<0.000050	<0.000050	0.000085	0.000281	0.00624	0.000050	8306582
Dissolved Molybdenum (Mo)	mg/L	<0.000050	<0.000050	0.000581	0.000388	0.000431	0.000050	8306582
Dissolved Nickel (Ni)	mg/L	<0.000020	<0.000020	0.000318	0.000196	0.000280	0.000020	8306582
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0025	<0.0020	0.0055	0.0035	0.0020	8306582
Dissolved Selenium (Se)	mg/L	<0.000040	<0.000040	0.000442	0.000395	0.000529	0.000040	8306582
Dissolved Silicon (Si)	mg/L	<0.050	<0.050	1.76	2.20	2.05	0.050	8306582
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000080	0.0000050	8306582
Dissolved Strontium (Sr)	mg/L	<0.000050	<0.000050	0.0713	0.130	0.120	0.000050	8306582
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000050	<0.0000020	0.0000030	0.0000020	8306582
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8306582
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8306582
Dissolved Uranium (U)	mg/L	<0.0000020	<0.0000020	0.00112	0.000642	0.000783	0.0000020	8306582
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8306582
Dissolved Zinc (Zn)	mg/L	<0.00010	<0.00010	0.0306	0.00030	0.0150	0.00010	8306582

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OW2139	OW3580	OW3628	OW3632	OW3633		
Sampling Date		2016/06/17 15:30	2016/06/14 17:00	2016/06/14 14:00	2016/06/14 12:35	2016/06/14 11:25		
COC Number		08423306	08423306	08423306	08423306	08423306		
	UNITS	**TRIP BLANK**	**KZ-28**	**KZ-2**	**KZ-6**	**KZ-7**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8306582
Dissolved Calcium (Ca)	mg/L	<0.050	<0.050	23.3	42.2	38.8	0.050	8305342
Dissolved Magnesium (Mg)	mg/L	<0.050	<0.050	2.13	5.00	5.42	0.050	8305342
Dissolved Potassium (K)	mg/L	<0.050	<0.050	1.19	0.575	0.928	0.050	8305342
Dissolved Sodium (Na)	mg/L	<0.050	<0.050	0.469	0.577	0.638	0.050	8305342
Dissolved Sulphur (S)	mg/L	<3.0	<3.0	10.0	6.0	10.4	3.0	8305342

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OW3634	OW3635		
Sampling Date		2016/06/14 08:35	2016/06/14 16:40		
COC Number		08423306	08423306		
	UNITS	KZ-9	KZ-13	RDL	QC Batch
Misc. Inorganics					
Dissolved Hardness (CaCO3)	mg/L	127	61.5	0.50	8304581
Elements					
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8309019
Dissolved Metals by ICPMS					
Dissolved Aluminum (Al)	mg/L	0.00114	0.00827	0.00050	8306582
Dissolved Antimony (Sb)	mg/L	0.000053	0.000020	0.000020	8306582
Dissolved Arsenic (As)	mg/L	0.000164	0.000161	0.000020	8306582
Dissolved Barium (Ba)	mg/L	0.0581	0.0897	0.000020	8306582
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	8306582
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	0.0000050	8306582
Dissolved Boron (B)	mg/L	<0.010	<0.010	0.010	8306582
Dissolved Cadmium (Cd)	mg/L	0.0000360	0.0000130	0.0000050	8306582
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00010	8306582
Dissolved Cobalt (Co)	mg/L	0.0000200	0.0000090	0.0000050	8306582
Dissolved Copper (Cu)	mg/L	0.000480	0.000423	0.000050	8306582
Dissolved Iron (Fe)	mg/L	0.0625	0.0123	0.0010	8306582
Dissolved Lead (Pb)	mg/L	0.0000230	<0.0000050	0.0000050	8306582
Dissolved Lithium (Li)	mg/L	0.00119	<0.00050	0.00050	8306582
Dissolved Manganese (Mn)	mg/L	0.0157	0.00136	0.000050	8306582
Dissolved Molybdenum (Mo)	mg/L	0.000476	0.000528	0.000050	8306582
Dissolved Nickel (Ni)	mg/L	0.000262	0.000336	0.000020	8306582
Dissolved Phosphorus (P)	mg/L	0.0060	0.0039	0.0020	8306582
Dissolved Selenium (Se)	mg/L	0.000557	0.000115	0.000040	8306582
Dissolved Silicon (Si)	mg/L	2.17	2.20	0.050	8306582
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	0.0000050	8306582
Dissolved Strontium (Sr)	mg/L	0.136	0.0640	0.000050	8306582
Dissolved Thallium (Tl)	mg/L	0.0000020	0.0000030 (1)	0.0000020	8306582
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8306582
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00050	8306582
Dissolved Uranium (U)	mg/L	0.000714	0.000418	0.0000020	8306582
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	0.00020	8306582

RDL = Reportable Detection Limit
(1) Matrix Spike outside acceptance criteria (10% of analytes failure allowed).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OW3634	OW3635		
Sampling Date		2016/06/14 08:35	2016/06/14 16:40		
COC Number		08423306	08423306		
	UNITS	KZ-9	KZ-13	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00699	0.00137	0.00010	8306582
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8306582
Dissolved Calcium (Ca)	mg/L	42.7	21.0	0.050	8305342
Dissolved Magnesium (Mg)	mg/L	5.03	2.18	0.050	8305342
Dissolved Potassium (K)	mg/L	1.17	1.32	0.050	8305342
Dissolved Sodium (Na)	mg/L	0.763	0.801	0.050	8305342
Dissolved Sulphur (S)	mg/L	9.6	3.9	3.0	8305342
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OW2139	OW3580	OW3628	OW3632	OW3633		
Sampling Date		2016/06/17 15:30	2016/06/14 17:00	2016/06/14 14:00	2016/06/14 12:35	2016/06/14 11:25		
COC Number		08423306	08423306	08423306	08423306	08423306		
	UNITS	TRIP BLANK	KZ-28	KZ-2	KZ-6	KZ-7	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	<0.50	<0.50	72.3	132	128	0.50	8304529
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8309051
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	<0.00050	<0.00050	0.0135	0.0271	0.00296	0.00050	8307264
Total Antimony (Sb)	mg/L	<0.000020	<0.000020	0.000035	<0.000020	0.000064	0.000020	8307264
Total Arsenic (As)	mg/L	<0.000020	<0.000020	0.000093	0.000133	0.000234	0.000020	8307264
Total Barium (Ba)	mg/L	<0.000020	<0.000020	0.0403	0.0372	0.0504	0.000020	8307264
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8307264
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8307264
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8307264
Total Cadmium (Cd)	mg/L	<0.0000050	<0.0000050	0.000214	0.0000330	0.0000710	0.0000050	8307264
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8307264
Total Cobalt (Co)	mg/L	<0.0000050	<0.0000050	0.0000140	0.0000530	0.0000100	0.0000050	8307264
Total Copper (Cu)	mg/L	<0.000050	<0.000050	0.000825	0.000353	0.000556	0.000050	8307264
Total Iron (Fe)	mg/L	<0.0010	<0.0010	0.0207	0.281	0.0618	0.0010	8307264
Total Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.000109	0.000128	0.0000210	0.0000050	8307264
Total Lithium (Li)	mg/L	<0.00050	<0.00050	0.00072	0.00066	0.00104	0.00050	8307264
Total Manganese (Mn)	mg/L	<0.000050	<0.000050	0.000934	0.0442	0.00633	0.000050	8307264
Total Molybdenum (Mo)	mg/L	<0.000050	<0.000050	0.000581	0.000367	0.000478	0.000050	8307264
Total Nickel (Ni)	mg/L	<0.000020	<0.000020	0.000351	0.000281	0.000284	0.000020	8307264
Total Phosphorus (P)	mg/L	<0.0020	0.0029	0.0022	0.0089	0.0041	0.0020	8307264
Total Selenium (Se)	mg/L	<0.000040	<0.000040	0.000435	0.000430	0.000668	0.000040	8307264
Total Silicon (Si)	mg/L	<0.050	<0.050	1.91	2.42	2.47	0.050	8307264
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8307264
Total Strontium (Sr)	mg/L	<0.000050	<0.000050	0.0789	0.133	0.130	0.000050	8307264
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000030	<0.0000020	<0.0000020	0.0000020	8307264
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8307264
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00081	0.00109	<0.00050	0.00050	8307264
Total Uranium (U)	mg/L	<0.0000020	<0.0000020	0.00112	0.000670	0.000798	0.0000020	8307264
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8307264
Total Zinc (Zn)	mg/L	<0.00010	0.00012	0.0341	0.00140	0.0142	0.00010	8307264

RDL = Reportable Detection Limit

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OW2139	OW3580	OW3628	OW3632	OW3633		
Sampling Date		2016/06/17 15:30	2016/06/14 17:00	2016/06/14 14:00	2016/06/14 12:35	2016/06/14 11:25		
COC Number		08423306	08423306	08423306	08423306	08423306		
	UNITS	**TRIP BLANK**	**KZ-28**	**KZ-2**	**KZ-6**	**KZ-7**	**RDL**	**QC Batch**
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8307264
Total Calcium (Ca)	mg/L	<0.050	<0.050	25.4	44.9	42.0	0.050	8305593
Total Magnesium (Mg)	mg/L	<0.050	<0.050	2.14	4.94	5.66	0.050	8305593
Total Potassium (K)	mg/L	<0.050	<0.050	1.28	0.570	0.968	0.050	8305593
Total Sodium (Na)	mg/L	<0.050	<0.050	0.469	0.540	0.667	0.050	8305593
Total Sulphur (S)	mg/L	<3.0	<3.0	9.8	6.2	11.1	3.0	8305593

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OW3634	OW3635		
Sampling Date		2016/06/14 08:35	2016/06/14 16:40		
COC Number		08423306	08423306		
	UNITS	KZ-9	KZ-13	RDL	QC Batch
Calculated Parameters					
Total Hardness (CaCO3)	mg/L	132	61.5	0.50	8304529
Elements					
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8309051
Total Metals by ICPMS					
Total Aluminum (Al)	mg/L	0.0291	0.0810	0.00050	8307264
Total Antimony (Sb)	mg/L	0.000063	0.000055	0.000020	8307264
Total Arsenic (As)	mg/L	0.000267	0.000252	0.000020	8307264
Total Barium (Ba)	mg/L	0.0634	0.0975	0.000020	8307264
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	8307264
Total Bismuth (Bi)	mg/L	<0.0000050	0.0000050	0.0000050	8307264
Total Boron (B)	mg/L	<0.010	<0.010	0.010	8307264
Total Cadmium (Cd)	mg/L	0.0000560	0.0000390	0.0000050	8307264
Total Chromium (Cr)	mg/L	<0.00010	0.00019	0.00010	8307264
Total Cobalt (Co)	mg/L	0.0000840	0.0000780	0.0000050	8307264
Total Copper (Cu)	mg/L	0.000677	0.000779	0.000050	8307264
Total Iron (Fe)	mg/L	0.328	0.206	0.0010	8307264
Total Lead (Pb)	mg/L	0.000159	0.000204	0.0000050	8307264
Total Lithium (Li)	mg/L	0.00149	0.00102	0.00050	8307264
Total Manganese (Mn)	mg/L	0.0379	0.0398	0.000050	8307264
Total Molybdenum (Mo)	mg/L	0.000497	0.000547	0.000050	8307264
Total Nickel (Ni)	mg/L	0.000361	0.000519	0.000020	8307264
Total Phosphorus (P)	mg/L	0.0095	0.0080	0.0020	8307264
Total Selenium (Se)	mg/L	0.000611	0.000142	0.000040	8307264
Total Silicon (Si)	mg/L	2.36	2.46	0.050	8307264
Total Silver (Ag)	mg/L	0.0000070	0.0000060	0.0000050	8307264
Total Strontium (Sr)	mg/L	0.146	0.0681	0.000050	8307264
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	8307264
Total Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8307264
Total Titanium (Ti)	mg/L	0.00216	0.00538	0.00050	8307264
Total Uranium (U)	mg/L	0.000802	0.000457	0.0000020	8307264
Total Vanadium (V)	mg/L	<0.00020	0.00037	0.00020	8307264
Total Zinc (Zn)	mg/L	0.0114	0.00502	0.00010	8307264
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OW3634	OW3635		
Sampling Date		2016/06/14 08:35	2016/06/14 16:40		
COC Number		08423306	08423306		
	UNITS	KZ-9	KZ-13	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8307264
Total Calcium (Ca)	mg/L	44.3	21.0	0.050	8305593
Total Magnesium (Mg)	mg/L	5.26	2.22	0.050	8305593
Total Potassium (K)	mg/L	1.21	1.35	0.050	8305593
Total Sodium (Na)	mg/L	0.759	0.814	0.050	8305593
Total Sulphur (S)	mg/L	9.7	3.9	3.0	8305593
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW2139
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/06/17
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8308968	N/A	2016/06/22	Name Redacted
Alkalinity - Water	AT/ALK	8306445	2016/06/21	2016/06/21	
Chloride by Automated Colourimetry	KONE/COL	8306771	N/A	2016/06/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8311832	N/A	2016/06/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8311837	N/A	2016/06/27	
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8307433	N/A	2016/06/21	
Conductance - water	AT/ALK	8306448	N/A	2016/06/21	
Fluoride	ISE/ISE	8308097	N/A	2016/06/22	
Hardness Total (calculated as CaCO3)	CALC	8304529	N/A	2016/06/22	
Hardness (calculated as CaCO3)	CALC	8304581	N/A	2016/06/22	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8309019	N/A	2016/06/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8309051	2016/06/23	2016/06/23	
Ion Balance	CALC	8304864	N/A	2016/06/22	
Sum of cations, anions	CALC	8305592	N/A	2016/06/22	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8305342	N/A	2016/06/22	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8306582	N/A	2016/06/21	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8305593	N/A	2016/06/22	
Elements by ICPMS Low Level (total)	ICP/CRCM	8307264	N/A	2016/06/22	
Ammonia-N (Unpreserved)	KONE/COL	8306390	N/A	2016/06/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8307350	N/A	2016/06/21	
Nitrite (N) (low level)	TRAA/COL	8307354	N/A	2016/06/21	
Nitrogen - Nitrate (as N)	CALC	8305594	N/A	2016/06/22	
pH Water	AT/ALK	8306450	N/A	2016/06/21	
Sulphate by Automated Colourimetry	KONE/COL	8306778	N/A	2016/06/21	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306895	2016/06/21	2016/06/21	
Total Phosphorus - unpreserved	KONE/COL	8306896	N/A	2016/06/21	
Total Suspended Solids-Low Level	BAL/BAL	8305800	2016/06/21	2016/06/22	

Maxxam ID: OW2139 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/06/17
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8307433	N/A	2016/06/21	Name Redacted
Ammonia-N (Unpreserved)	KONE/COL	8306390	N/A	2016/06/21	

Maxxam ID: OW3580
Sample ID: KZ-28
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8308968	N/A	2016/06/22	Name Redacted
Alkalinity - Water	AT/ALK	8306445	2016/06/21	2016/06/21	
Chloride by Automated Colourimetry	KONE/COL	8306771	N/A	2016/06/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8311832	N/A	2016/06/27	

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW3580
Sample ID: KZ-28
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide WAD (weak acid dissociable)	TECH/COL	8311837	N/A	2016/06/27	Name Redacted
Carbon (DOC) - field filtered/preserved	TRAA/COL	8307437	N/A	2016/06/21	
Conductance - water	AT/ALK	8306448	N/A	2016/06/21	
Fluoride	ISE/ISE	8308097	N/A	2016/06/22	
Hardness Total (calculated as CaCO3)	CALC	8304529	N/A	2016/06/23	
Hardness (calculated as CaCO3)	CALC	8304581	N/A	2016/06/22	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8309019	N/A	2016/06/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8309051	2016/06/23	2016/06/23	
Ion Balance	CALC	8304864	N/A	2016/06/22	
Sum of cations, anions	CALC	8305592	N/A	2016/06/22	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8305342	N/A	2016/06/22	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8306582	N/A	2016/06/21	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8305593	N/A	2016/06/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8307264	N/A	2016/06/22	
Ammonia-N (Preserved)	KONE/COL	8306381	N/A	2016/06/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8307350	N/A	2016/06/21	
Nitrite (N) (low level)	TRAA/COL	8307354	N/A	2016/06/21	
Nitrogen - Nitrate (as N)	CALC	8305594	N/A	2016/06/22	
Filter and HNO3 Preserve for Metals	ICP	8305638	N/A	2016/06/21	
pH Water	AT/ALK	8306450	N/A	2016/06/21	
Sulphate by Automated Colourimetry	KONE/COL	8306778	N/A	2016/06/21	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306895	2016/06/21	2016/06/21	
Total Phosphorus - unpreserved	KONE/COL	8306896	N/A	2016/06/21	
Total Suspended Solids-Low Level	BAL/BAL	8305800	2016/06/21	2016/06/22	

Maxxam ID: OW3580 Dup
Sample ID: KZ-28
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8311832	N/A	2016/06/27	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8311837	N/A	2016/06/27	

Maxxam ID: OW3628
Sample ID: KZ-2
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8308968	N/A	2016/06/22	Name Redacted
Alkalinity - Water	AT/ALK	8306442	2016/06/21	2016/06/21	
Chloride by Automated Colourimetry	KONE/COL	8306771	N/A	2016/06/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8307163	N/A	2016/06/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8311837	N/A	2016/06/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8307437	N/A	2016/06/21	
Conductance - water	AT/ALK	8306440	N/A	2016/06/21	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW3628
Sample ID: KZ-2
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8308097	N/A	2016/06/22	Name Redacted
Hardness Total (calculated as CaCO3)	CALC	8304529	N/A	2016/06/23	
Hardness (calculated as CaCO3)	CALC	8304581	N/A	2016/06/22	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8309019	N/A	2016/06/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8309051	2016/06/23	2016/06/23	
Ion Balance	CALC	8304864	N/A	2016/06/22	
Sum of cations, anions	CALC	8305592	N/A	2016/06/22	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8305342	N/A	2016/06/22	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8306582	N/A	2016/06/21	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8305593	N/A	2016/06/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8307264	N/A	2016/06/22	
Ammonia-N (Preserved)	KONE/COL	8306381	N/A	2016/06/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8307350	N/A	2016/06/21	
Nitrite (N) (low level)	TRAA/COL	8307354	N/A	2016/06/21	
Nitrogen - Nitrate (as N)	CALC	8305594	N/A	2016/06/22	
Filter and HNO3 Preserve for Metals	ICP	8305638	N/A	2016/06/21	
pH Water	AT/ALK	8306438	N/A	2016/06/21	
Sulphate by Automated Colourimetry	KONE/COL	8306778	N/A	2016/06/21	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306895	2016/06/21	2016/06/21	
Total Phosphorus - unpreserved	KONE/COL	8306896	N/A	2016/06/21	
Total Suspended Solids-Low Level	BAL/BAL	8305800	2016/06/21	2016/06/22	

Maxxam ID: OW3632
Sample ID: KZ-6
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8308968	N/A	2016/06/22	Name Redacted
Alkalinity - Water	AT/ALK	8306442	2016/06/21	2016/06/21	
Chloride by Automated Colourimetry	KONE/COL	8306771	N/A	2016/06/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8307163	N/A	2016/06/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8311837	N/A	2016/06/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8307437	N/A	2016/06/21	
Conductance - water	AT/ALK	8306440	N/A	2016/06/21	
Fluoride	ISE/ISE	8308097	N/A	2016/06/22	
Hardness Total (calculated as CaCO3)	CALC	8304529	N/A	2016/06/23	
Hardness (calculated as CaCO3)	CALC	8304581	N/A	2016/06/22	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8309019	N/A	2016/06/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8309051	2016/06/23	2016/06/23	
Ion Balance	CALC	8304864	N/A	2016/06/22	
Sum of cations, anions	CALC	8305592	N/A	2016/06/22	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8305342	N/A	2016/06/22	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8306582	N/A	2016/06/21	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8305593	N/A	2016/06/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8307264	N/A	2016/06/22	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW3632
Sample ID: KZ-6
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8306381	N/A	2016/06/21	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8307350	N/A	2016/06/21	
Nitrite (N) (low level)	TRAA/COL	8307354	N/A	2016/06/21	
Nitrogen - Nitrate (as N)	CALC	8305594	N/A	2016/06/22	
Filter and HNO3 Preserve for Metals	ICP	8305638	N/A	2016/06/21	
pH Water	AT/ALK	8306438	N/A	2016/06/21	
Sulphate by Automated Colourimetry	KONE/COL	8306778	N/A	2016/06/21	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306895	2016/06/21	2016/06/21	
Total Phosphorus - unpreserved	KONE/COL	8306896	N/A	2016/06/21	
Total Suspended Solids-Low Level	BAL/BAL	8305800	2016/06/21	2016/06/22	

Maxxam ID: OW3632 Dup
Sample ID: KZ-6
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8308968	N/A	2016/06/22	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8307350	N/A	2016/06/21	
Nitrite (N) (low level)	TRAA/COL	8307354	N/A	2016/06/21	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306895	2016/06/21	2016/06/21	
Total Phosphorus - unpreserved	KONE/COL	8306896	N/A	2016/06/21	

Maxxam ID: OW3633
Sample ID: KZ-7
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8308968	N/A	2016/06/22	Name Redacted
Alkalinity - Water	AT/ALK	8306445	2016/06/21	2016/06/21	
Chloride by Automated Colourimetry	KONE/COL	8306771	N/A	2016/06/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8307163	N/A	2016/06/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8311837	N/A	2016/06/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8307434	N/A	2016/06/21	
Conductance - water	AT/ALK	8306448	N/A	2016/06/21	
Fluoride	ISE/ISE	8308097	N/A	2016/06/22	
Hardness Total (calculated as CaCO3)	CALC	8304529	N/A	2016/06/23	
Hardness (calculated as CaCO3)	CALC	8304581	N/A	2016/06/22	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8309019	N/A	2016/06/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8309051	2016/06/23	2016/06/23	
Ion Balance	CALC	8304864	N/A	2016/06/22	
Sum of cations, anions	CALC	8305592	N/A	2016/06/22	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8305342	N/A	2016/06/22	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8306582	N/A	2016/06/21	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8305593	N/A	2016/06/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8307264	N/A	2016/06/22	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW3633
Sample ID: KZ-7
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8306381	N/A	2016/06/21	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8307350	N/A	2016/06/21	
Nitrite (N) (low level)	TRAA/COL	8307354	N/A	2016/06/21	
Nitrogen - Nitrate (as N)	CALC	8305594	N/A	2016/06/22	
Filter and HNO3 Preserve for Metals	ICP	8305638	N/A	2016/06/21	
pH Water	AT/ALK	8306450	N/A	2016/06/21	
Sulphate by Automated Colourimetry	KONE/COL	8306778	N/A	2016/06/21	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306895	2016/06/21	2016/06/21	
Total Phosphorus - unpreserved	KONE/COL	8306896	N/A	2016/06/21	
Total Suspended Solids-Low Level	BAL/BAL	8305800	2016/06/21	2016/06/22	

Maxxam ID: OW3633 Dup
Sample ID: KZ-7
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8307434	N/A	2016/06/21	Name Redacted

Maxxam ID: OW3634
Sample ID: KZ-9
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8308968	N/A	2016/06/22	Name Redacted
Alkalinity - Water	AT/ALK	8306445	2016/06/21	2016/06/21	
Chloride by Automated Colourimetry	KONE/COL	8306771	N/A	2016/06/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8307163	N/A	2016/06/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8307200	N/A	2016/06/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8307437	N/A	2016/06/21	
Conductance - water	AT/ALK	8306448	N/A	2016/06/21	
Fluoride	ISE/ISE	8308097	N/A	2016/06/22	
Hardness Total (calculated as CaCO3)	CALC	8304529	N/A	2016/06/23	
Hardness (calculated as CaCO3)	CALC	8304581	N/A	2016/06/22	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8309019	N/A	2016/06/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8309051	2016/06/23	2016/06/23	
Ion Balance	CALC	8304864	N/A	2016/06/22	
Sum of cations, anions	CALC	8305592	N/A	2016/06/22	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8305342	N/A	2016/06/22	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8306582	N/A	2016/06/21	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8305593	N/A	2016/06/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8307264	N/A	2016/06/22	
Ammonia-N (Preserved)	KONE/COL	8306381	N/A	2016/06/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8307350	N/A	2016/06/21	
Nitrite (N) (low level)	TRAA/COL	8307354	N/A	2016/06/21	
Nitrogen - Nitrate (as N)	CALC	8305594	N/A	2016/06/22	

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW3634
Sample ID: KZ-9
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	8305638	N/A	2016/06/21	Name Redacted
pH Water	AT/ALK	8306450	N/A	2016/06/21	
Sulphate by Automated Colourimetry	KONE/COL	8306778	N/A	2016/06/21	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306895	2016/06/21	2016/06/21	
Total Phosphorus - unpreserved	KONE/COL	8306896	N/A	2016/06/21	
Total Suspended Solids-Low Level	BAL/BAL	8305800	2016/06/21	2016/06/22	

Maxxam ID: OW3635
Sample ID: KZ-13
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8308968	N/A	2016/06/22	Name Redacted
Alkalinity - Water	AT/ALK	8306445	2016/06/21	2016/06/21	
Chloride by Automated Colourimetry	KONE/COL	8306771	N/A	2016/06/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8307163	N/A	2016/06/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8311837	N/A	2016/06/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8307437	N/A	2016/06/21	
Conductance - water	AT/ALK	8306448	N/A	2016/06/21	
Fluoride	ISE/ISE	8308097	N/A	2016/06/22	
Hardness Total (calculated as CaCO3)	CALC	8304529	N/A	2016/06/23	
Hardness (calculated as CaCO3)	CALC	8304581	N/A	2016/06/22	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8309019	N/A	2016/06/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8309051	2016/06/23	2016/06/23	
Ion Balance	CALC	8304864	N/A	2016/06/22	
Sum of cations, anions	CALC	8305592	N/A	2016/06/22	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8305342	N/A	2016/06/22	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8306582	N/A	2016/06/21	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8305593	N/A	2016/06/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8307264	N/A	2016/06/22	
Ammonia-N (Preserved)	KONE/COL	8306381	N/A	2016/06/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8307350	N/A	2016/06/21	
Nitrite (N) (low level)	TRAA/COL	8307354	N/A	2016/06/21	
Nitrogen - Nitrate (as N)	CALC	8305594	N/A	2016/06/22	
Filter and HNO3 Preserve for Metals	ICP	8305638	N/A	2016/06/21	
pH Water	AT/ALK	8306450	N/A	2016/06/21	
Sulphate by Automated Colourimetry	KONE/COL	8306778	N/A	2016/06/21	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306895	2016/06/21	2016/06/21	
Total Phosphorus - unpreserved	KONE/COL	8306896	N/A	2016/06/21	
Total Suspended Solids-Low Level	BAL/BAL	8305800	2016/06/21	2016/06/22	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW3635 Dup
Sample ID: KZ-13
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8306582	N/A	2016/06/21	Name Redacted
Ammonia-N (Preserved)	KONE/COL	8306381	N/A	2016/06/21	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	10.0°C

Sample OW2139-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8305800	Total Suspended Solids	2016/06/22			96	80 - 120	<1.0	mg/L		
8306381	Total Ammonia (N)	2016/06/21	103	80 - 120	101	80 - 120	<0.0050	mg/L	NC	20
8306390	Total Ammonia (N)	2016/06/21	98	80 - 120	101	80 - 120	<0.0050	mg/L	NC	20
8306438	pH	2016/06/21			102	97 - 103			0	N/A
8306440	Conductivity	2016/06/21			99	80 - 120	<1.0	uS/cm		
8306442	Alkalinity (PP as CaCO3)	2016/06/21					<0.50	mg/L		
8306442	Alkalinity (Total as CaCO3)	2016/06/21	NC	80 - 120	96	80 - 120	<0.50	mg/L		
8306442	Bicarbonate (HCO3)	2016/06/21					<0.50	mg/L		
8306442	Carbonate (CO3)	2016/06/21					<0.50	mg/L		
8306442	Hydroxide (OH)	2016/06/21					<0.50	mg/L		
8306445	Alkalinity (PP as CaCO3)	2016/06/21					<0.50	mg/L	NC	20
8306445	Alkalinity (Total as CaCO3)	2016/06/21	NC	80 - 120	101	80 - 120	<0.50	mg/L	1.3	20
8306445	Bicarbonate (HCO3)	2016/06/21					<0.50	mg/L	1.3	20
8306445	Carbonate (CO3)	2016/06/21					<0.50	mg/L	NC	20
8306445	Hydroxide (OH)	2016/06/21					<0.50	mg/L	NC	20
8306448	Conductivity	2016/06/21			100	80 - 120	<1.0	uS/cm	0.54	20
8306450	pH	2016/06/21			102	97 - 103			0.91	N/A
8306582	Dissolved Aluminum (Al)	2016/06/21	104	80 - 120	110	80 - 120	<0.00050	mg/L	0.31	20
8306582	Dissolved Antimony (Sb)	2016/06/21	95	80 - 120	94	80 - 120	<0.000020	mg/L	NC	20
8306582	Dissolved Arsenic (As)	2016/06/21	99	80 - 120	98	80 - 120	<0.000020	mg/L	3.2	20
8306582	Dissolved Barium (Ba)	2016/06/21	NC	80 - 120	98	80 - 120	<0.000020	mg/L	0.25	20
8306582	Dissolved Beryllium (Be)	2016/06/21	98	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8306582	Dissolved Bismuth (Bi)	2016/06/21	95	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8306582	Dissolved Boron (B)	2016/06/21	97	80 - 120	96	80 - 120	<0.010	mg/L	NC	20
8306582	Dissolved Cadmium (Cd)	2016/06/21	95	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8306582	Dissolved Chromium (Cr)	2016/06/21	95	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
8306582	Dissolved Cobalt (Co)	2016/06/21	95	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8306582	Dissolved Copper (Cu)	2016/06/21	94	80 - 120	98	80 - 120	<0.000050	mg/L	0.95	20
8306582	Dissolved Iron (Fe)	2016/06/21	108	80 - 120	107	80 - 120	<0.0010	mg/L	1.0	20
8306582	Dissolved Lead (Pb)	2016/06/21	95	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8306582	Dissolved Lithium (Li)	2016/06/21	98	80 - 120	93	80 - 120	<0.00050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8306582	Dissolved Manganese (Mn)	2016/06/21	95	80 - 120	100	80 - 120	<0.000050	mg/L	2.2	20
8306582	Dissolved Molybdenum (Mo)	2016/06/21	NC	80 - 120	95	80 - 120	<0.000050	mg/L	1.5	20
8306582	Dissolved Nickel (Ni)	2016/06/21	93	80 - 120	99	80 - 120	<0.000020	mg/L	2.4	20
8306582	Dissolved Phosphorus (P)	2016/06/21					0.0027, RDL=0.0020	mg/L	NC	20
8306582	Dissolved Selenium (Se)	2016/06/21	96	80 - 120	93	80 - 120	<0.000040	mg/L	NC	20
8306582	Dissolved Silicon (Si)	2016/06/21					<0.050	mg/L	0.95	20
8306582	Dissolved Silver (Ag)	2016/06/21	102	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8306582	Dissolved Strontium (Sr)	2016/06/21	NC	80 - 120	101	80 - 120	<0.000050	mg/L	1.6	20
8306582	Dissolved Thallium (Tl)	2016/06/21	74 (1)	80 - 120	108	80 - 120	<0.0000020	mg/L	NC	20
8306582	Dissolved Tin (Sn)	2016/06/21	97	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8306582	Dissolved Titanium (Ti)	2016/06/21	94	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8306582	Dissolved Uranium (U)	2016/06/21	95	80 - 120	101	80 - 120	<0.0000020	mg/L	2.7	20
8306582	Dissolved Vanadium (V)	2016/06/21	97	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
8306582	Dissolved Zinc (Zn)	2016/06/21	101	80 - 120	97	80 - 120	<0.00010	mg/L	7.7	20
8306582	Dissolved Zirconium (Zr)	2016/06/21					<0.00010	mg/L	NC	20
8306771	Dissolved Chloride (Cl)	2016/06/21			99	80 - 120	<0.50	mg/L	NC	20
8306778	Dissolved Sulphate (SO4)	2016/06/21			92	80 - 120	<0.50	mg/L	1.9	20
8306895	Dissolved Phosphorus (P)	2016/06/21	107	80 - 120	106	80 - 120	<0.0020	mg/L	NC (2)	20
8306896	Total Phosphorus (P)	2016/06/21	89	80 - 120	106	80 - 120	<0.0020	mg/L	NC (2)	20
8307163	Strong Acid Dissoc. Cyanide (CN)	2016/06/22	NC	80 - 120	103	80 - 120	0.00076, RDL=0.00050	mg/L	0.46	20
8307200	Weak Acid Dissoc. Cyanide (CN)	2016/06/22	49 (1)	80 - 120	98	80 - 120	0.00074, RDL=0.00050	mg/L	NC	20
8307264	Total Aluminum (Al)	2016/06/22	114	80 - 120	111	80 - 120	<0.00050	mg/L	NC	20
8307264	Total Antimony (Sb)	2016/06/22	106	80 - 120	100	80 - 120	<0.000020	mg/L		
8307264	Total Arsenic (As)	2016/06/22	102	80 - 120	100	80 - 120	<0.000020	mg/L		
8307264	Total Barium (Ba)	2016/06/22	108	80 - 120	102	80 - 120	<0.000020	mg/L		
8307264	Total Beryllium (Be)	2016/06/22	102	80 - 120	97	80 - 120	0.000010, RDL=0.000010	mg/L		
8307264	Total Bismuth (Bi)	2016/06/22	107	80 - 120	105	80 - 120	<0.0000050	mg/L		
8307264	Total Boron (B)	2016/06/22	88	80 - 120	100	80 - 120	<0.010	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8307264	Total Cadmium (Cd)	2016/06/22	101	80 - 120	99	80 - 120	<0.0000050	mg/L		
8307264	Total Chromium (Cr)	2016/06/22	99	80 - 120	98	80 - 120	<0.00010	mg/L		
8307264	Total Cobalt (Co)	2016/06/22	99	80 - 120	99	80 - 120	<0.0000050	mg/L		
8307264	Total Copper (Cu)	2016/06/22	100	80 - 120	100	80 - 120	<0.000050	mg/L		
8307264	Total Iron (Fe)	2016/06/22	105	80 - 120	106	80 - 120	<0.0010	mg/L		
8307264	Total Lead (Pb)	2016/06/22	108	80 - 120	106	80 - 120	<0.0000050	mg/L		
8307264	Total Lithium (Li)	2016/06/22	99	80 - 120	98	80 - 120	<0.00050	mg/L		
8307264	Total Manganese (Mn)	2016/06/22	103	80 - 120	101	80 - 120	<0.000050	mg/L		
8307264	Total Molybdenum (Mo)	2016/06/22	97	80 - 120	97	80 - 120	<0.000050	mg/L		
8307264	Total Nickel (Ni)	2016/06/22	99	80 - 120	99	80 - 120	<0.000020	mg/L		
8307264	Total Phosphorus (P)	2016/06/22					0.0024, RDL=0.0020	mg/L		
8307264	Total Selenium (Se)	2016/06/22	101	80 - 120	98	80 - 120	<0.000040	mg/L		
8307264	Total Silicon (Si)	2016/06/22					<0.050	mg/L		
8307264	Total Silver (Ag)	2016/06/22	86	80 - 120	107	80 - 120	<0.0000050	mg/L		
8307264	Total Strontium (Sr)	2016/06/22	96	80 - 120	102	80 - 120	<0.000050	mg/L		
8307264	Total Thallium (Tl)	2016/06/22	114	80 - 120	112	80 - 120	<0.0000020	mg/L		
8307264	Total Tin (Sn)	2016/06/22	118	80 - 120	102	80 - 120	<0.00020	mg/L		
8307264	Total Titanium (Ti)	2016/06/22	101	80 - 120	105	80 - 120	<0.00050	mg/L		
8307264	Total Uranium (U)	2016/06/22	106	80 - 120	104	80 - 120	<0.0000020	mg/L		
8307264	Total Vanadium (V)	2016/06/22	106	80 - 120	101	80 - 120	<0.00020	mg/L		
8307264	Total Zinc (Zn)	2016/06/22	103	80 - 120	118	80 - 120	<0.00010	mg/L	4.2	20
8307264	Total Zirconium (Zr)	2016/06/22					<0.00010	mg/L		
8307350	Nitrate plus Nitrite (N)	2016/06/21	106	80 - 120	108	80 - 120	<0.0020	mg/L	8.8 (2)	25
8307354	Nitrite (N)	2016/06/21	99	80 - 120	102	80 - 120	<0.0020	mg/L	NC (2)	25
8307433	Dissolved Organic Carbon (C)	2016/06/21	108	80 - 120	106	80 - 120	<0.50	mg/L	NC	20
8307434	Dissolved Organic Carbon (C)	2016/06/21	101	80 - 120	104	80 - 120	<0.50	mg/L	NC	20
8307437	Dissolved Organic Carbon (C)	2016/06/21	NC	80 - 120	99	80 - 120	<0.50	mg/L	0.80	20
8308097	Fluoride (F)	2016/06/22			98	80 - 120	<0.010	mg/L	1.9	20
8308968	Acidity (pH 4.5)	2016/06/22					<0.50	mg/L	NC	20
8308968	Acidity (pH 8.3)	2016/06/22			97	80 - 120	<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8309019	Dissolved Mercury (Hg)	2016/06/23	93	80 - 120	94	80 - 120	<0.0000020	mg/L	NC	20
8309051	Total Mercury (Hg)	2016/06/23	102	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8311832	Strong Acid Dissoc. Cyanide (CN)	2016/06/27	99	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8311837	Weak Acid Dissoc. Cyanide (CN)	2016/06/27	97	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649484
Report Date: 2016/06/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Name M.Sc., P.Chem., QP, Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

B649484_COC

B649484

MaxxAm
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

CO 08423306

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (v		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	RUSH [X] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6453	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12185

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

Rush Confirmation #:

LABORATORY USE ONLY — CUSTODY SEAL Y / N (Present / Intact) — COOLER TEMPERATURES

COOLING MEDIA PRESENT Y / N

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x	12		
3	KZ-28		14-Jun-16	17:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	12		
4	KZ-2		14-Jun-16	14:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	12		
	KZ-6		14-Jun-16	12:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	12		
5	KZ-7		14-Jun-16	11:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	12		
	KZ-9		14-Jun-16	8:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	12		
6	KZ-13		14-Jun-16	16:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	12		

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Andrew MacPhail	16/06/2017	11:00	Signature Redacted	2016/06/16	12:30
Signature Redacted				16	

MAXXAM JOB #

RECEIVED IN WHITEHORSE BY: Signature Redacted 2016-06-17

TEMP:

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 495921-01-01

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/07/05
Report #: R2210579
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B649116
Received: 2016/06/17, 15:30

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	4	N/A	2016/06/20	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	4	2016/06/20	2016/06/20	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	4	N/A	2016/06/20	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	4	N/A	2016/06/22	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	4	N/A	2016/06/22	BBY6SOP-00004	SM 22 4500-CN O m
COD by Colorimeter	4	2016/06/21	2016/06/22	BBY6SOP-00024	SM 22 5220 D m
Colour (True) by Kone Lab	4	N/A	2016/06/20	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	4	N/A	2016/06/20	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	4	N/A	2016/06/20	BBY6SOP-00026	SM 22 2510 B m
Fluoride	4	N/A	2016/06/21	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	3	N/A	2016/06/22	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	1	N/A	2016/06/24	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	4	N/A	2016/06/22	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	4	N/A	2016/06/22	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	4	2016/06/22	2016/06/22	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Bromide as Bromine (Br) by ICPMS	4	N/A	2016/06/20	BBY7SOP-00002	EPA 6020B R2 m
Ion Balance	4	N/A	2016/06/22	BBY WI-00033	SM 22 1030E
Sum of cations, anions	4	N/A	2016/06/22	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	4	N/A	2016/06/22	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	4	N/A	2016/06/22	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	1	2016/06/21	2016/06/22	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Digested LL (total)	2	2016/06/22	2016/06/22	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	3	N/A	2016/06/22	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2016/06/24	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	1	N/A	2016/06/21	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Nitrogen (Total)	4	2016/06/21	2016/06/21	BBY6SOP-00016	SM 22 4500-N C m
Ammonia-N (Preserved)	4	N/A	2016/06/21	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	4	N/A	2016/06/19	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	4	N/A	2016/06/19	BBY6SOP-00010	SM 22 4500-NO3- I m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 495921-01-01

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/07/05
Report #: R2210579
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B649116
Received: 2016/06/17, 15:30

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrogen - Nitrate (as N)	4	N/A	2016/06/21	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	4	N/A	2016/06/20	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	4	N/A	2016/06/20	BBY6SOP-00026	SM 22 4500-H+ B m
Orthophosphate by Konelab (low level)	4	N/A	2016/06/20	BBY6SOP-00013	SM 22 4500-P E m
Sulphate by Automated Colourimetry	4	N/A	2016/06/20	BBY6SOP-00017	SM 22 4500-SO42- E m
Total Dissolved Solids - Low Level	4	N/A	2016/06/22	BBY6SOP-00033	SM 22 2540 C m
TKN (Calc. TN, N/N) total	4	N/A	2016/06/22	BBY WI-00033	Calculation
Carbon (Total Organic) (3)	4	N/A	2016/06/20	BBY6SOP-00003	SM 22 5310 C m
Phosphorus-P (LL Tot, dissolved) - UF/UP	4	2016/06/21	2016/06/21	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	4	N/A	2016/06/21	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	4	2016/06/20	2016/06/21	BBY6SOP-00034	SM 22 2540 D
Turbidity	4	N/A	2016/06/18	BBY6SOP-00027	SM 22 2130 B m

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.
(3) TOC present in the sample should be considered as non-purgeable TOC.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OW2120	OW2136	OW2137	OW2138	OY8575		
Sampling Date		2016/06/14 09:52	2016/06/16 11:30	2016/06/16 14:20	2016/06/16 12:20	2016/06/16 12:05		
COC Number		495921-01-01	495921-01-01	495921-01-01	495921-01-01	495921-01-01		
	UNITS	KZ-9 WEST SEEP	KZ-9 EAST SEEP	SEEP 4	SEEP 5	KZ-9 WEST SEEP	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	5.2	18	3.4	5.7		N/A	8304169
Cation Sum	meq/L	5.1	17	3.2	5.6		N/A	8304169
Filter and HNO3 Preservation	N/A	LAB	LAB	LAB	LAB		N/A	8304808
Ion Balance	N/A	0.97	0.94	0.96	0.98		0.010	8304168
Nitrate (N)	mg/L	0.358	0.0152	0.489	0.0046		0.0020	8304029
Demand Parameters								
Chemical Oxygen Demand	mg/L	21	18	<10	26		10	8306226
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00078	0.00059	0.00081	0.00093		0.00050	8307163
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00107	0.00091	0.00131	0.00123		0.00050	8307200
Fluoride (F)	mg/L	0.072	0.970	0.038	0.170		0.010	8306756
Dissolved Organic Carbon (C)	mg/L	1.27	0.63	0.91	4.17		0.50	8306429
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	<0.50		0.50	8305190
Alkalinity (Total as CaCO3)	mg/L	211	901	124	262		0.50	8305343
Total Organic Carbon (C)	mg/L	1.43	1.81	2.07	6.34		0.50	8306431
Acidity (pH 8.3)	mg/L	0.87	271	<0.50	8.22		0.50	8305190
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	<0.50		0.50	8305343
Bicarbonate (HCO3)	mg/L	257	1100	151	319		0.50	8305343
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	<0.50		0.50	8305343
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	<0.50		0.50	8305343
Anions								
Orthophosphate (P)	mg/L	0.0019 (1)	0.0079 (2)	0.0012 (2)	0.014 (2)		0.0010	8305544
Dissolved Sulphate (SO4)	mg/L	47.2	17.0	39.5	8.60		0.50	8305561
Dissolved Chloride (Cl)	mg/L	0.91	2.1	0.71	11		0.50	8305558
MISCELLANEOUS								
True Colour	Col. Unit	<5.0 (2)	12.6 (2)	<5.0 (2)	16.0 (2)		5.0	8305542
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0021 (1)	0.0066 (2)	0.0023 (2)	0.0127 (2)		0.0020	8306812
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.032	0.328	0.054	0.545		0.020	8304130

RDL = Reportable Detection Limit

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		OW2120	OW2136	OW2137	OW2138	OY8575		
Sampling Date		2016/06/14 09:52	2016/06/16 11:30	2016/06/16 14:20	2016/06/16 12:20	2016/06/16 12:05		
COC Number		495921-01-01	495921-01-01	495921-01-01	495921-01-01	495921-01-01		
	UNITS	KZ-9 WEST SEEP	KZ-9 EAST SEEP	SEEP 4	SEEP 5	KZ-9 WEST SEEP	RDL	QC Batch
Total Ammonia (N)	mg/L	0.048	0.12	0.034	0.030		0.0050	8305698
Nitrate plus Nitrite (N)	mg/L	0.358 (1)	0.0152	0.489	0.0046		0.0020	8306263
Nitrite (N)	mg/L	<0.0020 (1)	<0.0020	<0.0020	<0.0020		0.0020	8306266
Total Nitrogen (N)	mg/L	0.391	0.343	0.543	0.549		0.020	8306042
Total Phosphorus (P)	mg/L	0.0026 (1)	0.0127 (2)	0.0027 (2)	0.0635 (2)		0.0020	8306889
Physical Properties								
Conductivity	uS/cm	463	1550	309	520		1.0	8305346
pH	pH	8.21	6.65	8.17	8.06			8305345
Physical Properties								
Total Suspended Solids	mg/L		11.6	1.0	13.1	1.1	1.0	8305103
Total Dissolved Solids	mg/L	300	946	200	314		1.0	8306095
Turbidity	NTU	0.75	14.4	0.21	28.2		0.10	8303918

RDL = Reportable Detection Limit

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		OW2120		OW2136		OW2137	OW2138		
Sampling Date		2016/06/14 09:52		2016/06/16 11:30		2016/06/16 14:20	2016/06/16 12:20		
COC Number		495921-01-01		495921-01-01		495921-01-01	495921-01-01		
	UNITS	KZ-9 WEST SEEP	RDL	KZ-9 EAST SEEP	RDL	SEEP 4	SEEP 5	RDL	QC Batch
ANIONS									
Bromide (Br)	mg/L	<0.010	0.010	<0.10 (1)	0.10	<0.010	<0.010	0.010	8305166

RDL = Reportable Detection Limit
(1) RDL raised due to sample matrix interference.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OW2120		OW2136		OW2137		
Sampling Date		2016/06/14 09:52		2016/06/16 11:30		2016/06/16 14:20		
COC Number		495921-01-01		495921-01-01		495921-01-01		
	UNITS	KZ-9 WEST SEEP	QC Batch	KZ-9 EAST SEEP	QC Batch	SEEP 4	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	251	8303851	834	8303851	156	0.50	8303851
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8307542	<0.0000020	8307542	<0.0000020	0.0000020	8307542
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00094	8307256	0.0586	8307256	0.00155	0.00050	8307256
Dissolved Antimony (Sb)	mg/L	0.000024	8307256	<0.000020	8307256	<0.000020	0.000020	8307256
Dissolved Arsenic (As)	mg/L	0.000109	8307256	0.000781	8307256	0.000062	0.000020	8307256
Dissolved Barium (Ba)	mg/L	0.176	8307256	0.132	8307256	0.115	0.000020	8307256
Dissolved Beryllium (Be)	mg/L	<0.000010	8307256	0.000244	8307256	<0.000010	0.000010	8307256
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8307256	<0.0000050	8307256	<0.0000050	0.0000050	8307256
Dissolved Boron (B)	mg/L	<0.010	8307256	<0.010	8307256	<0.010	0.010	8307256
Dissolved Cadmium (Cd)	mg/L	0.0000410	8307256	0.0000610	8307256	0.0000100	0.0000050	8307256
Dissolved Chromium (Cr)	mg/L	0.00015	8307256	<0.00010	8307256	0.00094 (1)	0.00010	8308675
Dissolved Cobalt (Co)	mg/L	<0.0000050	8307256	0.00228	8307256	0.0000190	0.0000050	8307256
Dissolved Copper (Cu)	mg/L	0.000095	8307256	<0.000050	8307256	0.000352 (1)	0.000050	8308675
Dissolved Iron (Fe)	mg/L	<0.0010	8307256	3.13	8307256	0.0070 (1)	0.0010	8308675
Dissolved Lead (Pb)	mg/L	<0.0000050	8307256	<0.0000050	8307256	<0.0000050	0.0000050	8307256
Dissolved Lithium (Li)	mg/L	0.00197	8307256	0.0726	8307256	0.00061	0.00050	8307256
Dissolved Manganese (Mn)	mg/L	<0.000050	8307256	2.04	8307256	0.000175	0.000050	8307256
Dissolved Molybdenum (Mo)	mg/L	0.00155	8307256	0.000405	8307256	0.000603	0.000050	8308675
Dissolved Nickel (Ni)	mg/L	0.000101	8307256	0.00698	8307256	0.000597 (1)	0.000020	8308675
Dissolved Phosphorus (P)	mg/L	0.0041	8307256	0.0086	8307256	0.0048	0.0020	8307256
Dissolved Selenium (Se)	mg/L	0.00240	8307256	<0.000040	8307256	0.000833	0.000040	8307256
Dissolved Silicon (Si)	mg/L	3.43	8307256	15.9	8307256	2.61	0.050	8307256
Dissolved Silver (Ag)	mg/L	<0.0000050	8307256	<0.0000050	8307256	<0.0000050	0.0000050	8307256
Dissolved Strontium (Sr)	mg/L	0.268	8307256	1.25	8307256	0.222	0.000050	8307256
Dissolved Thallium (Tl)	mg/L	0.0000050	8307256	0.0000040	8308675	0.0000030	0.0000020	8307256
Dissolved Tin (Sn)	mg/L	<0.00020	8307256	<0.00020	8307256	<0.00020	0.00020	8307256
Dissolved Titanium (Ti)	mg/L	<0.00050	8307256	<0.00050	8307256	<0.00050	0.00050	8307256
Dissolved Uranium (U)	mg/L	0.00311	8307256	0.00149	8307256	0.00131	0.0000020	8307256

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OW2120		OW2136		OW2137		
Sampling Date		2016/06/14 09:52		2016/06/16 11:30		2016/06/16 14:20		
COC Number		495921-01-01		495921-01-01		495921-01-01		
	UNITS	KZ-9 WEST SEEP	QC Batch	KZ-9 EAST SEEP	QC Batch	SEEP 4	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	8307256	<0.00020	8307256	<0.00020	0.00020	8307256
Dissolved Zinc (Zn)	mg/L	0.00038	8307256	0.0266	8307256	0.00037	0.00010	8307256
Dissolved Zirconium (Zr)	mg/L	<0.00010	8307256	0.00029	8307256	<0.00010	0.00010	8307256
Dissolved Calcium (Ca)	mg/L	85.0	8303852	282	8303852	58.1	0.050	8303852
Dissolved Magnesium (Mg)	mg/L	9.32	8303852	31.5	8303852	2.75	0.050	8303852
Dissolved Potassium (K)	mg/L	1.08	8303852	5.18	8303852	1.84	0.050	8303852
Dissolved Sodium (Na)	mg/L	1.04	8303852	8.53	8303852	0.663	0.050	8303852
Dissolved Sulphur (S)	mg/L	14.3	8303852	6.2	8303852	11.9	3.0	8303852
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OW2138		
Sampling Date		2016/06/16 12:20		
COC Number		495921-01-01		
	UNITS	SEEP 5	RDL	QC Batch
Misc. Inorganics				
Dissolved Hardness (CaCO3)	mg/L	255	0.50	8303851
Elements				
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000020	8307542
Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	mg/L	0.00102	0.00050	8307256
Dissolved Antimony (Sb)	mg/L	0.000022	0.000020	8307256
Dissolved Arsenic (As)	mg/L	0.000277	0.000020	8307256
Dissolved Barium (Ba)	mg/L	0.158	0.000020	8307256
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000010	8307256
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8307256
Dissolved Boron (B)	mg/L	<0.010	0.010	8307256
Dissolved Cadmium (Cd)	mg/L	0.0000380	0.0000050	8307256
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00010	8307256
Dissolved Cobalt (Co)	mg/L	0.0000190	0.0000050	8307256
Dissolved Copper (Cu)	mg/L	0.000432	0.000050	8307256
Dissolved Iron (Fe)	mg/L	0.0373	0.0010	8307256
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000050	8307256
Dissolved Lithium (Li)	mg/L	0.0169	0.00050	8307256
Dissolved Manganese (Mn)	mg/L	0.103	0.000050	8307256
Dissolved Molybdenum (Mo)	mg/L	0.000078	0.000050	8307256
Dissolved Nickel (Ni)	mg/L	0.00119	0.000020	8307256
Dissolved Phosphorus (P)	mg/L	0.0166	0.0020	8307256
Dissolved Selenium (Se)	mg/L	0.000099	0.000040	8307256
Dissolved Silicon (Si)	mg/L	6.32	0.050	8307256
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	8307256
Dissolved Strontium (Sr)	mg/L	0.330	0.000050	8307256
Dissolved Thallium (Tl)	mg/L	0.0000050	0.0000020	8307256
Dissolved Tin (Sn)	mg/L	<0.00020	0.00020	8307256
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00050	8307256
Dissolved Uranium (U)	mg/L	0.000287	0.0000020	8307256
Dissolved Vanadium (V)	mg/L	<0.00020	0.00020	8307256
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		OW2138		
Sampling Date		2016/06/16 12:20		
COC Number		495921-01-01		
	UNITS	**SEEP 5**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	0.0105	0.00010	8307256
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00010	8307256
Dissolved Calcium (Ca)	mg/L	85.2	0.050	8303852
Dissolved Magnesium (Mg)	mg/L	10.3	0.050	8303852
Dissolved Potassium (K)	mg/L	2.06	0.050	8303852
Dissolved Sodium (Na)	mg/L	9.52	0.050	8303852
Dissolved Sulphur (S)	mg/L	3.5	3.0	8303852
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OW2137		
Sampling Date		2016/06/16 14:20		
COC Number		495921-01-01		
	UNITS	SEEP 4	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	166	0.50	8308597
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8307502
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.00510	0.00050	8310129
Total Antimony (Sb)	mg/L	<0.000020	0.000020	8310129
Total Arsenic (As)	mg/L	0.000066	0.000020	8310129
Total Barium (Ba)	mg/L	0.120	0.000020	8310129
Total Beryllium (Be)	mg/L	<0.000010	0.000010	8310129
Total Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8310129
Total Boron (B)	mg/L	<0.010	0.010	8310129
Total Cadmium (Cd)	mg/L	0.0000120	0.0000050	8310129
Total Chromium (Cr)	mg/L	<0.00010	0.00010	8310129
Total Cobalt (Co)	mg/L	0.0000060	0.0000050	8310129
Total Copper (Cu)	mg/L	0.000268	0.000050	8310129
Total Iron (Fe)	mg/L	0.0048	0.0010	8310129
Total Lead (Pb)	mg/L	0.0000080	0.0000050	8310129
Total Lithium (Li)	mg/L	0.00061	0.00050	8310129
Total Manganese (Mn)	mg/L	0.000150	0.000050	8310129
Total Molybdenum (Mo)	mg/L	0.000569	0.000050	8306148
Total Nickel (Ni)	mg/L	0.000161	0.000020	8310129
Total Phosphorus (P)	mg/L	0.0039	0.0020	8310129
Total Selenium (Se)	mg/L	0.000920	0.000040	8310129
Total Silicon (Si)	mg/L	2.84	0.050	8310129
Total Silver (Ag)	mg/L	<0.0000050	0.0000050	8310129
Total Strontium (Sr)	mg/L	0.229	0.000050	8310129
Total Thallium (Tl)	mg/L	<0.0000020	0.0000020	8310129
Total Tin (Sn)	mg/L	<0.00020	0.00020	8310129
Total Titanium (Ti)	mg/L	<0.00050	0.00050	8310129
Total Uranium (U)	mg/L	0.00144	0.0000020	8310129
Total Vanadium (V)	mg/L	<0.00020	0.00020	8310129
Total Zinc (Zn)	mg/L	0.00055	0.00010	8310129
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		OW2137		
Sampling Date		2016/06/16 14:20		
COC Number		495921-01-01		
	UNITS	SEEP 4	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8310129
Total Calcium (Ca)	mg/L	61.7	0.050	8308937
Total Magnesium (Mg)	mg/L	2.86	0.050	8308937
Total Potassium (K)	mg/L	1.89	0.050	8308937
Total Sodium (Na)	mg/L	0.676	0.050	8308937
Total Sulphur (S)	mg/L	13.1	3.0	8308937
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OW2120		OW2136	OW2138		
Sampling Date		2016/06/14 09:52		2016/06/16 11:30	2016/06/16 12:20		
COC Number		495921-01-01		495921-01-01	495921-01-01		
	UNITS	KZ-9 WEST SEEP	QC Batch	KZ-9 EAST SEEP	SEEP 5	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	242	8303881	848	262	0.50	8303881
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	8307502	<0.0000020	<0.0000020	0.0000020	8307502
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0203	8306504	0.180	0.0202	0.0030	8307302
Total Antimony (Sb)	mg/L	<0.000050	8306504	<0.000050	0.000064	0.000050	8307302
Total Arsenic (As)	mg/L	0.000171	8306504	0.0143	0.000690	0.000020	8307302
Total Barium (Ba)	mg/L	0.169	8306504	0.174	0.163	0.00010	8307302
Total Beryllium (Be)	mg/L	<0.000010	8306504	0.000357	0.000017	0.000010	8307302
Total Bismuth (Bi)	mg/L	<0.000020	8306504	<0.000020	<0.000020	0.000020	8307302
Total Boron (B)	mg/L	<0.050	8306504	<0.050	<0.050	0.050	8307302
Total Cadmium (Cd)	mg/L	0.0000650	8306504	0.0000570	0.0000920	0.0000050	8307302
Total Chromium (Cr)	mg/L	<0.00050	8306504	<0.00050	<0.00050	0.00050	8307302
Total Cobalt (Co)	mg/L	0.000025	8306504	0.00206	0.000466	0.000010	8307302
Total Copper (Cu)	mg/L	0.00038	8306504	0.00021	0.00171	0.00020	8307302
Total Iron (Fe)	mg/L	0.0447	8306504	13.0	3.92	0.0050	8307302
Total Lead (Pb)	mg/L	0.000063	8306504	0.000075	0.000391	0.000050	8307302
Total Lithium (Li)	mg/L	0.00190	8306504	0.0827	0.0177	0.00050	8307302
Total Manganese (Mn)	mg/L	0.00747	8306504	1.80	0.444	0.00010	8307302
Total Molybdenum (Mo)	mg/L	0.00156	8306504	0.000466	0.000106	0.000050	8307302
Total Nickel (Ni)	mg/L	0.00021	8306504	0.00652	0.00171	0.00010	8307302
Total Phosphorus (P)	mg/L	<0.010	8306504	0.023	0.103	0.010	8307302
Total Selenium (Se)	mg/L	0.00233	8306504	<0.000040	0.000108	0.000040	8307302
Total Silicon (Si)	mg/L	3.35	8306504	18.1	7.05	0.10	8307302
Total Silver (Ag)	mg/L	0.000038	8306504	0.000052	0.000014	0.000010	8307302
Total Strontium (Sr)	mg/L	0.281	8306504	1.23	0.404	0.000050	8307302
Total Thallium (Tl)	mg/L	<0.0000020	8306504	0.0000040	0.0000020	0.0000020	8307302
Total Tin (Sn)	mg/L	<0.00020	8306504	<0.00020	<0.00020	0.00020	8307302
Total Titanium (Ti)	mg/L	<0.0050	8306504	<0.0050	<0.0050	0.0050	8307302
Total Uranium (U)	mg/L	0.00287	8306504	0.00174	0.000295	0.0000050	8307302
Total Vanadium (V)	mg/L	<0.00050	8306504	<0.00050	<0.00050	0.00050	8307302
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		OW2120		OW2136	OW2138		
Sampling Date		2016/06/14 09:52		2016/06/16 11:30	2016/06/16 12:20		
COC Number		495921-01-01		495921-01-01	495921-01-01		
	UNITS	KZ-9 WEST SEEP	QC Batch	KZ-9 EAST SEEP	SEEP 5	RDL	QC Batch
Total Zinc (Zn)	mg/L	<0.0010	8306504	0.0235	0.0231	0.0010	8307302
Total Zirconium (Zr)	mg/L	0.00011	8306504	0.00059	0.00020	0.00010	8307302
Total Calcium (Ca)	mg/L	81.4	8304042	288	84.2	0.25	8304042
Total Magnesium (Mg)	mg/L	9.45	8304042	31.5	12.6	0.25	8304042
Total Potassium (K)	mg/L	1.09	8304042	4.94	2.71	0.25	8304042
Total Sodium (Na)	mg/L	1.06	8304042	8.51	11.8	0.25	8304042
Total Sulphur (S)	mg/L	16	8304042	<15	<15	15	8304042
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW2120
Sample ID: KZ-9 WEST SEEP
Matrix: Water

Collected: 2016/06/14
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8305190	N/A	2016/06/20	Name Redacted
Alkalinity - Water	AT/ALK	8305343	2016/06/20	2016/06/20	
Chloride by Automated Colourimetry	KONE/COL	8305558	N/A	2016/06/20	
Cyanide SAD (strong acid dissociable)	TECH/COL	8307163	N/A	2016/06/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8307200	N/A	2016/06/22	
COD by Colorimeter	M/COL	8306226	2016/06/21	2016/06/22	
Colour (True) by Kone Lab	KONE	8305542	N/A	2016/06/20	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8306429	N/A	2016/06/20	
Conductance - water	AT/ALK	8305346	N/A	2016/06/20	
Fluoride	ISE/ISE	8306756	N/A	2016/06/21	
Hardness Total (calculated as CaCO3)	CALC	8303881	N/A	2016/06/22	
Hardness (calculated as CaCO3)	CALC	8303851	N/A	2016/06/22	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8307542	N/A	2016/06/22	
Mercury (Total-LowLevel) by CVAF	CV/AF	8307502	2016/06/22	2016/06/22	
Bromide as Bromine (Br) by ICPMS	ICP/CRCM	8305166	N/A	2016/06/20	
Ion Balance	CALC	8304168	N/A	2016/06/22	
Sum of cations, anions	CALC	8304169	N/A	2016/06/22	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8303852	N/A	2016/06/22	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8307256	N/A	2016/06/22	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8306504	2016/06/21	2016/06/22	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8304042	N/A	2016/06/22	
Nitrogen (Total)	TRAA/COL	8306042	2016/06/21	2016/06/21	
Ammonia-N (Preserved)	KONE/COL	8305698	N/A	2016/06/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8306263	N/A	2016/06/19	
Nitrite (N) (low level)	TRAA/COL	8306266	N/A	2016/06/19	
Nitrogen - Nitrate (as N)	CALC	8304029	N/A	2016/06/21	
Filter and HNO3 Preserve for Metals	ICP	8304808	N/A	2016/06/20	
pH Water	AT/ALK	8305345	N/A	2016/06/20	
Orthophosphate by Konelab (low level)	KONE/COL	8305544	N/A	2016/06/20	
Sulphate by Automated Colourimetry	KONE/COL	8305561	N/A	2016/06/20	
Total Dissolved Solids - Low Level	BAL/BAL	8306095	N/A	2016/06/22	
TKN (Calc. TN, N/N) total	CALC	8304130	N/A	2016/06/22	
Carbon (Total Organic)	TRAA/COL	8306431	N/A	2016/06/20	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306812	2016/06/21	2016/06/21	
Total Phosphorus - unpreserved	KONE/COL	8306889	N/A	2016/06/21	
Turbidity	TURB	8303918	N/A	2016/06/18	

Maxxam ID: OW2136
Sample ID: KZ-9 EAST SEEP
Matrix: Water

Collected: 2016/06/16
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8305190	N/A	2016/06/20	Name Redacted
Alkalinity - Water	AT/ALK	8305343	2016/06/20	2016/06/20	
Chloride by Automated Colourimetry	KONE/COL	8305558	N/A	2016/06/20	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW2136
Sample ID: KZ-9 EAST SEEP
Matrix: Water

Collected: 2016/06/16
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8307163	N/A	2016/06/22	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8307200	N/A	2016/06/22	
COD by Colorimeter	M/COL	8306226	2016/06/21	2016/06/22	
Colour (True) by Kone Lab	KONE	8305542	N/A	2016/06/20	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8306429	N/A	2016/06/20	
Conductance - water	AT/ALK	8305346	N/A	2016/06/20	
Fluoride	ISE/ISE	8306756	N/A	2016/06/21	
Hardness Total (calculated as CaCO3)	CALC	8303881	N/A	2016/06/22	
Hardness (calculated as CaCO3)	CALC	8303851	N/A	2016/06/22	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8307542	N/A	2016/06/22	
Mercury (Total-LowLevel) by CVAF	CV/AF	8307502	2016/06/22	2016/06/22	
Bromide as Bromine (Br) by ICPMS	ICP/CRCM	8305166	N/A	2016/06/20	
Ion Balance	CALC	8304168	N/A	2016/06/22	
Sum of cations, anions	CALC	8304169	N/A	2016/06/22	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8303852	N/A	2016/06/22	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8307256	N/A	2016/06/22	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8307302	2016/06/22	2016/06/22	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8304042	N/A	2016/06/22	
Nitrogen (Total)	TRAA/COL	8306042	2016/06/21	2016/06/21	
Ammonia-N (Preserved)	KONE/COL	8305698	N/A	2016/06/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8306263	N/A	2016/06/19	
Nitrite (N) (low level)	TRAA/COL	8306266	N/A	2016/06/19	
Nitrogen - Nitrate (as N)	CALC	8304029	N/A	2016/06/21	
Filter and HNO3 Preserve for Metals	ICP	8304808	N/A	2016/06/20	
pH Water	AT/ALK	8305345	N/A	2016/06/20	
Orthophosphate by Konelab (low level)	KONE/COL	8305544	N/A	2016/06/20	
Sulphate by Automated Colourimetry	KONE/COL	8305561	N/A	2016/06/20	
Total Dissolved Solids - Low Level	BAL/BAL	8306095	N/A	2016/06/22	
TKN (Calc. TN, N/N) total	CALC	8304130	N/A	2016/06/22	
Carbon (Total Organic)	TRAA/COL	8306431	N/A	2016/06/20	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306812	2016/06/21	2016/06/21	
Total Phosphorus - unpreserved	KONE/COL	8306889	N/A	2016/06/21	
Total Suspended Solids-Low Level	BAL/BAL	8305103	2016/06/20	2016/06/21	
Turbidity	TURB	8303918	N/A	2016/06/18	

Maxxam ID: OW2136 Dup
Sample ID: KZ-9 EAST SEEP
Matrix: Water

Collected: 2016/06/16
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8305558	N/A	2016/06/20	Name Redacted
Sulphate by Automated Colourimetry	KONE/COL	8305561	N/A	2016/06/20	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW2137
Sample ID: SEEP 4
Matrix: Water

Collected: 2016/06/16
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8305190	N/A	2016/06/20	Name Redacted
Alkalinity - Water	AT/ALK	8305343	2016/06/20	2016/06/20	
Chloride by Automated Colourimetry	KONE/COL	8305558	N/A	2016/06/20	
Cyanide SAD (strong acid dissociable)	TECH/COL	8307163	N/A	2016/06/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8307200	N/A	2016/06/22	
COD by Colorimeter	M/COL	8306226	2016/06/21	2016/06/22	
Colour (True) by Kone Lab	KONE	8305542	N/A	2016/06/20	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8306429	N/A	2016/06/20	
Conductance - water	AT/ALK	8305346	N/A	2016/06/20	
Fluoride	ISE/ISE	8306756	N/A	2016/06/21	
Hardness Total (calculated as CaCO3)	CALC	8308597	N/A	2016/06/24	
Hardness (calculated as CaCO3)	CALC	8303851	N/A	2016/06/22	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8307542	N/A	2016/06/22	
Mercury (Total-LowLevel) by CVAF	CV/AF	8307502	2016/06/22	2016/06/22	
Bromide as Bromine (Br) by ICPMS	ICP/CRCM	8305166	N/A	2016/06/20	
Ion Balance	CALC	8304168	N/A	2016/06/22	
Sum of cations, anions	CALC	8304169	N/A	2016/06/22	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8303852	N/A	2016/06/22	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8307256	N/A	2016/06/22	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8308937	N/A	2016/06/24	
Elements by ICPMS Low Level (total)	ICP/CRCM	8310129	N/A	2016/06/24	
Nitrogen (Total)	TRAA/COL	8306042	2016/06/21	2016/06/21	
Ammonia-N (Preserved)	KONE/COL	8305698	N/A	2016/06/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8306263	N/A	2016/06/19	
Nitrite (N) (low level)	TRAA/COL	8306266	N/A	2016/06/19	
Nitrogen - Nitrate (as N)	CALC	8304029	N/A	2016/06/21	
Filter and HNO3 Preserve for Metals	ICP	8304808	N/A	2016/06/20	
pH Water	AT/ALK	8305345	N/A	2016/06/20	
Orthophosphate by Konelab (low level)	KONE/COL	8305544	N/A	2016/06/20	
Sulphate by Automated Colourimetry	KONE/COL	8305561	N/A	2016/06/20	
Total Dissolved Solids - Low Level	BAL/BAL	8306095	N/A	2016/06/22	
TKN (Calc. TN, N/N) total	CALC	8304130	N/A	2016/06/22	
Carbon (Total Organic)	TRAA/COL	8306431	N/A	2016/06/20	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306812	2016/06/21	2016/06/21	
Total Phosphorus - unpreserved	KONE/COL	8306889	N/A	2016/06/21	
Total Suspended Solids-Low Level	BAL/BAL	8305103	2016/06/20	2016/06/21	
Turbidity	TURB	8303918	N/A	2016/06/18	

Maxxam ID: OW2137 Dup
Sample ID: SEEP 4
Matrix: Water

Collected: 2016/06/16
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8306429	N/A	2016/06/20	Name Redacted
Bromide as Bromine (Br) by ICPMS	ICP/CRCM	8305166	N/A	2016/06/20	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW2137 Dup
Sample ID: SEEP 4
Matrix: Water

Collected: 2016/06/16
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Dissolved Solids - Low Level	BAL/BAL	8306095	N/A	2016/06/22	Name Redacted
Carbon (Total Organic)	TRAA/COL	8306431	N/A	2016/06/20	

Maxxam ID: OW2138
Sample ID: SEEP 5
Matrix: Water

Collected: 2016/06/16
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8305190	N/A	2016/06/20	Name Redacted
Alkalinity - Water	AT/ALK	8305343	2016/06/20	2016/06/20	
Chloride by Automated Colourimetry	KONE/COL	8305558	N/A	2016/06/20	
Cyanide SAD (strong acid dissociable)	TECH/COL	8307163	N/A	2016/06/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8307200	N/A	2016/06/22	
COD by Colorimeter	M/COL	8306226	2016/06/21	2016/06/22	
Colour (True) by Kone Lab	KONE	8305542	N/A	2016/06/20	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8306429	N/A	2016/06/20	
Conductance - water	AT/ALK	8305346	N/A	2016/06/20	
Fluoride	ISE/ISE	8306756	N/A	2016/06/21	
Hardness Total (calculated as CaCO3)	CALC	8303881	N/A	2016/06/22	
Hardness (calculated as CaCO3)	CALC	8303851	N/A	2016/06/22	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8307542	N/A	2016/06/22	
Mercury (Total-LowLevel) by CVAF	CV/AF	8307502	2016/06/22	2016/06/22	
Bromide as Bromine (Br) by ICPMS	ICP/CRCM	8305166	N/A	2016/06/20	
Ion Balance	CALC	8304168	N/A	2016/06/22	
Sum of cations, anions	CALC	8304169	N/A	2016/06/22	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8303852	N/A	2016/06/22	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8307256	N/A	2016/06/22	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8307302	2016/06/22	2016/06/22	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8304042	N/A	2016/06/22	
Nitrogen (Total)	TRAA/COL	8306042	2016/06/21	2016/06/21	
Ammonia-N (Preserved)	KONE/COL	8305698	N/A	2016/06/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8306263	N/A	2016/06/19	
Nitrite (N) (low level)	TRAA/COL	8306266	N/A	2016/06/19	
Nitrogen - Nitrate (as N)	CALC	8304029	N/A	2016/06/21	
Filter and HNO3 Preserve for Metals	ICP	8304808	N/A	2016/06/20	
pH Water	AT/ALK	8305345	N/A	2016/06/20	
Orthophosphate by Konelab (low level)	KONE/COL	8305544	N/A	2016/06/20	
Sulphate by Automated Colourimetry	KONE/COL	8305561	N/A	2016/06/20	
Total Dissolved Solids - Low Level	BAL/BAL	8306095	N/A	2016/06/22	
TKN (Calc. TN, N/N) total	CALC	8304130	N/A	2016/06/22	
Carbon (Total Organic)	TRAA/COL	8306431	N/A	2016/06/20	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8306812	2016/06/21	2016/06/21	
Total Phosphorus - unpreserved	KONE/COL	8306889	N/A	2016/06/21	
Total Suspended Solids-Low Level	BAL/BAL	8305103	2016/06/20	2016/06/21	
Turbidity	TURB	8303918	N/A	2016/06/18	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: OW2138 Dup
Sample ID: SEEP 5
Matrix: Water

Collected: 2016/06/16
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8307502	2016/06/22	2016/06/22	Name Redacted

Maxxam ID: OY8575
Sample ID: KZ-9 WEST SEEP
Matrix: Water

Collected: 2016/06/16
Shipped:
Received: 2016/06/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Suspended Solids-Low Level	BAL/BAL	8305103	2016/06/20	2016/06/21	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	11.0°C

Revised Report V2 (M_S, 2016/07/05): Sample KZ-9 West Seep sampling date and time amended, TSS reported as a separate sample due to different sampling date.

Sample OW2120-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OW2136-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OW2138-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample OW2136, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample OW2137, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample OW2137, Elements by ICPMS Low Level (total): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8303918	Turbidity	2016/06/18			101	80 - 120	<0.10	NTU	0.45	20
8305103	Total Suspended Solids	2016/06/21			92	80 - 120	<1.0	mg/L		
8305166	Bromide (Br)	2016/06/20	100	78 - 120	96	80 - 120	<0.010	mg/L	NC	20
8305190	Acidity (pH 4.5)	2016/06/20					<0.50	mg/L	NC	20
8305190	Acidity (pH 8.3)	2016/06/20			100	80 - 120	<0.50	mg/L	13	20
8305343	Alkalinity (PP as CaCO3)	2016/06/20					<0.50	mg/L	NC	20
8305343	Alkalinity (Total as CaCO3)	2016/06/20	NC	80 - 120	98	80 - 120	0.61, RDL=0.50	mg/L	0.30	20
8305343	Bicarbonate (HCO3)	2016/06/20					0.74, RDL=0.50	mg/L	0.30	20
8305343	Carbonate (CO3)	2016/06/20					<0.50	mg/L	NC	20
8305343	Hydroxide (OH)	2016/06/20					<0.50	mg/L	NC	20
8305345	pH	2016/06/20			101	97 - 103			0.36	N/A
8305346	Conductivity	2016/06/20			100	80 - 120	<1.0	uS/cm	1.4	20
8305542	True Colour	2016/06/20			100	80 - 120	<5.0	Col. Unit	NC	20
8305544	Orthophosphate (P)	2016/06/20	97	80 - 120	90	80 - 120	<0.0010	mg/L	1.3	20
8305558	Dissolved Chloride (Cl)	2016/06/20	95	80 - 120	100	80 - 120	<0.50	mg/L	NC	20
8305561	Dissolved Sulphate (SO4)	2016/06/20	NC	80 - 120	98	80 - 120	<0.50	mg/L	1.9	20
8305698	Total Ammonia (N)	2016/06/21	105	80 - 120	101	80 - 120	<0.0050	mg/L	NC	20
8306042	Total Nitrogen (N)	2016/06/21	NC	80 - 120	97	80 - 120	<0.020	mg/L	0.73	20
8306095	Total Dissolved Solids	2016/06/22	102	80 - 120	112	80 - 120	<1.0	mg/L	2.0	20
8306148	Total Molybdenum (Mo)	2016/06/21	92	80 - 120	95	80 - 120	<0.000050	mg/L		
8306226	Chemical Oxygen Demand	2016/06/22	103	80 - 120	108	80 - 120	<10	mg/L	NC	20
8306263	Nitrate plus Nitrite (N)	2016/06/19	100	80 - 120	95	80 - 120	<0.0020	mg/L	NC	25
8306266	Nitrite (N)	2016/06/19	97	80 - 120	98	80 - 120	<0.0020	mg/L	NC	25
8306429	Dissolved Organic Carbon (C)	2016/06/20	102	80 - 120	106	80 - 120	<0.50	mg/L	NC	20
8306431	Total Organic Carbon (C)	2016/06/20	93	80 - 120	101	80 - 120	<0.50	mg/L	NC	20
8306504	Total Aluminum (Al)	2016/06/22	NC	80 - 120	114	80 - 120	<0.0030	mg/L	3.2	20
8306504	Total Antimony (Sb)	2016/06/22	98	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8306504	Total Arsenic (As)	2016/06/22	96	80 - 120	104	80 - 120	<0.000020	mg/L	1.2	20
8306504	Total Barium (Ba)	2016/06/22	NC	80 - 120	102	80 - 120	<0.00010	mg/L	0.50	20
8306504	Total Beryllium (Be)	2016/06/22	96	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8306504	Total Bismuth (Bi)	2016/06/22	98	80 - 120	96	80 - 120	<0.000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8306504	Total Boron (B)	2016/06/22	99	80 - 120	101	80 - 120	<0.050	mg/L	NC	20
8306504	Total Cadmium (Cd)	2016/06/22	92	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8306504	Total Chromium (Cr)	2016/06/22	94	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8306504	Total Cobalt (Co)	2016/06/22	90	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8306504	Total Copper (Cu)	2016/06/22	85	80 - 120	100	80 - 120	<0.00020	mg/L	2.2	20
8306504	Total Iron (Fe)	2016/06/22	NC	80 - 120	103	80 - 120	<0.0050	mg/L	3.5	20
8306504	Total Lead (Pb)	2016/06/22	101	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8306504	Total Lithium (Li)	2016/06/22	96	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8306504	Total Manganese (Mn)	2016/06/22	NC	80 - 120	100	80 - 120	<0.00010	mg/L	1.8	20
8306504	Total Molybdenum (Mo)	2016/06/22	NC	80 - 120	99	80 - 120	<0.000050	mg/L	0.63	20
8306504	Total Nickel (Ni)	2016/06/22	89	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
8306504	Total Phosphorus (P)	2016/06/22					<0.010	mg/L	NC	20
8306504	Total Selenium (Se)	2016/06/22	NC	80 - 120	95	80 - 120	<0.000040	mg/L	0.46	20
8306504	Total Silicon (Si)	2016/06/22					<0.10	mg/L	0.38	20
8306504	Total Silver (Ag)	2016/06/22	116	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8306504	Total Strontium (Sr)	2016/06/22	NC	80 - 120	104	80 - 120	<0.000050	mg/L	3.6	20
8306504	Total Thallium (Tl)	2016/06/22	108	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8306504	Total Tin (Sn)	2016/06/22	104	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8306504	Total Titanium (Ti)	2016/06/22	101	80 - 120	100	80 - 120	<0.0050	mg/L	NC	20
8306504	Total Uranium (U)	2016/06/22	103	80 - 120	96	80 - 120	<0.0000050	mg/L	0.43	20
8306504	Total Vanadium (V)	2016/06/22	97	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8306504	Total Zinc (Zn)	2016/06/22	90	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
8306504	Total Zirconium (Zr)	2016/06/22					<0.00010	mg/L	NC	20
8306756	Fluoride (F)	2016/06/21	96	80 - 120	92	80 - 120	<0.010	mg/L	4.7	20
8306812	Dissolved Phosphorus (P)	2016/06/21	100	80 - 120	108	80 - 120	<0.0020	mg/L	NC	20
8306889	Total Phosphorus (P)	2016/06/21	99	80 - 120	105	80 - 120	<0.0020	mg/L	NC	20
8307163	Strong Acid Dissoc. Cyanide (CN)	2016/06/22	NC	80 - 120	103	80 - 120	0.00076, RDL=0.00050	mg/L	0.46	20
8307200	Weak Acid Dissoc. Cyanide (CN)	2016/06/22	49 (1)	80 - 120	98	80 - 120	0.00074, RDL=0.00050	mg/L	NC	20
8307256	Dissolved Aluminum (Al)	2016/06/22	113	80 - 120	109	80 - 120	<0.00050	mg/L		
8307256	Dissolved Antimony (Sb)	2016/06/22	100	80 - 120	97	80 - 120	<0.000020	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8307256	Dissolved Arsenic (As)	2016/06/22	103	80 - 120	102	80 - 120	<0.000020	mg/L		
8307256	Dissolved Barium (Ba)	2016/06/22	105	80 - 120	99	80 - 120	<0.000020	mg/L		
8307256	Dissolved Beryllium (Be)	2016/06/22	101	80 - 120	97	80 - 120	<0.000010	mg/L		
8307256	Dissolved Bismuth (Bi)	2016/06/22	105	80 - 120	105	80 - 120	<0.0000050	mg/L		
8307256	Dissolved Boron (B)	2016/06/22	104	80 - 120	98	80 - 120	<0.010	mg/L		
8307256	Dissolved Cadmium (Cd)	2016/06/22	100	80 - 120	96	80 - 120	<0.0000050	mg/L		
8307256	Dissolved Chromium (Cr)	2016/06/22	101	80 - 120	97	80 - 120	<0.00010	mg/L		
8307256	Dissolved Cobalt (Co)	2016/06/22	100	80 - 120	98	80 - 120	<0.0000050	mg/L		
8307256	Dissolved Copper (Cu)	2016/06/22	101	80 - 120	98	80 - 120	<0.000050	mg/L		
8307256	Dissolved Iron (Fe)	2016/06/22	101	80 - 120	103	80 - 120	<0.0010	mg/L		
8307256	Dissolved Lead (Pb)	2016/06/22	104	80 - 120	105	80 - 120	<0.0000050	mg/L		
8307256	Dissolved Lithium (Li)	2016/06/22	99	80 - 120	97	80 - 120	<0.00050	mg/L		
8307256	Dissolved Manganese (Mn)	2016/06/22	102	80 - 120	99	80 - 120	<0.000050	mg/L		
8307256	Dissolved Molybdenum (Mo)	2016/06/22	99	80 - 120	97	80 - 120	<0.000050	mg/L		
8307256	Dissolved Nickel (Ni)	2016/06/22	100	80 - 120	96	80 - 120	<0.000020	mg/L		
8307256	Dissolved Phosphorus (P)	2016/06/22					<0.0020	mg/L		
8307256	Dissolved Selenium (Se)	2016/06/22	99	80 - 120	97	80 - 120	<0.000040	mg/L		
8307256	Dissolved Silicon (Si)	2016/06/22					<0.050	mg/L		
8307256	Dissolved Silver (Ag)	2016/06/22	101	80 - 120	99	80 - 120	<0.0000050	mg/L		
8307256	Dissolved Strontium (Sr)	2016/06/22	97	80 - 120	99	80 - 120	<0.000050	mg/L		
8307256	Dissolved Thallium (Tl)	2016/06/22	111	80 - 120	112	80 - 120	<0.0000020	mg/L		
8307256	Dissolved Tin (Sn)	2016/06/22	105	80 - 120	100	80 - 120	<0.00020	mg/L		
8307256	Dissolved Titanium (Ti)	2016/06/22	101	80 - 120	107	80 - 120	<0.00050	mg/L		
8307256	Dissolved Uranium (U)	2016/06/22	103	80 - 120	103	80 - 120	<0.0000020	mg/L		
8307256	Dissolved Vanadium (V)	2016/06/22	101	80 - 120	100	80 - 120	<0.00020	mg/L		
8307256	Dissolved Zinc (Zn)	2016/06/22	106	80 - 120	118	80 - 120	<0.00010	mg/L		
8307256	Dissolved Zirconium (Zr)	2016/06/22					<0.00010	mg/L		
8307302	Total Aluminum (Al)	2016/06/22	NC	80 - 120	116	80 - 120	<0.0030	mg/L	2.5	20
8307302	Total Antimony (Sb)	2016/06/22	NC	80 - 120	103	80 - 120	<0.000050	mg/L	2.0	20
8307302	Total Arsenic (As)	2016/06/22	NC	80 - 120	108	80 - 120	<0.000020	mg/L	13	20
8307302	Total Barium (Ba)	2016/06/22	NC	80 - 120	105	80 - 120	<0.00010	mg/L	0.62	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8307302	Total Beryllium (Be)	2016/06/22	100	80 - 120	100	80 - 120	0.000013, RDL=0.000010	mg/L	NC	20
8307302	Total Bismuth (Bi)	2016/06/22	102	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
8307302	Total Boron (B)	2016/06/22	104	80 - 120	99	80 - 120	<0.050	mg/L	NC	20
8307302	Total Cadmium (Cd)	2016/06/22	95	80 - 120	102	80 - 120	<0.0000050	mg/L	3.2	20
8307302	Total Chromium (Cr)	2016/06/22	100	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8307302	Total Cobalt (Co)	2016/06/22	95	80 - 120	99	80 - 120	<0.000010	mg/L	10	20
8307302	Total Copper (Cu)	2016/06/22	104	80 - 120	102	80 - 120	0.00025, RDL=0.00020	mg/L	11	20
8307302	Total Iron (Fe)	2016/06/22	NC	80 - 120	99	80 - 120	<0.0050	mg/L	2.4	20
8307302	Total Lead (Pb)	2016/06/22	NC	80 - 120	108	80 - 120	<0.000050	mg/L	2.6	20
8307302	Total Lithium (Li)	2016/06/22	NC	80 - 120	100	80 - 120	<0.00050	mg/L	0.76	20
8307302	Total Manganese (Mn)	2016/06/22	NC	80 - 120	102	80 - 120	<0.00010	mg/L	14	20
8307302	Total Molybdenum (Mo)	2016/06/22	111	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8307302	Total Nickel (Ni)	2016/06/22	91	80 - 120	99	80 - 120	<0.00010	mg/L	8.6	20
8307302	Total Phosphorus (P)	2016/06/22					<0.010	mg/L	12	20
8307302	Total Selenium (Se)	2016/06/22	96	80 - 120	102	80 - 120	<0.000040	mg/L	NC	20
8307302	Total Silicon (Si)	2016/06/22					<0.10	mg/L	0.38	20
8307302	Total Silver (Ag)	2016/06/22	125 (1)	80 - 120	104	80 - 120	<0.000010	mg/L	0.33	20
8307302	Total Strontium (Sr)	2016/06/22	NC	80 - 120	107	80 - 120	<0.000050	mg/L	19	20
8307302	Total Thallium (Tl)	2016/06/22	96	80 - 120	110	80 - 120	<0.0000020	mg/L	12	20
8307302	Total Tin (Sn)	2016/06/22	NC	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8307302	Total Titanium (Ti)	2016/06/22	NC	80 - 120	112	80 - 120	<0.0050	mg/L	NC	20
8307302	Total Uranium (U)	2016/06/22	NC	80 - 120	104	80 - 120	<0.0000050	mg/L	0.014	20
8307302	Total Vanadium (V)	2016/06/22	101	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8307302	Total Zinc (Zn)	2016/06/22	NC	80 - 120	104	80 - 120	<0.0010	mg/L	13	20
8307302	Total Zirconium (Zr)	2016/06/22					<0.00010	mg/L	14	20
8307502	Total Mercury (Hg)	2016/06/22	94	80 - 120	119	80 - 120	<0.0000020	mg/L	NC	20
8307542	Dissolved Mercury (Hg)	2016/06/22	101	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8308675	Dissolved Chromium (Cr)	2016/06/23			101	80 - 120	<0.00010	mg/L		
8308675	Dissolved Copper (Cu)	2016/06/23			102	80 - 120	<0.000050	mg/L		
8308675	Dissolved Iron (Fe)	2016/06/23			106	80 - 120	<0.0010	mg/L		

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8308675	Dissolved Molybdenum (Mo)	2016/06/23			93	80 - 120	<0.000050	mg/L		
8308675	Dissolved Nickel (Ni)	2016/06/23			100	80 - 120	<0.000020	mg/L		
8308675	Dissolved Thallium (Tl)	2016/06/23			104	80 - 120	<0.0000020	mg/L		
8310129	Total Aluminum (Al)	2016/06/24			108	80 - 120	<0.00050	mg/L		
8310129	Total Antimony (Sb)	2016/06/24			99	80 - 120	<0.000020	mg/L		
8310129	Total Arsenic (As)	2016/06/24			101	80 - 120	<0.000020	mg/L		
8310129	Total Barium (Ba)	2016/06/24			100	80 - 120	<0.000020	mg/L		
8310129	Total Beryllium (Be)	2016/06/24			97	80 - 120	<0.000010	mg/L		
8310129	Total Bismuth (Bi)	2016/06/24			100	80 - 120	<0.0000050	mg/L		
8310129	Total Boron (B)	2016/06/24			94	80 - 120	<0.010	mg/L		
8310129	Total Cadmium (Cd)	2016/06/24			97	80 - 120	<0.0000050	mg/L		
8310129	Total Chromium (Cr)	2016/06/24			100	80 - 120	<0.00010	mg/L		
8310129	Total Cobalt (Co)	2016/06/24			100	80 - 120	<0.0000050	mg/L		
8310129	Total Copper (Cu)	2016/06/24			100	80 - 120	<0.000050	mg/L		
8310129	Total Iron (Fe)	2016/06/24			99	80 - 120	<0.0010	mg/L		
8310129	Total Lead (Pb)	2016/06/24			100	80 - 120	<0.0000050	mg/L		
8310129	Total Lithium (Li)	2016/06/24			95	80 - 120	<0.00050	mg/L		
8310129	Total Manganese (Mn)	2016/06/24			99	80 - 120	<0.000050	mg/L		
8310129	Total Nickel (Ni)	2016/06/24			100	80 - 120	<0.000020	mg/L		
8310129	Total Phosphorus (P)	2016/06/24					<0.0020	mg/L		
8310129	Total Selenium (Se)	2016/06/24			92	80 - 120	<0.000040	mg/L		
8310129	Total Silicon (Si)	2016/06/24					<0.050	mg/L		
8310129	Total Silver (Ag)	2016/06/24			96	80 - 120	<0.0000050	mg/L		
8310129	Total Strontium (Sr)	2016/06/24			98	80 - 120	<0.000050	mg/L		
8310129	Total Thallium (Tl)	2016/06/24			109	80 - 120	<0.0000020	mg/L		
8310129	Total Tin (Sn)	2016/06/24			101	80 - 120	<0.00020	mg/L		
8310129	Total Titanium (Ti)	2016/06/24			108	80 - 120	<0.00050	mg/L		
8310129	Total Uranium (U)	2016/06/24			100	80 - 120	<0.0000020	mg/L		
8310129	Total Vanadium (V)	2016/06/24			100	80 - 120	<0.00020	mg/L		
8310129	Total Zinc (Zn)	2016/06/24			100	80 - 120	<0.00010	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8310129	Total Zirconium (Zr)	2016/06/24					<0.00010	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B649116
Report Date: 2016/07/05

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Signature Redacted

Rob Reinert, B.Sc., Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Analytics International Corporation o/a Maxxam Analytics
4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel:(604) 734 7276 Toll-Free:800-563-6266 Fax:(604) 731 2386 www.maxxam.ca

Chain Of Custody Record

Page 1 of 1

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#11954 BMC MINERAL (NO. 1) LTD.	Company Name	#31132 ALEXCO ENVIRONMENTAL GROUP INC.	Quotation #	B60751	Maxxam Job #	Bottle Order #:
Contact Name	ACCOUNTS PAYABLE	Contact Name	KAI WOLOSHYN	P.O. #		B649116	495921
Address	530-1130 West Pender Street, Vancouver BC V6E 4A4	Address	Unit 3 Calcite Business Centre 151 Industrial Road WHITEHORSE BC Y1A 2V3	Project #	BMC-16-01	Chain Of Custody Record	Project Manager
Phone	(778) 233-7058 x Fax:	Phone	(867) 668-6463 Fax:	Project Name		C#495921-01-01	Morgan Melnychuk
Email	accounts@bmcminerals.com	Email	kwoloshyn@alexcoresource.com	Site #			
				Sampled By			

Regulatory Criteria:
- [ ] CSR
- [ ] CCME
- [ ] BC Water Quality
- [ ] Other _____

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
1 DAY ☐ 2 Day ☐ 3 Day ☐ Date Required: _____
Rush Confirmation Number: _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Acidity, Alkalinity, Conductivity, pH, Color, Turbidity, TDS LL	Chloride, Fluoride, Sulphate, Nitrate, Nitrite, Orthophos, Bromide	Cyanide SAD & WAD	COD, TN, NH4, TOC, TKN	Carbon (DOC) - field filtered/preserved	Phosphorus (LL Total & Dissolved) - UF/UP	Total Suspended Solids-Low Level	Low Level Total & Dissolved Metals with CV Hg			# of Bottles	Comments
1		KZ-9 West Seep	14-June-16	9:53			X	X	X	X	X	X	X	X			13	TSS filled on 16-June-16
2		KZ-9 East Seep	16-June-16	11:30			X	X	X	X	X	X	X	X			13	
3		Seep 3	[illegible]	[illegible]			X	X	X	X	X	X	X	X			[illegible]	
4		Seep 4	16-June-16	11:20			X	X	X	X	X	X	X	X			13	
5		Seep					X	X	X	X	X	X	X	X			[illegible]	
6		Seep 5	16-June-16	12:20			X	X	X	X	X	X	X	X			13	
7																	[illegible]	
8																		
9																		
10																		

B649116_COC

RECEIVED IN WHITEHORSE
BY: Shauna @ 1530
2016-06-17

TEMP: 11 / 11 / 11 cooler 8

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Signature Redacted	16/06/17		Signature Redacted	~~12:30~~ KC 2016/06/18	12:30	NIA	☑	3, 4, 3	☐ Yes ☐ No

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

NIA

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08425770

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/08/04
Report #: R2229192
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B661912
Received: 2016/07/26, 16:00

Sample Matrix: Water
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	3	N/A	2016/07/28	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	2	2016/07/28	2016/07/28	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	1	2016/07/28	2016/07/29	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	3	N/A	2016/07/28	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	3	N/A	2016/07/29	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	3	N/A	2016/07/29	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	3	N/A	2016/07/28	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	2	N/A	2016/07/28	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	1	N/A	2016/07/29	BBY6SOP-00026	SM 22 2510 B m
Fluoride	3	N/A	2016/07/28	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	3	N/A	2016/08/03	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	3	N/A	2016/08/03	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	3	N/A	2016/07/29	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	3	2016/07/28	2016/07/28	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	3	N/A	2016/08/03	BBY WI-00033	SM 22 1030E
Sum of cations, anions	3	N/A	2016/08/03	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	3	N/A	2016/08/03	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	3	N/A	2016/08/03	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	3	2016/07/28	2016/08/02	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	3	N/A	2016/08/03	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	3	N/A	2016/07/28	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	3	N/A	2016/07/28	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	3	N/A	2016/07/28	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	3	N/A	2016/07/29	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	3	N/A	2016/07/28	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	2	N/A	2016/07/28	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (2)	1	N/A	2016/07/29	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	3	N/A	2016/07/28	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	3	2016/07/28	2016/07/28	BBY6SOP-00013	SM 22 4500-P E m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08425770

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/08/04
Report #: R2229192
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B661912
Received: 2016/07/26, 16:00

Sample Matrix: Water
Samples Received: 3

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Phosphorus - unpreserved	3	N/A	2016/07/28	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	3	2016/07/28	2016/07/29	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PC7450	PC7451		PC7452		
Sampling Date		2016/07/25 16:40	2016/07/25 15:30		2016/07/25 13:00		
COC Number		08425770	08425770		08425770		
	UNITS	KZ-21	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Calculated Parameters							
Anion Sum	meq/L	4.2	3.7	8342951	3.9	N/A	8342951
Cation Sum	meq/L	4.5	3.9	8342951	4.1	N/A	8342951
Filter and HNO3 Preservation	N/A	LAB	LAB	8343607	LAB	N/A	8343607
Ion Balance	N/A	1.1	1.1	8342811	1.0	0.010	8342811
Nitrate (N)	mg/L	0.0041	0.0074	8342621	0.0166	0.0020	8342621
Misc. Inorganics							
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00054	<0.00050	8345770	<0.00050	0.00050	8345770
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	8345773	0.00055	0.00050	8345773
Fluoride (F)	mg/L	0.160	0.120	8345456	0.110	0.010	8345926
Dissolved Organic Carbon (C)	mg/L	10.3	6.29	8343769	7.49	0.50	8343769
Acidity (pH 4.5)	mg/L	<0.50	<0.50	8343742	<0.50	0.50	8343742
Alkalinity (Total as CaCO3)	mg/L	168	148	8344200	157	0.50	8344217
Acidity (pH 8.3)	mg/L	<0.50	<0.50	8343742	<0.50	0.50	8343742
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	8344200	<0.50	0.50	8344217
Bicarbonate (HCO3)	mg/L	205	181	8344200	192	0.50	8344217
Carbonate (CO3)	mg/L	<0.50	<0.50	8344200	<0.50	0.50	8344217
Hydroxide (OH)	mg/L	<0.50	<0.50	8344200	<0.50	0.50	8344217
Anions							
Dissolved Sulphate (SO4)	mg/L	40.3	34.9	8345016	36.4	0.50	8345018
Dissolved Chloride (Cl)	mg/L	1.0	0.74	8345010	<0.50	0.50	8345017
Nutrients							
Dissolved Phosphorus (P)	mg/L	0.0297	0.0195	8343791	0.0366	0.0020	8343791
Total Ammonia (N)	mg/L	0.040	0.029	8343384	0.028	0.0050	8343384
Nitrate plus Nitrite (N)	mg/L	0.0072	0.0074	8344417	0.0166	0.0020	8344420
Nitrite (N)	mg/L	0.0031	<0.0020	8344419	<0.0020	0.0020	8344423
Total Phosphorus (P)	mg/L	0.0288	0.0185	8343799	0.0357	0.0020	8343799
Physical Properties							
Conductivity	uS/cm	375	335	8344201	344	1.0	8344218
pH	pH	8.19	8.25	8344205	8.27		8344221

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PC7450	PC7451		PC7452		
Sampling Date		2016/07/25 16:40	2016/07/25 15:30		2016/07/25 13:00		
COC Number		08425770	08425770		08425770		
	UNITS	KZ-21	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Physical Properties							
Total Suspended Solids	mg/L	7.1	3.8	8343061	24.2	1.0	8343061
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PC7450	PC7451	PC7452		
Sampling Date		2016/07/25 16:40	2016/07/25 15:30	2016/07/25 13:00		
COC Number		08425770	08425770	08425770		
	UNITS	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Misc. Inorganics						
Dissolved Hardness (CaCO3)	mg/L	223	192	201	0.50	8341845
Elements						
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8344654
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	0.00713	0.00410	0.00576	0.00050	8343783
Dissolved Antimony (Sb)	mg/L	0.000216	0.000116	0.000139	0.000020	8343783
Dissolved Arsenic (As)	mg/L	0.00192	0.00114	0.000931	0.000020	8343783
Dissolved Barium (Ba)	mg/L	0.0516	0.0570	0.0648	0.000020	8343783
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8343783
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8343783
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	8343783
Dissolved Cadmium (Cd)	mg/L	0.0000090	0.0000100	0.0000100	0.0000050	8343783
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8343783
Dissolved Cobalt (Co)	mg/L	0.0000630	0.0000430	0.0000450	0.0000050	8343783
Dissolved Copper (Cu)	mg/L	0.000898	0.000687	0.000977	0.000050	8343783
Dissolved Iron (Fe)	mg/L	0.185	0.0897	0.0509	0.0010	8343783
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000120	0.0000050	8343783
Dissolved Lithium (Li)	mg/L	0.00378	0.00334	0.00416	0.00050	8343783
Dissolved Manganese (Mn)	mg/L	0.0327	0.0210	0.00862	0.000050	8343783
Dissolved Molybdenum (Mo)	mg/L	0.00154	0.00111	0.00102	0.000050	8343783
Dissolved Nickel (Ni)	mg/L	0.00356	0.00179	0.00168	0.000020	8343783
Dissolved Phosphorus (P)	mg/L	0.0049	<0.0020	0.0026	0.0020	8343783
Dissolved Selenium (Se)	mg/L	0.000565	0.000470	0.000442	0.000040	8343783
Dissolved Silicon (Si)	mg/L	5.27	4.19	4.63	0.050	8343783
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8343783
Dissolved Strontium (Sr)	mg/L	0.159	0.149	0.161	0.000050	8343783
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8343783
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8343783
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8343783
Dissolved Uranium (U)	mg/L	0.00221	0.00183	0.00182	0.0000020	8343783
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8343783
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PC7450	PC7451	PC7452		
Sampling Date		2016/07/25 16:40	2016/07/25 15:30	2016/07/25 13:00		
COC Number		08425770	08425770	08425770		
	UNITS	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00145	0.00097	0.00053	0.00010	8343783
Dissolved Zirconium (Zr)	mg/L	0.00011	<0.00010	<0.00010	0.00010	8343783
Dissolved Calcium (Ca)	mg/L	54.9	52.1	53.7	0.050	8341847
Dissolved Magnesium (Mg)	mg/L	20.8	15.1	16.2	0.050	8341847
Dissolved Potassium (K)	mg/L	0.805	0.900	0.864	0.050	8341847
Dissolved Sodium (Na)	mg/L	1.34	1.18	1.32	0.050	8341847
Dissolved Sulphur (S)	mg/L	13.2	10.8	10.4	3.0	8341847
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PC7450		PC7451	PC7452		
Sampling Date		2016/07/25 16:40		2016/07/25 15:30	2016/07/25 13:00		
COC Number		08425770		08425770	08425770		
	UNITS	KZ-21	QC Batch	KZ-22	KZ-26	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	225	8341901	188	210	0.50	8341901
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	8343423	<0.0000020	<0.0000020	0.0000020	8343416
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0387	8343616	0.0195	0.0793	0.0030	8343616
Total Antimony (Sb)	mg/L	0.000222	8343616	0.000119	0.000159	0.000020	8343616
Total Arsenic (As)	mg/L	0.00430	8343616	0.00223	0.00139	0.000020	8343616
Total Barium (Ba)	mg/L	0.0575	8343616	0.0590	0.0691	0.000050	8343616
Total Beryllium (Be)	mg/L	<0.000010	8343616	<0.000010	<0.000010	0.000010	8343616
Total Bismuth (Bi)	mg/L	<0.000010	8343616	<0.000010	<0.000010	0.000010	8343616
Total Boron (B)	mg/L	0.017	8343616	0.013	0.012	0.010	8343616
Total Cadmium (Cd)	mg/L	0.0000280	8343616	0.0000230	0.0000250	0.0000050	8343616
Total Chromium (Cr)	mg/L	0.00018	8343616	0.00010	0.00022	0.00010	8343616
Total Cobalt (Co)	mg/L	0.000203	8343616	0.000101	0.000119	0.000010	8343616
Total Copper (Cu)	mg/L	0.00125	8343616	0.00096	0.00141	0.00020	8343616
Total Iron (Fe)	mg/L	0.955	8343616	0.472	0.309	0.0050	8343616
Total Lead (Pb)	mg/L	0.000051	8343616	0.000027	0.000153	0.000020	8343616
Total Lithium (Li)	mg/L	0.00386	8343616	0.00329	0.00427	0.00050	8343616
Total Manganese (Mn)	mg/L	0.122	8343616	0.0582	0.0219	0.00010	8343616
Total Molybdenum (Mo)	mg/L	0.00157	8343616	0.00111	0.00107	0.000050	8343616
Total Nickel (Ni)	mg/L	0.00412	8343616	0.00205	0.00211	0.00010	8343616
Total Phosphorus (P)	mg/L	0.0295	8343616	0.0133	0.0115	0.0050	8343616
Total Selenium (Se)	mg/L	0.000600	8343616	0.000497	0.000489	0.000040	8343616
Total Silicon (Si)	mg/L	5.08	8343616	3.95	4.63	0.050	8343616
Total Silver (Ag)	mg/L	<0.000010	8343616	<0.000010	<0.000010	0.000010	8343616
Total Strontium (Sr)	mg/L	0.158	8343616	0.147	0.162	0.000050	8343616
Total Thallium (Tl)	mg/L	<0.0000020	8343616	<0.0000020	0.0000020	0.0000020	8343616
Total Tin (Sn)	mg/L	<0.00020	8343616	<0.00020	<0.00020	0.00020	8343616
Total Titanium (Ti)	mg/L	<0.0020	8343616	<0.0020	<0.0020	0.0020	8343616
Total Uranium (U)	mg/L	0.00224	8343616	0.00181	0.00190	0.0000050	8343616
Total Vanadium (V)	mg/L	0.00022	8343616	<0.00020	0.00037	0.00020	8343616
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PC7450		PC7451	PC7452		
Sampling Date		2016/07/25 16:40		2016/07/25 15:30	2016/07/25 13:00		
COC Number		08425770		08425770	08425770		
	UNITS	KZ-21	QC Batch	KZ-22	KZ-26	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0038	8343616	0.0022	0.0017	0.0010	8343616
Total Zirconium (Zr)	mg/L	0.00019	8343616	<0.00010	0.00024	0.00010	8343616
Total Calcium (Ca)	mg/L	54.7	8341902	50.5	55.6	0.25	8341902
Total Magnesium (Mg)	mg/L	21.4	8341902	15.0	17.2	0.25	8341902
Total Potassium (K)	mg/L	0.83	8341902	0.89	0.92	0.25	8341902
Total Sodium (Na)	mg/L	1.49	8341902	1.32	1.59	0.25	8341902
Total Sulphur (S)	mg/L	13.4	8341902	10.8	10.9	3.0	8341902
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PC7450
Sample ID: KZ-21
Matrix: Water

Collected: 2016/07/25
Shipped:
Received: 2016/07/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8343742	N/A	2016/07/28	Name Redacted
Alkalinity - Water	AT/ALK	8344200	2016/07/28	2016/07/28	
Chloride by Automated Colourimetry	KONE/COL	8345010	N/A	2016/07/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8345770	N/A	2016/07/29	
Cyanide WAD (weak acid dissociable)	TECH/COL	8345773	N/A	2016/07/29	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8343769	N/A	2016/07/28	
Conductance - water	AT/ALK	8344201	N/A	2016/07/28	
Fluoride	ISE/ISE	8345456	N/A	2016/07/28	
Hardness Total (calculated as CaCO3)	CALC	8341901	N/A	2016/08/03	
Hardness (calculated as CaCO3)	CALC	8341845	N/A	2016/08/03	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8344654	N/A	2016/07/29	
Mercury (Total-LowLevel) by CVAF	CV/AF	8343423	2016/07/28	2016/07/28	
Ion Balance	CALC	8342811	N/A	2016/08/03	
Sum of cations, anions	CALC	8342951	N/A	2016/08/03	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8341847	N/A	2016/08/03	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8343783	N/A	2016/08/03	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8343616	2016/07/28	2016/08/02	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8341902	N/A	2016/08/03	
Ammonia-N (Preserved)	KONE/COL	8343384	N/A	2016/07/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8344417	N/A	2016/07/28	
Nitrite (N) (low level)	TRAA/COL	8344419	N/A	2016/07/28	
Nitrogen - Nitrate (as N)	CALC	8342621	N/A	2016/07/29	
Filter and HNO3 Preserve for Metals	ICP	8343607	N/A	2016/07/28	
pH Water	AT/ALK	8344205	N/A	2016/07/28	
Sulphate by Automated Colourimetry	KONE/COL	8345016	N/A	2016/07/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8343791	2016/07/28	2016/07/28	
Total Phosphorus - unpreserved	KONE/COL	8343799	N/A	2016/07/28	
Total Suspended Solids-Low Level	BAL/BAL	8343061	2016/07/28	2016/07/29	

Maxxam ID: PC7451
Sample ID: KZ-22
Matrix: Water

Collected: 2016/07/25
Shipped:
Received: 2016/07/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8343742	N/A	2016/07/28	Name Redacted
Alkalinity - Water	AT/ALK	8344200	2016/07/28	2016/07/28	
Chloride by Automated Colourimetry	KONE/COL	8345010	N/A	2016/07/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8345770	N/A	2016/07/29	
Cyanide WAD (weak acid dissociable)	TECH/COL	8345773	N/A	2016/07/29	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8343769	N/A	2016/07/28	
Conductance - water	AT/ALK	8344201	N/A	2016/07/28	
Fluoride	ISE/ISE	8345456	N/A	2016/07/28	
Hardness Total (calculated as CaCO3)	CALC	8341901	N/A	2016/08/03	
Hardness (calculated as CaCO3)	CALC	8341845	N/A	2016/08/03	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PC7451
Sample ID: KZ-22
Matrix: Water

Collected: 2016/07/25
Shipped:
Received: 2016/07/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8344654	N/A	2016/07/29	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8343416	2016/07/28	2016/07/28	
Ion Balance	CALC	8342811	N/A	2016/08/03	
Sum of cations, anions	CALC	8342951	N/A	2016/08/03	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8341847	N/A	2016/08/03	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8343783	N/A	2016/08/03	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8343616	2016/07/28	2016/08/02	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8341902	N/A	2016/08/03	
Ammonia-N (Preserved)	KONE/COL	8343384	N/A	2016/07/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8344417	N/A	2016/07/28	
Nitrite (N) (low level)	TRAA/COL	8344419	N/A	2016/07/28	
Nitrogen - Nitrate (as N)	CALC	8342621	N/A	2016/07/29	
Filter and HNO3 Preserve for Metals	ICP	8343607	N/A	2016/07/28	
pH Water	AT/ALK	8344205	N/A	2016/07/28	
Sulphate by Automated Colourimetry	KONE/COL	8345016	N/A	2016/07/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8343791	2016/07/28	2016/07/28	
Total Phosphorus - unpreserved	KONE/COL	8343799	N/A	2016/07/28	
Total Suspended Solids-Low Level	BAL/BAL	8343061	2016/07/28	2016/07/29	

Maxxam ID: PC7451 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2016/07/25
Shipped:
Received: 2016/07/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8344417	N/A	2016/07/28	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8344419	N/A	2016/07/28	
Total Phosphorus - unpreserved	KONE/COL	8343799	N/A	2016/07/28	

Maxxam ID: PC7452
Sample ID: KZ-26
Matrix: Water

Collected: 2016/07/25
Shipped:
Received: 2016/07/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8343742	N/A	2016/07/28	Name Redacted
Alkalinity - Water	AT/ALK	8344217	2016/07/28	2016/07/29	
Chloride by Automated Colourimetry	KONE/COL	8345017	N/A	2016/07/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8345770	N/A	2016/07/29	
Cyanide WAD (weak acid dissociable)	TECH/COL	8345773	N/A	2016/07/29	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8343769	N/A	2016/07/28	
Conductance - water	AT/ALK	8344218	N/A	2016/07/29	
Fluoride	ISE/ISE	8345926	N/A	2016/07/28	
Hardness Total (calculated as CaCO3)	CALC	8341901	N/A	2016/08/03	
Hardness (calculated as CaCO3)	CALC	8341845	N/A	2016/08/03	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8344654	N/A	2016/07/29	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PC7452
Sample ID: KZ-26
Matrix: Water

Collected: 2016/07/25
Shipped:
Received: 2016/07/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8343416	2016/07/28	2016/07/28	Name Redacted
Ion Balance	CALC	8342811	N/A	2016/08/03	
Sum of cations, anions	CALC	8342951	N/A	2016/08/03	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8341847	N/A	2016/08/03	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8343783	N/A	2016/08/03	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8343616	2016/07/28	2016/08/02	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8341902	N/A	2016/08/03	
Ammonia-N (Preserved)	KONE/COL	8343384	N/A	2016/07/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8344420	N/A	2016/07/28	
Nitrite (N) (low level)	TRAA/COL	8344423	N/A	2016/07/28	
Nitrogen - Nitrate (as N)	CALC	8342621	N/A	2016/07/29	
Filter and HNO3 Preserve for Metals	ICP	8343607	N/A	2016/07/28	
pH Water	AT/ALK	8344221	N/A	2016/07/29	
Sulphate by Automated Colourimetry	KONE/COL	8345018	N/A	2016/07/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8343791	2016/07/28	2016/07/28	
Total Phosphorus - unpreserved	KONE/COL	8343799	N/A	2016/07/28	
Total Suspended Solids-Low Level	BAL/BAL	8343061	2016/07/28	2016/07/29	

Maxxam ID: PC7452 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2016/07/25
Shipped:
Received: 2016/07/26

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8345770	N/A	2016/07/29	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8345773	N/A	2016/07/29	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.7°C

Sample PC7450-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PC7451-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PC7452-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8343061	Total Suspended Solids	2016/07/29			104	80 - 120	<1.0	mg/L		
8343384	Total Ammonia (N)	2016/07/28	106	80 - 120	97	80 - 120	<0.0050	mg/L	NC	20
8343416	Total Mercury (Hg)	2016/07/28	98	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8343423	Total Mercury (Hg)	2016/07/28	101	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8343616	Total Aluminum (Al)	2016/08/02	NC	80 - 120	123 (1)	80 - 120	<0.0030	mg/L		
8343616	Total Antimony (Sb)	2016/08/02	107	80 - 120	106	80 - 120	<0.000020	mg/L		
8343616	Total Arsenic (As)	2016/08/02	110	80 - 120	105	80 - 120	<0.000020	mg/L		
8343616	Total Barium (Ba)	2016/08/02	NC	80 - 120	112	80 - 120	<0.000050	mg/L		
8343616	Total Beryllium (Be)	2016/08/02	117	80 - 120	116	80 - 120	<0.000010	mg/L		
8343616	Total Bismuth (Bi)	2016/08/02	100	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8343616	Total Boron (B)	2016/08/02	NC	80 - 120	112	80 - 120	<0.010	mg/L		
8343616	Total Cadmium (Cd)	2016/08/02	103	80 - 120	103	80 - 120	<0.0000050	mg/L		
8343616	Total Chromium (Cr)	2016/08/02	100	80 - 120	100	80 - 120	<0.00010	mg/L		
8343616	Total Cobalt (Co)	2016/08/02	101	80 - 120	102	80 - 120	<0.000010	mg/L		
8343616	Total Copper (Cu)	2016/08/02	97	80 - 120	105	80 - 120	0.00029, RDL=0.00020 (2)	mg/L		
8343616	Total Iron (Fe)	2016/08/02	NC	80 - 120	107	80 - 120	<0.0050	mg/L		
8343616	Total Lead (Pb)	2016/08/02	102	80 - 120	103	80 - 120	<0.000020	mg/L		
8343616	Total Lithium (Li)	2016/08/02	NC	80 - 120	117	80 - 120	<0.00050	mg/L		
8343616	Total Manganese (Mn)	2016/08/02	NC	80 - 120	106	80 - 120	<0.00010	mg/L		
8343616	Total Molybdenum (Mo)	2016/08/02	NC	80 - 120	101	80 - 120	<0.000050	mg/L		
8343616	Total Nickel (Ni)	2016/08/02	100	80 - 120	105	80 - 120	<0.00010	mg/L		
8343616	Total Phosphorus (P)	2016/08/02					<0.0050	mg/L		
8343616	Total Selenium (Se)	2016/08/02	110	80 - 120	109	80 - 120	<0.000040	mg/L		
8343616	Total Silicon (Si)	2016/08/02					<0.050	mg/L		
8343616	Total Silver (Ag)	2016/08/02	109	80 - 120	105	80 - 120	<0.000010	mg/L		
8343616	Total Strontium (Sr)	2016/08/02	NC	80 - 120	102	80 - 120	<0.000050	mg/L		
8343616	Total Thallium (Tl)	2016/08/02	106	80 - 120	103	80 - 120	<0.0000020	mg/L		
8343616	Total Tin (Sn)	2016/08/02	82	80 - 120	100	80 - 120	<0.00020	mg/L		
8343616	Total Titanium (Ti)	2016/08/02	119	80 - 120	100	80 - 120	<0.0020	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8343616	Total Uranium (U)	2016/08/02	114	80 - 120	110	80 - 120	<0.0000050	mg/L		
8343616	Total Vanadium (V)	2016/08/02	NC	80 - 120	106	80 - 120	<0.00020	mg/L		
8343616	Total Zinc (Zn)	2016/08/02	NC	80 - 120	105	80 - 120	<0.0010	mg/L		
8343616	Total Zirconium (Zr)	2016/08/02					<0.00010	mg/L		
8343742	Acidity (pH 4.5)	2016/07/28					<0.50	mg/L	NC	20
8343742	Acidity (pH 8.3)	2016/07/28			99	80 - 120	<0.50	mg/L	NC	20
8343769	Dissolved Organic Carbon (C)	2016/07/28	108	80 - 120	114	80 - 120	<0.50	mg/L	1.4	20
8343783	Dissolved Aluminum (Al)	2016/08/03	109	80 - 120	118	80 - 120	<0.00050	mg/L	NC	20
8343783	Dissolved Antimony (Sb)	2016/08/03	101	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8343783	Dissolved Arsenic (As)	2016/08/03	102	80 - 120	101	80 - 120	<0.000020	mg/L	0.66	20
8343783	Dissolved Barium (Ba)	2016/08/03	NC	80 - 120	108	80 - 120	<0.000020	mg/L	0.033	20
8343783	Dissolved Beryllium (Be)	2016/08/03	104	80 - 120	118	80 - 120	<0.000010	mg/L	NC	20
8343783	Dissolved Bismuth (Bi)	2016/08/03	98	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8343783	Dissolved Boron (B)	2016/08/03	101	80 - 120	122 (1)	80 - 120	<0.010	mg/L	NC	20
8343783	Dissolved Cadmium (Cd)	2016/08/03	98	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8343783	Dissolved Chromium (Cr)	2016/08/03	99	80 - 120	99	80 - 120	0.00015, RDL=0.00010	mg/L	NC	20
8343783	Dissolved Cobalt (Co)	2016/08/03	93	80 - 120	101	80 - 120	<0.0000050	mg/L	2.7	20
8343783	Dissolved Copper (Cu)	2016/08/03	91	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8343783	Dissolved Iron (Fe)	2016/08/03	109	80 - 120	111	80 - 120	0.0012, RDL=0.0010	mg/L	NC	20
8343783	Dissolved Lead (Pb)	2016/08/03	100	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8343783	Dissolved Lithium (Li)	2016/08/03	NC	80 - 120	121 (1)	80 - 120	<0.00050	mg/L	0.87	20
8343783	Dissolved Manganese (Mn)	2016/08/03	NC	80 - 120	105	80 - 120	<0.000050	mg/L	0.36	20
8343783	Dissolved Molybdenum (Mo)	2016/08/03	NC	80 - 120	103	80 - 120	<0.000050	mg/L		
8343783	Dissolved Nickel (Ni)	2016/08/03	95	80 - 120	105	80 - 120	<0.000020	mg/L	0	20
8343783	Dissolved Phosphorus (P)	2016/08/03					0.0035, RDL=0.0020	mg/L	NC	20
8343783	Dissolved Selenium (Se)	2016/08/03	104	80 - 120	104	80 - 120	<0.000040	mg/L	NC	20
8343783	Dissolved Silicon (Si)	2016/08/03					<0.050	mg/L	2.5	20
8343783	Dissolved Silver (Ag)	2016/08/03	100	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8343783	Dissolved Strontium (Sr)	2016/08/03	NC	80 - 120	98	80 - 120	<0.000050	mg/L	2.0	20
8343783	Dissolved Thallium (Tl)	2016/08/03	101	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8343783	Dissolved Tin (Sn)	2016/08/03	100	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
8343783	Dissolved Titanium (Ti)	2016/08/03	98	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8343783	Dissolved Uranium (U)	2016/08/03	103	80 - 120	111	80 - 120	<0.0000020	mg/L	0.27	20
8343783	Dissolved Vanadium (V)	2016/08/03	99	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20
8343783	Dissolved Zinc (Zn)	2016/08/03	99	80 - 120	101	80 - 120	<0.00010	mg/L	3.5	20
8343783	Dissolved Zirconium (Zr)	2016/08/03					<0.00010	mg/L	NC	20
8343791	Dissolved Phosphorus (P)	2016/07/28	101	80 - 120	111	80 - 120	<0.0020	mg/L	6.3	20
8343799	Total Phosphorus (P)	2016/07/28			111	80 - 120	0.0022, RDL=0.0020	mg/L	0.76	20
8344200	Alkalinity (PP as CaCO3)	2016/07/28					<0.50	mg/L	24 (3)	20
8344200	Alkalinity (Total as CaCO3)	2016/07/28	NC	80 - 120	101	80 - 120	0.69, RDL=0.50	mg/L	5.4	20
8344200	Bicarbonate (HCO3)	2016/07/28					0.84, RDL=0.50	mg/L	7.1	20
8344200	Carbonate (CO3)	2016/07/28					<0.50	mg/L	24 (3)	20
8344200	Hydroxide (OH)	2016/07/28					<0.50	mg/L	NC	20
8344201	Conductivity	2016/07/28			101	80 - 120	<1.0	uS/cm	0.20	20
8344205	pH	2016/07/28			101	97 - 103			1.7	N/A
8344217	Alkalinity (PP as CaCO3)	2016/07/29					<0.50	mg/L	NC	20
8344217	Alkalinity (Total as CaCO3)	2016/07/29	NC	80 - 120	96	80 - 120	<0.50	mg/L	NC	20
8344217	Bicarbonate (HCO3)	2016/07/29					<0.50	mg/L		
8344217	Carbonate (CO3)	2016/07/29					<0.50	mg/L		
8344217	Hydroxide (OH)	2016/07/29					<0.50	mg/L		
8344218	Conductivity	2016/07/29			101	80 - 120	<1.0	uS/cm		
8344221	pH	2016/07/29			101	97 - 103			6.3	N/A
8344417	Nitrate plus Nitrite (N)	2016/07/28	105	80 - 120	106	80 - 120	<0.0020	mg/L	NC	25
8344419	Nitrite (N)	2016/07/28	97	80 - 120	93	80 - 120	<0.0020	mg/L	NC	25
8344420	Nitrate plus Nitrite (N)	2016/07/28	108	80 - 120	103	80 - 120	<0.0020	mg/L	4.2	25
8344423	Nitrite (N)	2016/07/28	99	80 - 120	95	80 - 120	<0.0020	mg/L	NC	25
8344654	Dissolved Mercury (Hg)	2016/07/29	91	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8345010	Dissolved Chloride (Cl)	2016/07/28	96	80 - 120	101	80 - 120	<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8345016	Dissolved Sulphate (SO4)	2016/07/28	NC	80 - 120	107	80 - 120	<0.50	mg/L	1.2	20
8345017	Dissolved Chloride (Cl)	2016/07/28	97	80 - 120	102	80 - 120	<0.50	mg/L	NC	20
8345018	Dissolved Sulphate (SO4)	2016/07/28	100	80 - 120	105	80 - 120	<0.50	mg/L	NC	20
8345456	Fluoride (F)	2016/07/28	101	80 - 120	98	80 - 120	0.010, RDL=0.010	mg/L	0	20
8345770	Strong Acid Dissoc. Cyanide (CN)	2016/07/29	100	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8345773	Weak Acid Dissoc. Cyanide (CN)	2016/07/29	99	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8345926	Fluoride (F)	2016/07/28	102	80 - 120	102	80 - 120	<0.010	mg/L	0	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Blank Spike outside acceptance criteria (10% of analytes failure allowed)

(2) RDL raised due to background artifacts detected in analysis

(3) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B661912
Report Date: 2016/08/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Name , M.Sc., P.Chem., QP, Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC # 08425770

BBY FCD-00077/05

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	~~Andrew Mackrell~~ C. Henry	Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-21		2016/07/25	16:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
2	KZ-22		2016/07/25	15:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3	KZ-26		2016/07/25	13.00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
4	~~KZ-28~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	~~Trip Blank~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6																			
7																			
8																			
9																			
10																			

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
H		3.3.4
		1.1

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Signature @ 16:00
2016 07 26
TEMP: 8 / 6 / 6

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	2016/07/26	8:00	Signature Redacted	2016/07/27	14:40

B661912_COC

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08425837, 08425838, 08425833

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/08/08
Report #: R2231772
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B662843
Received: 2016/07/28, 10:15

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	4	N/A	2016/08/01	BBY6SOP-00037	SM 22 2310 B m
Acidity pH 4.5 & pH 8.3 (as CaCO3)	11	N/A	2016/08/02	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	4	2016/07/29	2016/07/30	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	3	2016/07/30	2016/07/30	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	8	2016/07/30	2016/07/31	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	11	N/A	2016/08/02	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	11	N/A	2016/08/02	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	11	N/A	2016/08/02	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	10	N/A	2016/08/02	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2016/08/02	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	7	N/A	2016/07/30	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	8	N/A	2016/07/31	BBY6SOP-00026	SM 22 2510 B m
Fluoride	11	N/A	2016/08/02	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	6	N/A	2016/08/05	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	5	N/A	2016/08/06	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	15	N/A	2016/08/04	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	15	N/A	2016/08/03	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	11	2016/08/03	2016/08/03	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	11	N/A	2016/08/04	BBY WI-00033	SM 22 1030E
Sum of cations, anions	11	N/A	2016/08/04	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	15	N/A	2016/08/04	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	15	N/A	2016/08/04	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	6	2016/08/03	2016/08/05	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	6	N/A	2016/08/05	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	5	N/A	2016/08/06	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	2	N/A	2016/08/05	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	3	N/A	2016/08/06	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Unpreserved)	1	N/A	2016/08/02	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	9	N/A	2016/08/02	BBY6SOP-00009	SM 22 4500-NH3- G m

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08425837, 08425838, 08425833

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/08/08
Report #: R2231772
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B662843
Received: 2016/07/28, 10:15

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Ammonia-N (Preserved)	1	N/A	2016/08/08	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	11	N/A	2016/07/30	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	11	N/A	2016/07/30	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	11	N/A	2016/08/03	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	4	N/A	2016/07/29	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	10	N/A	2016/08/02	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	7	N/A	2016/07/30	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (2)	8	N/A	2016/07/31	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	11	N/A	2016/08/02	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	11	2016/08/02	2016/08/02	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	10	N/A	2016/08/02	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	1	N/A	2016/08/03	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	11	2016/08/02	2016/08/03	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PD1443	PD1444	PD1445	PD1446		PD2289		
Sampling Date		2016/07/27 09:00	2016/07/27 08:50	2016/07/27 10:35	2016/07/27 09:30		2016/07/26 08:30		
COC Number		08425838	08425838	08425838	08425838		08425837		
	UNITS	KZ-9_E-SEEP	KZ-9_W-SEEP	SEEP-3	SEEP-5	QC Batch	KZ-2	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L					8345465	1.7	N/A	8345465
Cation Sum	meq/L					8345465	1.7	N/A	8345465
Filter and HNO3 Preservation	N/A	LAB	LAB	LAB	LAB	8345300	LAB	N/A	8348252
Ion Balance	N/A						1.0	0.010	8345464
Nitrate (N)	mg/L						0.0743	0.0020	8344863
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L						<0.00050	0.00050	8348144
Weak Acid Dissoc. Cyanide (CN)	mg/L						0.00064	0.00050	8348171
Fluoride (F)	mg/L						0.035	0.010	8348716
Dissolved Organic Carbon (C)	mg/L						1.87	0.50	8348801
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	<0.50	8346037	<0.50	0.50	8350392
Alkalinity (Total as CaCO3)	mg/L	798	204	149	70.7	8345820	48.0	0.50	8346401
Acidity (pH 8.3)	mg/L	296	1.70	2.55	3.44	8346037	<0.50	0.50	8350392
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	<0.50	8345820	<0.50	0.50	8346401
Bicarbonate (HCO3)	mg/L	974	248	182	86.3	8345820	58.5	0.50	8346401
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	<0.50	8345820	<0.50	0.50	8346401
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	<0.50	8345820	<0.50	0.50	8346401
Anions									
Dissolved Sulphate (SO4)	mg/L						37.3	0.50	8348772
Dissolved Chloride (Cl)	mg/L						<0.50	0.50	8348761
Nutrients									
Dissolved Phosphorus (P)	mg/L						<0.0020 (1)	0.0020	8348728
Total Ammonia (N)	mg/L						0.020	0.0050	8348574
Nitrate plus Nitrite (N)	mg/L						0.0743 (2)	0.0020	8349465
Nitrite (N)	mg/L						<0.0020 (2)	0.0020	8349466
Total Phosphorus (P)	mg/L						0.0022 (1)	0.0020	8348720
Physical Properties									
Conductivity	uS/cm	1530	468	355	222	8345821	178	1.0	8346404
pH	pH	6.52	8.24	8.25	7.68	8345822	7.92		8346405

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.
(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PD1443	PD1444	PD1445	PD1446		PD2289		
Sampling Date		2016/07/27 09:00	2016/07/27 08:50	2016/07/27 10:35	2016/07/27 09:30		2016/07/26 08:30		
COC Number		08425838	08425838	08425838	08425838		08425837		
	UNITS	KZ-9_E-SEEP	KZ-9_W-SEEP	SEEP-3	SEEP-5	QC Batch	KZ-2	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L						<1.0	1.0	8345978
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PD2290	PD2291		PD2292		PD2293		
Sampling Date		2016/07/27 14:35	2016/07/27 12:00		2016/07/27 08:10		2016/07/26 13:25		
COC Number		08425837	08425837		08425837		08425837		
	UNITS	KZ-6	KZ-7	QC Batch	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	3.2	2.7	8345465	3.0	8345465	1.5	N/A	8345465
Cation Sum	meq/L	3.2	2.6	8345465	3.0	8345465	1.5	N/A	8345465
Filter and HNO3 Preservation	N/A	LAB	LAB	8348252	LAB	8348252	LAB	N/A	8348252
Ion Balance	N/A	1.0	0.99	8345464	1.0	8345464	1.0	0.010	8345464
Nitrate (N)	mg/L	0.0119	0.0105	8344863	0.0274	8344863	0.0287	0.0020	8344863
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00051	8348144	<0.00050	8348144	<0.00050	0.00050	8348144
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00065	8348171	0.00057	8348171	0.00055	0.00050	8348171
Fluoride (F)	mg/L	0.060	0.050	8348716	0.050	8348751	0.043	0.010	8348751
Dissolved Organic Carbon (C)	mg/L	2.20	2.54	8348802	2.62	8348802	3.90	0.50	8348802
Acidity (pH 4.5)	mg/L	<0.50	<0.50	8350392	<0.50	8350392	<0.50	0.50	8348731
Alkalinity (Total as CaCO3)	mg/L	139	93.4	8346406	114	8346406	60.3	0.50	8346406
Acidity (pH 8.3)	mg/L	<0.50	<0.50	8350392	<0.50	8350392	<0.50	0.50	8348731
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	8346406	<0.50	8346406	<0.50	0.50	8346406
Bicarbonate (HCO3)	mg/L	170	114	8346406	139	8346406	73.6	0.50	8346406
Carbonate (CO3)	mg/L	<0.50	<0.50	8346406	<0.50	8346406	<0.50	0.50	8346406
Hydroxide (OH)	mg/L	<0.50	<0.50	8346406	<0.50	8346406	<0.50	0.50	8346406
Anions									
Dissolved Sulphate (SO4)	mg/L	20.0	36.8	8348772	33.3	8348772	12.8	0.50	8348772
Dissolved Chloride (Cl)	mg/L	0.51	0.53	8348761	0.54	8348761	<0.50	0.50	8348761
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0027 (1)	0.0030 (1)	8348728	0.0031 (1)	8348728	0.0049 (1)	0.0020	8348728
Total Ammonia (N)	mg/L	0.022	0.018	8348574	0.035	8348574	0.024	0.0050	8348574
Nitrate plus Nitrite (N)	mg/L	0.0119	0.0105	8349465	0.0274	8349465	0.0287 (2)	0.0020	8349465
Nitrite (N)	mg/L	<0.0020	<0.0020	8349466	<0.0020	8349466	<0.0020 (2)	0.0020	8349466
Total Phosphorus (P)	mg/L	0.0029 (1)	0.0053 (1)	8348720	0.0040 (1)	8348720	0.0053 (1)	0.0020	8348720
Physical Properties									
Conductivity	uS/cm	294	250	8346408	283	8346408	148	1.0	8346408
pH	pH	8.27	8.16	8346409	8.22	8346409	7.98		8346409

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.
(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PD2290	PD2291		PD2292		PD2293		
Sampling Date		2016/07/27 14:35	2016/07/27 12:00		2016/07/27 08:10		2016/07/26 13:25		
COC Number		08425837	08425837		08425837		08425837		
	UNITS	KZ-6	KZ-7	QC Batch	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	<1.0	<1.0	8345978	1.1	8345978	1.4	1.0	8345978
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PD2294		PD2295		PD2296		
Sampling Date		2016/07/26 09:45		2016/07/26 10:35		2016/07/26 11:25		
COC Number		08425837		08425837		08425837		
	UNITS	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.7	8345465	2.3	8345465	3.6	N/A	8345465
Cation Sum	meq/L	2.8	8345465	2.4	8345465	3.6	N/A	8345465
Filter and HNO3 Preservation	N/A	LAB	8348252	LAB	8348252	LAB	N/A	8348252
Ion Balance	N/A	1.0	8345464	1.0	8345464	0.99	0.010	8345464
Nitrate (N)	mg/L	0.0119	8344863	0.0087	8344863	0.0227	0.0020	8344863
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8348144	<0.00050	8348144	<0.00050	0.00050	8348144
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00069	8348171	0.00077	8348171	0.00054	0.00050	8348171
Fluoride (F)	mg/L	0.066	8348751	0.053	8348716	0.098	0.010	8348716
Dissolved Organic Carbon (C)	mg/L	2.54	8348802	2.34	8348802	2.60	0.50	8348801
Acidity (pH 4.5)	mg/L	<0.50	8348731	<0.50	8350392	<0.50	0.50	8348731
Alkalinity (Total as CaCO3)	mg/L	111	8346406	96.0	8346401	146	0.50	8346401
Acidity (pH 8.3)	mg/L	<0.50	8348731	<0.50	8350392	<0.50	0.50	8348731
Alkalinity (PP as CaCO3)	mg/L	<0.50	8346406	<0.50	8346401	<0.50	0.50	8346401
Bicarbonate (HCO3)	mg/L	136	8346406	117	8346401	178	0.50	8346401
Carbonate (CO3)	mg/L	<0.50	8346406	<0.50	8346401	<0.50	0.50	8346401
Hydroxide (OH)	mg/L	<0.50	8346406	<0.50	8346401	<0.50	0.50	8346401
Anions								
Dissolved Sulphate (SO4)	mg/L	23.2	8348772	19.9	8348772	32.3	0.50	8348772
Dissolved Chloride (Cl)	mg/L	<0.50	8348761	<0.50	8348761	<0.50	0.50	8348761
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0024 (1)	8348732	<0.0020 (1)	8348728	0.0040 (1)	0.0020	8348728
Total Ammonia (N)	mg/L	0.030	8348574	0.029	8348574	0.014	0.0050	8348574
Nitrate plus Nitrite (N)	mg/L	0.0119 (2)	8349465	0.0087 (2)	8349465	0.0227 (2)	0.0020	8349465
Nitrite (N)	mg/L	<0.0020 (2)	8349466	<0.0020 (2)	8349466	<0.0020 (2)	0.0020	8349466
Total Phosphorus (P)	mg/L	0.0031 (1)	8348720	<0.0020 (2)	8350000	0.0046 (1)	0.0020	8348720
Physical Properties								
Conductivity	uS/cm	254	8346408	221	8346404	326	1.0	8346404
pH	pH	8.20	8346409	8.17	8346405	8.27		8346405

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.
(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PD2294		PD2295		PD2296		
Sampling Date		2016/07/26 09:45		2016/07/26 10:35		2016/07/26 11:25		
COC Number		08425837		08425837		08425837		
	UNITS	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8345978	<1.0	8345978	<1.0	1.0	8345978
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PD2297		PD2298		PD2299		
Sampling Date						2016/07/28 10:15		
COC Number		08425837		08425833		08425833		
	UNITS	KZ-19	QC Batch	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	1.5	8345465	0.014	8345465	0.00010	N/A	8345465
Cation Sum	meq/L	1.5	8345465	0.0050	8345465	0.0018	N/A	8345465
Filter and HNO3 Preservation	N/A	LAB	8348252	LAB	8348252		N/A	8348252
Ion Balance	N/A	1.0	8345464	0.37 (1)	8345464	NC	0.010	8345464
Nitrate (N)	mg/L	0.0263	8344863	<0.0020	8344863	0.0021	0.0020	8344863
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00064	8348144	<0.00050	8348144	<0.00050	0.00050	8348144
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00079	8348171	<0.00050	8348171	<0.00050	0.00050	8348171
Fluoride (F)	mg/L	0.048	8348751	<0.010	8348751	<0.010	0.010	8348751
Dissolved Organic Carbon (C)	mg/L	3.81	8348801	0.67	8348801	<0.50 (2)	0.50	8346758
Acidity (pH 4.5)	mg/L	<0.50	8348731	<0.50	8348731	<0.50	0.50	8348731
Alkalinity (Total as CaCO3)	mg/L	61.6	8346406	0.68	8346406	<0.50	0.50	8346406
Acidity (pH 8.3)	mg/L	<0.50	8348731	<0.50	8348731	<0.50	0.50	8348731
Alkalinity (PP as CaCO3)	mg/L	<0.50	8346406	<0.50	8346406	<0.50	0.50	8346406
Bicarbonate (HCO3)	mg/L	75.1	8346406	0.83	8346406	<0.50	0.50	8346406
Carbonate (CO3)	mg/L	<0.50	8346406	<0.50	8346406	<0.50	0.50	8346406
Hydroxide (OH)	mg/L	<0.50	8346406	<0.50	8346406	<0.50	0.50	8346406
Anions								
Dissolved Sulphate (SO4)	mg/L	13.4	8348772	<0.50	8348772	<0.50	0.50	8348772
Dissolved Chloride (Cl)	mg/L	<0.50	8348761	<0.50	8348761	<0.50	0.50	8348761
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0045	8348728	<0.0020	8348728	<0.0020 (2)	0.0020	8348728
Total Ammonia (N)	mg/L	0.024	8348574	0.0060	8355226	<0.0050 (2)	0.0050	8346036
Nitrate plus Nitrite (N)	mg/L	0.0263	8349465	<0.0020	8349465	0.0021	0.0020	8349465
Nitrite (N)	mg/L	<0.0020	8349466	<0.0020	8349466	<0.0020	0.0020	8349466
Total Phosphorus (P)	mg/L	0.0049	8348720	<0.0020	8348720	<0.0020 (2)	0.0020	8348720
Physical Properties								
Conductivity	uS/cm	149	8346408	1.2	8346408	1.0	1.0	8346408

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).
(2) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PD2297		PD2298		PD2299		
Sampling Date						2016/07/28 10:15		
COC Number		08425837		08425833		08425833		
	UNITS	KZ-19	QC Batch	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
pH	pH	8.06	8346409	5.34	8346409	5.75		8346409
Physical Properties								
Total Suspended Solids	mg/L	1.8	8345978	<1.0	8345978	<1.0	1.0	8345978
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PD1443	PD1444	PD1445	PD1446	PD2289		
Sampling Date		2016/07/27 09:00	2016/07/27 08:50	2016/07/27 10:35	2016/07/27 09:30	2016/07/26 08:30		
COC Number		08425838	08425838	08425838	08425838	08425837		
	UNITS	KZ-9_E-SEEP	KZ-9_W-SEEP	SEEP-3	SEEP-5	KZ-2	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	921	259	193	72.6	84.4	0.50	8344822
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8349728
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0489	0.00121	0.00422	0.0147	0.00429	0.00050	8350070
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000021	<0.000020	0.000073	0.000026	0.000020	8350070
Dissolved Arsenic (As)	mg/L	0.000605	0.000085	0.000096	0.000676	0.000071	0.000020	8350070
Dissolved Barium (Ba)	mg/L	0.143	0.168	0.129	0.0674	0.0454	0.000020	8350070
Dissolved Beryllium (Be)	mg/L	0.000247	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8350070
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8350070
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8350070
Dissolved Cadmium (Cd)	mg/L	0.0000700	0.0000400	0.0000070	0.000185	0.000274	0.0000050	8350070
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00016	<0.00010	0.00017	<0.00010	0.00010	8350070
Dissolved Cobalt (Co)	mg/L	0.00225	<0.0000050	0.0000070	0.0000340	0.0000080	0.0000050	8350070
Dissolved Copper (Cu)	mg/L	0.000066	0.000084	0.000167	0.00239	0.000748	0.000050	8350070
Dissolved Iron (Fe)	mg/L	1.85	<0.0010	0.0011	0.681	0.0012	0.0010	8350070
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000250	0.0000090	0.0000050	8350070
Dissolved Lithium (Li)	mg/L	0.0779	0.00181	0.00063	0.00260	0.00076	0.00050	8350070
Dissolved Manganese (Mn)	mg/L	2.04	0.000083	<0.000050	0.0155	0.000133	0.000050	8350070
Dissolved Molybdenum (Mo)	mg/L	0.000442	0.00148	0.000602	0.000536	0.000583	0.000050	8350070
Dissolved Nickel (Ni)	mg/L	0.00712	0.000111	0.000095	0.00334	0.000363	0.000020	8350070
Dissolved Phosphorus (P)	mg/L	<0.0020	<0.0020	<0.0020	0.0043	<0.0020	0.0020	8350070
Dissolved Selenium (Se)	mg/L	<0.000040	0.00237	0.000732	0.000183	0.000522	0.000040	8350070
Dissolved Silicon (Si)	mg/L	19.7	3.85	3.18	6.41	2.27	0.050	8350070
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8350070
Dissolved Strontium (Sr)	mg/L	1.22	0.247	0.226	0.0834	0.0812	0.000050	8350070
Dissolved Thallium (Tl)	mg/L	0.0000020	<0.0000020	<0.0000020	0.0000050	0.0000040	0.0000020	8350070
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8350070
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8350070
Dissolved Uranium (U)	mg/L	0.00179	0.00285	0.00112	0.0000690	0.00130	0.0000020	8350070
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8350070

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PD1443	PD1444	PD1445	PD1446	PD2289		
Sampling Date		2016/07/27 09:00	2016/07/27 08:50	2016/07/27 10:35	2016/07/27 09:30	2016/07/26 08:30		
COC Number		08425838	08425838	08425838	08425838	08425837		
	UNITS	KZ-9_E-SEEP	KZ-9_W-SEEP	SEEP-3	SEEP-5	KZ-2	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0263	<0.00010	<0.00010	0.0233	0.0385	0.00010	8350070
Dissolved Zirconium (Zr)	mg/L	0.00018	<0.00010	<0.00010	0.00026	<0.00010	0.00010	8350070
Dissolved Calcium (Ca)	mg/L	315	88.0	73.1	23.1	29.7	0.050	8344823
Dissolved Magnesium (Mg)	mg/L	32.5	9.47	2.52	3.64	2.49	0.050	8344823
Dissolved Potassium (K)	mg/L	4.65	0.922	1.19	0.710	1.18	0.050	8344823
Dissolved Sodium (Na)	mg/L	8.48	1.04	0.875	18.4	0.539	0.050	8344823
Dissolved Sulphur (S)	mg/L	7.6	14.8	10.9	3.2	12.5	3.0	8344823

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PD2290	PD2291	PD2292	PD2293	PD2294		
Sampling Date		2016/07/27 14:35	2016/07/27 12:00	2016/07/27 08:10	2016/07/26 13:25	2016/07/26 09:45		
COC Number		08425837	08425837	08425837	08425837	08425837		
	UNITS	KZ-6	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	159	127	147	72.6	135	0.50	8344822
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8349728
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00288	0.00263	0.00169	0.00754	0.00172	0.00050	8350070
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000081	0.000064	0.000032	0.000030	0.000020	8350070
Dissolved Arsenic (As)	mg/L	0.000075	0.000249	0.000197	0.000226	0.000288	0.000020	8350070
Dissolved Barium (Ba)	mg/L	0.0436	0.0621	0.0732	0.0982	0.0523	0.000020	8350070
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8350070
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8350070
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8350070
Dissolved Cadmium (Cd)	mg/L	0.0000100	0.000122	0.0000460	0.0000080	0.0000140	0.0000050	8350070
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8350070
Dissolved Cobalt (Co)	mg/L	0.0000060	<0.0000050	0.0000160	0.0000110	0.0000100	0.0000050	8350070
Dissolved Copper (Cu)	mg/L	0.000205	0.000699	0.000499	0.000472	0.000424	0.000050	8350070
Dissolved Iron (Fe)	mg/L	0.0080	0.0605	0.0710	0.0171	0.0077	0.0010	8350070
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000240	0.0000060	<0.0000050	<0.0000050	0.0000050	8350070
Dissolved Lithium (Li)	mg/L	0.00070	0.00131	0.00196	0.00133	0.00165	0.00050	8350070
Dissolved Manganese (Mn)	mg/L	<0.000050	0.00147	0.0266	0.000187	0.00559	0.000050	8350070
Dissolved Molybdenum (Mo)	mg/L	0.000419	0.000496	0.000521	0.000549	0.000702	0.000050	8350070
Dissolved Nickel (Ni)	mg/L	0.000193	0.000368	0.000299	0.000358	0.000358	0.000020	8350070
Dissolved Phosphorus (P)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8350070
Dissolved Selenium (Se)	mg/L	0.000511	0.000687	0.000622	0.000120	0.000359	0.000040	8350070
Dissolved Silicon (Si)	mg/L	2.90	2.83	3.04	2.52	2.87	0.050	8350070
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8350070
Dissolved Strontium (Sr)	mg/L	0.146	0.122	0.150	0.0684	0.127	0.000050	8350070
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000020	0.0000020	0.0000020	<0.0000020	0.0000020	8350070
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8350070
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8350070
Dissolved Uranium (U)	mg/L	0.000774	0.000718	0.000760	0.000593	0.00114	0.0000020	8350070
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8350070

RDL = Reportable Detection Limit

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PD2290	PD2291	PD2292	PD2293	PD2294		
Sampling Date		2016/07/27 14:35	2016/07/27 12:00	2016/07/27 08:10	2016/07/26 13:25	2016/07/26 09:45		
COC Number		08425837	08425837	08425837	08425837	08425837		
	UNITS	KZ-6	KZ-7	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	<0.00010	0.0241	0.00624	0.00096	<0.00010	0.00010	8350070
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8350070
Dissolved Calcium (Ca)	mg/L	53.3	42.4	49.5	24.8	43.1	0.050	8344823
Dissolved Magnesium (Mg)	mg/L	6.16	5.17	5.72	2.60	6.73	0.050	8344823
Dissolved Potassium (K)	mg/L	0.587	1.16	1.19	1.29	0.957	0.050	8344823
Dissolved Sodium (Na)	mg/L	0.686	0.797	0.918	0.917	0.840	0.050	8344823
Dissolved Sulphur (S)	mg/L	6.4	12.1	11.4	4.3	7.9	3.0	8344823

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PD2295		PD2296	PD2297	PD2298		
Sampling Date		2016/07/26 10:35		2016/07/26 11:25				
COC Number		08425837		08425837	08425837	08425833		
	UNITS	KZ-16	QC Batch	KZ-17	KZ-19	KZ-28	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	118	8344822	175	72.2	<0.50	0.50	8344822
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8349728	<0.0000020	<0.0000020	<0.0000020	0.0000020	8349766
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00189	8350070	0.00156	0.00777	<0.00050	0.00050	8350070
Dissolved Antimony (Sb)	mg/L	<0.000020	8350070	0.000054	0.000027	<0.000020	0.000020	8350070
Dissolved Arsenic (As)	mg/L	0.000211	8350070	0.000411	0.000228	<0.000020	0.000020	8350070
Dissolved Barium (Ba)	mg/L	0.0460	8350070	0.0661	0.0967	0.000024	0.000020	8350070
Dissolved Beryllium (Be)	mg/L	<0.000010	8350070	<0.000010	<0.000010	<0.000010	0.000010	8350070
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8350070	<0.0000050	<0.0000050	<0.0000050	0.0000050	8350070
Dissolved Boron (B)	mg/L	<0.010	8350070	<0.010	<0.010	<0.010	0.010	8350070
Dissolved Cadmium (Cd)	mg/L	0.0000090	8350070	0.0000180	0.0000090	<0.0000050	0.0000050	8350070
Dissolved Chromium (Cr)	mg/L	<0.00010	8350070	<0.00010	<0.00010	<0.00010	0.00010	8350070
Dissolved Cobalt (Co)	mg/L	0.0000090	8350070	0.0000060	0.0000100	<0.0000050	0.0000050	8350070
Dissolved Copper (Cu)	mg/L	0.000427	8350070	0.000459	0.000543	<0.000050	0.000050	8350070
Dissolved Iron (Fe)	mg/L	0.0032	8350070	0.0116	0.0175	<0.0010	0.0010	8350070
Dissolved Lead (Pb)	mg/L	<0.0000050	8350070	<0.0000050	<0.0000050	<0.0000050	0.0000050	8350070
Dissolved Lithium (Li)	mg/L	0.00121	8350070	0.00272	0.00129	<0.00050	0.00050	8350070
Dissolved Manganese (Mn)	mg/L	0.00131	8350070	0.00540	0.000329	<0.000050	0.000050	8350070
Dissolved Molybdenum (Mo)	mg/L	0.000411	8350070	0.00140	0.000541	0.000078	0.000050	8350070
Dissolved Nickel (Ni)	mg/L	0.000253	8350070	0.000484	0.000372	<0.000020	0.000020	8350070
Dissolved Phosphorus (P)	mg/L	<0.0020	8350070	<0.0020	<0.0020	<0.0020	0.0020	8350070
Dissolved Selenium (Se)	mg/L	0.000299	8350070	0.000490	0.000131	<0.000040	0.000040	8350070
Dissolved Silicon (Si)	mg/L	2.74	8350070	3.57	2.41	<0.050	0.050	8350070
Dissolved Silver (Ag)	mg/L	<0.0000050	8350070	<0.0000050	<0.0000050	<0.0000050	0.0000050	8350070
Dissolved Strontium (Sr)	mg/L	0.112	8350070	0.164	0.0690	<0.000050	0.000050	8350070
Dissolved Thallium (Tl)	mg/L	<0.0000020	8350070	<0.0000020	0.0000020	<0.0000020	0.0000020	8350070
Dissolved Tin (Sn)	mg/L	<0.00020	8350070	<0.00020	<0.00020	<0.00020	0.00020	8350070
Dissolved Titanium (Ti)	mg/L	<0.00050	8350070	<0.00050	<0.00050	<0.00050	0.00050	8350070
Dissolved Uranium (U)	mg/L	0.000647	8350070	0.00225	0.000572	<0.0000020	0.0000020	8350070
Dissolved Vanadium (V)	mg/L	<0.00020	8350070	<0.00020	<0.00020	<0.00020	0.00020	8350070

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PD2295		PD2296	PD2297	PD2298		
Sampling Date		2016/07/26 10:35		2016/07/26 11:25				
COC Number		08425837		08425837	08425837	08425833		
	UNITS	KZ-16	QC Batch	KZ-17	KZ-19	KZ-28	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	<0.00010	8350070	0.00095	0.00036	<0.00010	0.00010	8350070
Dissolved Zirconium (Zr)	mg/L	<0.00010	8350070	<0.00010	<0.00010	<0.00010	0.00010	8350070
Dissolved Calcium (Ca)	mg/L	38.4	8344823	53.2	24.8	<0.050	0.050	8344823
Dissolved Magnesium (Mg)	mg/L	5.28	8344823	10.2	2.53	<0.050	0.050	8344823
Dissolved Potassium (K)	mg/L	0.878	8344823	1.17	1.26	<0.050	0.050	8344823
Dissolved Sodium (Na)	mg/L	0.763	8344823	1.03	0.878	<0.050	0.050	8344823
Dissolved Sulphur (S)	mg/L	6.3	8344823	10.3	4.4	<3.0	3.0	8344823

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PD2299		
Sampling Date		2016/07/28 10:15		
COC Number		08425833		
	UNITS	TRIP BLANK	RDL	QC Batch
Misc. Inorganics				
Dissolved Hardness (CaCO3)	mg/L	<0.50	0.50	8344822
Elements				
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000020	8349766
Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	mg/L	<0.00050	0.00050	8350070
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000020	8350070
Dissolved Arsenic (As)	mg/L	<0.000020	0.000020	8350070
Dissolved Barium (Ba)	mg/L	<0.000020	0.000020	8350070
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000010	8350070
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8350070
Dissolved Boron (B)	mg/L	<0.010	0.010	8350070
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.0000050	8350070
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00010	8350070
Dissolved Cobalt (Co)	mg/L	<0.0000050	0.0000050	8350070
Dissolved Copper (Cu)	mg/L	<0.000050	0.000050	8350070
Dissolved Iron (Fe)	mg/L	<0.0010	0.0010	8350070
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000050	8350070
Dissolved Lithium (Li)	mg/L	<0.00050	0.00050	8350070
Dissolved Manganese (Mn)	mg/L	<0.000050	0.000050	8350070
Dissolved Molybdenum (Mo)	mg/L	<0.000050	0.000050	8350070
Dissolved Nickel (Ni)	mg/L	<0.000020	0.000020	8350070
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8350070
Dissolved Selenium (Se)	mg/L	<0.000040	0.000040	8350070
Dissolved Silicon (Si)	mg/L	<0.050	0.050	8350070
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	8350070
Dissolved Strontium (Sr)	mg/L	<0.000050	0.000050	8350070
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000020	8350070
Dissolved Tin (Sn)	mg/L	<0.00020	0.00020	8350070
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00050	8350070
Dissolved Uranium (U)	mg/L	<0.0000020	0.0000020	8350070
Dissolved Vanadium (V)	mg/L	<0.00020	0.00020	8350070
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PD2299		
Sampling Date		2016/07/28 10:15		
COC Number		08425833		
	UNITS	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	<0.00010	0.00010	8350070
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00010	8350070
Dissolved Calcium (Ca)	mg/L	<0.050	0.050	8344823
Dissolved Magnesium (Mg)	mg/L	<0.050	0.050	8344823
Dissolved Potassium (K)	mg/L	<0.050	0.050	8344823
Dissolved Sodium (Na)	mg/L	<0.050	0.050	8344823
Dissolved Sulphur (S)	mg/L	<3.0	3.0	8344823
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PD2289	PD2294	PD2295	PD2298	PD2299		
Sampling Date		2016/07/26 08:30	2016/07/26 09:45	2016/07/26 10:35		2016/07/28 10:15		
COC Number		08425837	08425837	08425837	08425833	08425833		
	UNITS	KZ-2	KZ-15	KZ-16	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	85.8	137	118	<0.50	<0.50	0.50	8344964
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8349989
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0222	0.00423	0.00288	0.00067	<0.00050	0.00050	8349895
Total Antimony (Sb)	mg/L	0.000026	0.000030	<0.000020	<0.000020	<0.000020	0.000020	8349895
Total Arsenic (As)	mg/L	0.000074	0.000338	0.000246	<0.000020	<0.000020	0.000020	8349895
Total Barium (Ba)	mg/L	0.0470	0.0544	0.0479	<0.000020	<0.000020	0.000020	8349895
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8349895
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8349895
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8349895
Total Cadmium (Cd)	mg/L	0.000280	0.0000200	0.0000130	<0.0000050	<0.0000050	0.0000050	8349895
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8349895
Total Cobalt (Co)	mg/L	0.0000240	0.0000250	0.0000150	<0.0000050	<0.0000050	0.0000050	8349895
Total Copper (Cu)	mg/L	0.000813	0.000501	0.000460	<0.000050	<0.000050	0.000050	8349895
Total Iron (Fe)	mg/L	0.0325	0.0411	0.0089	<0.0010	<0.0010	0.0010	8349895
Total Lead (Pb)	mg/L	0.000115	0.0000160	<0.0000050	<0.0000050	<0.0000050	0.0000050	8349895
Total Lithium (Li)	mg/L	0.00076	0.00175	0.00123	<0.00050	<0.00050	0.00050	8349895
Total Manganese (Mn)	mg/L	0.000920	0.0153	0.00344	<0.000050	<0.000050	0.000050	8349895
Total Molybdenum (Mo)	mg/L	0.000604	0.000756	0.000423	<0.000050	<0.000050	0.000050	8349895
Total Nickel (Ni)	mg/L	0.000398	0.000364	0.000260	<0.000020	<0.000020	0.000020	8349895
Total Phosphorus (P)	mg/L	0.0029	0.0029	0.0026	<0.0020	<0.0020	0.0020	8349895
Total Selenium (Se)	mg/L	0.000496	0.000389	0.000296	<0.000040	<0.000040	0.000040	8349895
Total Silicon (Si)	mg/L	2.11	2.88	2.63	<0.050	<0.050	0.050	8349895
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8349895
Total Strontium (Sr)	mg/L	0.0864	0.137	0.121	<0.000050	<0.000050	0.000050	8349895
Total Thallium (Tl)	mg/L	0.0000040	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8349895
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8349895
Total Titanium (Ti)	mg/L	0.00115	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8349895
Total Uranium (U)	mg/L	0.00133	0.00121	0.000667	<0.0000020	<0.0000020	0.0000020	8349895
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8349895

RDL = Reportable Detection Limit

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PD2289	PD2294	PD2295	PD2298	PD2299		
Sampling Date		2016/07/26 08:30	2016/07/26 09:45	2016/07/26 10:35		2016/07/28 10:15		
COC Number		08425837	08425837	08425837	08425833	08425833		
	UNITS	KZ-2	KZ-15	KZ-16	KZ-28	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0422	0.00165	0.00047	0.00022	<0.00010	0.00010	8349895
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8349895
Total Calcium (Ca)	mg/L	30.2	43.5	39.1	<0.050	<0.050	0.050	8345216
Total Magnesium (Mg)	mg/L	2.49	6.76	4.97	<0.050	<0.050	0.050	8345216
Total Potassium (K)	mg/L	1.35	1.06	0.950	<0.050	<0.050	0.050	8345216
Total Sodium (Na)	mg/L	0.515	0.842	0.732	<0.050	<0.050	0.050	8345216
Total Sulphur (S)	mg/L	11.9	8.1	6.4	<3.0	<3.0	3.0	8345216

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PD2290		PD2291	PD2292	PD2293		
Sampling Date		2016/07/27 14:35		2016/07/27 12:00	2016/07/27 08:10	2016/07/26 13:25		
COC Number		08425837		08425837	08425837	08425837		
	UNITS	KZ-6	RDL	KZ-7	KZ-9	KZ-13	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	155	0.50	127	145	71.2	0.50	8344964
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8349989
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	<0.015	0.015	0.0173	0.0139	0.0343	0.0030	8350125
Total Antimony (Sb)	mg/L	<0.00010	0.00010	0.000079	0.000064	0.000028	0.000020	8350125
Total Arsenic (As)	mg/L	<0.00010	0.00010	0.000395	0.000256	0.000260	0.000020	8350125
Total Barium (Ba)	mg/L	0.0475	0.00025	0.0651	0.0738	0.0988	0.000050	8350125
Total Beryllium (Be)	mg/L	<0.000050	0.000050	0.000010	0.000011	0.000015	0.000010	8350125
Total Bismuth (Bi)	mg/L	<0.000050	0.000050	<0.000010	<0.000010	<0.000010	0.000010	8350125
Total Boron (B)	mg/L	<0.050	0.050	<0.010	<0.010	<0.010	0.010	8350125
Total Cadmium (Cd)	mg/L	0.000029	0.000025	0.000201	0.0000620	0.0000330	0.0000050	8350125
Total Chromium (Cr)	mg/L	<0.00050	0.00050	<0.00010	<0.00010	0.00012	0.00010	8350125
Total Cobalt (Co)	mg/L	<0.000050	0.000050	0.000037	0.000058	0.000055	0.000010	8350125
Total Copper (Cu)	mg/L	0.00062	0.00050	0.00109	0.00078	0.00088	0.00010	8350125
Total Iron (Fe)	mg/L	0.060	0.025	0.264	0.287	0.119	0.0050	8350125
Total Lead (Pb)	mg/L	<0.00010	0.00010	0.000177	0.000076	0.000065	0.000020	8350125
Total Lithium (Li)	mg/L	<0.0025	0.0025	0.00171	0.00235	0.00144	0.00050	8350125
Total Manganese (Mn)	mg/L	0.00447	0.00050	0.0254	0.0414	0.0382	0.00010	8350125
Total Molybdenum (Mo)	mg/L	0.00044	0.00025	0.000484	0.000517	0.000570	0.000050	8350125
Total Nickel (Ni)	mg/L	<0.00050	0.00050	0.00044	0.00035	0.00049	0.00010	8350125
Total Phosphorus (P)	mg/L	<0.025	0.025	0.0056	0.0053	0.0074	0.0050	8350125
Total Selenium (Se)	mg/L	0.00051	0.00020	0.000700	0.000615	0.000147	0.000040	8350125
Total Silicon (Si)	mg/L	2.75	0.25	2.80	3.03	2.31	0.050	8350125
Total Silver (Ag)	mg/L	<0.000050	0.000050	<0.000010	<0.000010	<0.000010	0.000010	8350125
Total Strontium (Sr)	mg/L	0.158	0.00025	0.134	0.152	0.0698	0.000050	8350125
Total Thallium (Tl)	mg/L	<0.000010	0.000010	0.0000030	0.0000020	0.0000030	0.0000020	8350125
Total Tin (Sn)	mg/L	<0.0010	0.0010	<0.00020	<0.00020	<0.00020	0.00020	8350125
Total Titanium (Ti)	mg/L	<0.010	0.010	<0.0020	<0.0020	<0.0020	0.0020	8350125
Total Uranium (U)	mg/L	0.000785	0.000025	0.000735	0.000778	0.000605	0.0000050	8350125
Total Vanadium (V)	mg/L	<0.0010	0.0010	<0.00020	<0.00020	0.00024	0.00020	8350125

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PD2290		PD2291	PD2292	PD2293		
Sampling Date		2016/07/27 14:35		2016/07/27 12:00	2016/07/27 08:10	2016/07/26 13:25		
COC Number		08425837		08425837	08425837	08425837		
	UNITS	KZ-6	RDL	KZ-7	KZ-9	KZ-13	RDL	QC Batch
Total Zinc (Zn)	mg/L	<0.0050	0.0050	0.0392	0.0106	0.0038	0.0010	8350125
Total Zirconium (Zr)	mg/L	<0.00050	0.00050	<0.00010	<0.00010	<0.00010	0.00010	8350125
Total Calcium (Ca)	mg/L	51.4	1.3	42.1	48.4	24.1	0.25	8345216
Total Magnesium (Mg)	mg/L	6.4	1.3	5.37	5.83	2.66	0.25	8345216
Total Potassium (K)	mg/L	<1.3	1.3	1.19	1.19	1.27	0.25	8345216
Total Sodium (Na)	mg/L	<1.3	1.3	0.84	0.95	0.92	0.25	8345216
Total Sulphur (S)	mg/L	<15	15	12.2	11.4	4.3	3.0	8345216

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PD2296	PD2297		
Sampling Date		2016/07/26 11:25			
COC Number		08425837	08425837		
	UNITS	KZ-17	KZ-19	RDL	QC Batch
Calculated Parameters					
Total Hardness (CaCO3)	mg/L	174	71.7	0.50	8344964
Elements					
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8349989
Total Metals by ICPMS					
Total Aluminum (Al)	mg/L	0.0077	0.0286	0.0030	8350125
Total Antimony (Sb)	mg/L	0.000056	0.000033	0.000020	8350125
Total Arsenic (As)	mg/L	0.000540	0.000269	0.000020	8350125
Total Barium (Ba)	mg/L	0.0686	0.103	0.000050	8350125
Total Beryllium (Be)	mg/L	0.000010	0.000014	0.000010	8350125
Total Bismuth (Bi)	mg/L	<0.000010	<0.000010	0.000010	8350125
Total Boron (B)	mg/L	<0.010	<0.010	0.010	8350125
Total Cadmium (Cd)	mg/L	0.0000350	0.0000280	0.0000050	8350125
Total Chromium (Cr)	mg/L	<0.00010	0.00014	0.00010	8350125
Total Cobalt (Co)	mg/L	0.000028	0.000040	0.000010	8350125
Total Copper (Cu)	mg/L	0.00079	0.00086	0.00010	8350125
Total Iron (Fe)	mg/L	0.0941	0.103	0.0050	8350125
Total Lead (Pb)	mg/L	0.000032	0.000125	0.000020	8350125
Total Lithium (Li)	mg/L	0.00325	0.00143	0.00050	8350125
Total Manganese (Mn)	mg/L	0.0254	0.0237	0.00010	8350125
Total Molybdenum (Mo)	mg/L	0.00142	0.000563	0.000050	8350125
Total Nickel (Ni)	mg/L	0.00059	0.00047	0.00010	8350125
Total Phosphorus (P)	mg/L	<0.0050	0.0065	0.0050	8350125
Total Selenium (Se)	mg/L	0.000541	0.000167	0.000040	8350125
Total Silicon (Si)	mg/L	3.43	2.40	0.050	8350125
Total Silver (Ag)	mg/L	<0.000010	<0.000010	0.000010	8350125
Total Strontium (Sr)	mg/L	0.170	0.0718	0.000050	8350125
Total Thallium (Tl)	mg/L	<0.0000020	0.0000030	0.0000020	8350125
Total Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8350125
Total Titanium (Ti)	mg/L	<0.0020	<0.0020	0.0020	8350125
Total Uranium (U)	mg/L	0.00226	0.000622	0.0000050	8350125
Total Vanadium (V)	mg/L	<0.00020	0.00024	0.00020	8350125
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PD2296	PD2297		
Sampling Date		2016/07/26 11:25			
COC Number		08425837	08425837		
	UNITS	KZ-17	KZ-19	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0036	0.0031	0.0010	8350125
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8350125
Total Calcium (Ca)	mg/L	53.0	24.1	0.25	8345216
Total Magnesium (Mg)	mg/L	10.0	2.78	0.25	8345216
Total Potassium (K)	mg/L	1.17	1.32	0.25	8345216
Total Sodium (Na)	mg/L	1.06	0.97	0.25	8345216
Total Sulphur (S)	mg/L	10.6	4.6	3.0	8345216
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD1443
Sample ID: KZ-9_E-SEEP
Matrix: Water

Collected: 2016/07/27
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8346037	N/A	2016/08/01	Name Redacted
Alkalinity - Water	AT/ALK	8345820	2016/07/29	2016/07/30	
Conductance - water	AT/ALK	8345821	N/A	2016/07/30	
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	
Filter and HNO3 Preserve for Metals	ICP	8345300	N/A	2016/07/29	
pH Water	AT/ALK	8345822	N/A	2016/07/30	

Maxxam ID: PD1444
Sample ID: KZ-9_W-SEEP
Matrix: Water

Collected: 2016/07/27
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8346037	N/A	2016/08/01	Name Redacted
Alkalinity - Water	AT/ALK	8345820	2016/07/29	2016/07/30	
Conductance - water	AT/ALK	8345821	N/A	2016/07/30	
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	
Filter and HNO3 Preserve for Metals	ICP	8345300	N/A	2016/07/29	
pH Water	AT/ALK	8345822	N/A	2016/07/30	

Maxxam ID: PD1445
Sample ID: SEEP-3
Matrix: Water

Collected: 2016/07/27
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8346037	N/A	2016/08/01	Name Redacted
Alkalinity - Water	AT/ALK	8345820	2016/07/29	2016/07/30	
Conductance - water	AT/ALK	8345821	N/A	2016/07/30	
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	
Filter and HNO3 Preserve for Metals	ICP	8345300	N/A	2016/07/29	
pH Water	AT/ALK	8345822	N/A	2016/07/30	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD1446
Sample ID: SEEP-5
Matrix: Water

Collected: 2016/07/27
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8346037	N/A	2016/08/01	Name Redacted
Alkalinity - Water	AT/ALK	8345820	2016/07/29	2016/07/30	
Conductance - water	AT/ALK	8345821	N/A	2016/07/30	
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	
Filter and HNO3 Preserve for Metals	ICP	8345300	N/A	2016/07/29	
pH Water	AT/ALK	8345822	N/A	2016/07/30	

Maxxam ID: PD2289
Sample ID: KZ-2
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8350392	N/A	2016/08/02	Name Redacted
Alkalinity - Water	AT/ALK	8346401	2016/07/30	2016/07/30	
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348801	N/A	2016/08/02	
Conductance - water	AT/ALK	8346404	N/A	2016/07/30	
Fluoride	ISE/ISE	8348716	N/A	2016/08/02	
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/06	
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	
Ion Balance	CALC	8345464	N/A	2016/08/04	
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/06	
Elements by ICPMS Low Level (total)	ICP/CRCM	8349895	N/A	2016/08/06	
Ammonia-N (Preserved)	KONE/COL	8348574	N/A	2016/08/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	
Filter and HNO3 Preserve for Metals	ICP	8348252	N/A	2016/08/02	
pH Water	AT/ALK	8346405	N/A	2016/07/30	
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	
Total Phosphorus - unpreserved	KONE/COL	8348720	N/A	2016/08/02	
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD2289 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	Name Redacted

Maxxam ID: PD2290
Sample ID: KZ-6
Matrix: Water

Collected: 2016/07/27
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8350392	N/A	2016/08/02	Name Redacted
Alkalinity - Water	AT/ALK	8346406	2016/07/30	2016/07/31	
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348802	N/A	2016/08/02	
Conductance - water	AT/ALK	8346408	N/A	2016/07/31	
Fluoride	ISE/ISE	8348716	N/A	2016/08/02	
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/05	
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	
Ion Balance	CALC	8345464	N/A	2016/08/04	
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8350125	2016/08/03	2016/08/05	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/05	
Ammonia-N (Preserved)	KONE/COL	8348574	N/A	2016/08/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	
Filter and HNO3 Preserve for Metals	ICP	8348252	N/A	2016/08/02	
pH Water	AT/ALK	8346409	N/A	2016/07/31	
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	
Total Phosphorus - unpreserved	KONE/COL	8348720	N/A	2016/08/02	
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	

Maxxam ID: PD2290 Dup
Sample ID: KZ-6
Matrix: Water

Collected: 2016/07/27
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8346406	2016/07/30	2016/07/31	Name Redacted
Conductance - water	AT/ALK	8346408	N/A	2016/07/31	
pH Water	AT/ALK	8346409	N/A	2016/07/31	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD2291
Sample ID: KZ-7
Matrix: Water

Collected: 2016/07/27
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8350392	N/A	2016/08/02	Name Redacted
Alkalinity - Water	AT/ALK	8346406	2016/07/30	2016/07/31	
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348802	N/A	2016/08/02	
Conductance - water	AT/ALK	8346408	N/A	2016/07/31	
Fluoride	ISE/ISE	8348716	N/A	2016/08/02	
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/05	
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	
Ion Balance	CALC	8345464	N/A	2016/08/04	
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8350125	2016/08/03	2016/08/05	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/05	
Ammonia-N (Preserved)	KONE/COL	8348574	N/A	2016/08/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	
Filter and HNO3 Preserve for Metals	ICP	8348252	N/A	2016/08/02	
pH Water	AT/ALK	8346409	N/A	2016/07/31	
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	
Total Phosphorus - unpreserved	KONE/COL	8348720	N/A	2016/08/02	
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	

Maxxam ID: PD2292
Sample ID: KZ-9
Matrix: Water

Collected: 2016/07/27
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8350392	N/A	2016/08/02	Name Redacted
Alkalinity - Water	AT/ALK	8346406	2016/07/30	2016/07/31	
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348802	N/A	2016/08/02	
Conductance - water	AT/ALK	8346408	N/A	2016/07/31	
Fluoride	ISE/ISE	8348751	N/A	2016/08/02	
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/05	
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD2292
Sample ID: KZ-9
Matrix: Water

Collected: 2016/07/27
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	
Ion Balance	CALC	8345464	N/A	2016/08/04	
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8350125	2016/08/03	2016/08/05	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/05	
Ammonia-N (Preserved)	KONE/COL	8348574	N/A	2016/08/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	
Filter and HNO3 Preserve for Metals	ICP	8348252	N/A	2016/08/02	
pH Water	AT/ALK	8346409	N/A	2016/07/31	
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	
Total Phosphorus - unpreserved	KONE/COL	8348720	N/A	2016/08/02	
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	

Maxxam ID: PD2293
Sample ID: KZ-13
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8348731	N/A	2016/08/02	Name Redacted
Alkalinity - Water	AT/ALK	8346406	2016/07/30	2016/07/31	
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348802	N/A	2016/08/02	
Conductance - water	AT/ALK	8346408	N/A	2016/07/31	
Fluoride	ISE/ISE	8348751	N/A	2016/08/02	
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/05	
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	
Ion Balance	CALC	8345464	N/A	2016/08/04	
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8350125	2016/08/03	2016/08/05	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/05	
Ammonia-N (Preserved)	KONE/COL	8348574	N/A	2016/08/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD2293
Sample ID: KZ-13
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	Name Redacted
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	
Filter and HNO3 Preserve for Metals	ICP	8348252	N/A	2016/08/02	
pH Water	AT/ALK	8346409	N/A	2016/07/31	
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	
Total Phosphorus - unpreserved	KONE/COL	8348720	N/A	2016/08/02	
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	

Maxxam ID: PD2293 Dup
Sample ID: KZ-13
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	

Maxxam ID: PD2294
Sample ID: KZ-15
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8348731	N/A	2016/08/02	Name Redacted
Alkalinity - Water	AT/ALK	8346406	2016/07/30	2016/07/31	
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348802	N/A	2016/08/02	
Conductance - water	AT/ALK	8346408	N/A	2016/07/31	
Fluoride	ISE/ISE	8348751	N/A	2016/08/02	
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/06	
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	
Ion Balance	CALC	8345464	N/A	2016/08/04	
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/06	
Elements by ICPMS Low Level (total)	ICP/CRCM	8349895	N/A	2016/08/06	
Ammonia-N (Preserved)	KONE/COL	8348574	N/A	2016/08/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD2294
Sample ID: KZ-15
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	Name Redacted
Filter and HNO3 Preserve for Metals	ICP	8348252	N/A	2016/08/02	
pH Water	AT/ALK	8346409	N/A	2016/07/31	
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348732	2016/08/02	2016/08/02	
Total Phosphorus - unpreserved	KONE/COL	8348720	N/A	2016/08/02	
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	

Maxxam ID: PD2294 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348802	N/A	2016/08/02	Name Redacted

Maxxam ID: PD2295
Sample ID: KZ-16
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8350392	N/A	2016/08/02	Name Redacted
Alkalinity - Water	AT/ALK	8346401	2016/07/30	2016/07/30	
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348802	N/A	2016/08/02	
Conductance - water	AT/ALK	8346404	N/A	2016/07/30	
Fluoride	ISE/ISE	8348716	N/A	2016/08/02	
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/06	
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349728	N/A	2016/08/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	
Ion Balance	CALC	8345464	N/A	2016/08/04	
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/06	
Elements by ICPMS Low Level (total)	ICP/CRCM	8349895	N/A	2016/08/05	
Ammonia-N (Preserved)	KONE/COL	8348574	N/A	2016/08/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	
Filter and HNO3 Preserve for Metals	ICP	8348252	N/A	2016/08/02	
pH Water	AT/ALK	8346405	N/A	2016/07/30	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD2295
Sample ID: KZ-16
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	Name Redacted
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	
Total Phosphorus - unpreserved	KONE/COL	8350000	N/A	2016/08/03	
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	

Maxxam ID: PD2295 Dup
Sample ID: KZ-16
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	
Total Phosphorus - unpreserved	KONE/COL	8350000	N/A	2016/08/03	

Maxxam ID: PD2296
Sample ID: KZ-17
Matrix: Water

Collected: 2016/07/26
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8348731	N/A	2016/08/02	Name Redacted
Alkalinity - Water	AT/ALK	8346401	2016/07/30	2016/07/30	
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348801	N/A	2016/08/02	
Conductance - water	AT/ALK	8346404	N/A	2016/07/30	
Fluoride	ISE/ISE	8348716	N/A	2016/08/02	
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/05	
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349766	N/A	2016/08/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	
Ion Balance	CALC	8345464	N/A	2016/08/04	
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8350125	2016/08/03	2016/08/05	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/05	
Ammonia-N (Preserved)	KONE/COL	8348574	N/A	2016/08/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	
Filter and HNO3 Preserve for Metals	ICP	8348252	N/A	2016/08/02	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD2296 **Collected:** 2016/07/26
Sample ID: KZ-17 **Shipped:**
Matrix: Water **Received:** 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH Water	AT/ALK	8346405	N/A	2016/07/30	Name Redacted
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	
Total Phosphorus - unpreserved	KONE/COL	8348720	N/A	2016/08/02	
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	

Maxxam ID: PD2296 Dup **Collected:** 2016/07/26
Sample ID: KZ-17 **Shipped:**
Matrix: Water **Received:** 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349766	N/A	2016/08/03	Name Redacted

Maxxam ID: PD2297 **Collected:**
Sample ID: KZ-19 **Shipped:**
Matrix: Water **Received:** 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8348731	N/A	2016/08/02	Name Redacted
Alkalinity - Water	AT/ALK	8346406	2016/07/30	2016/07/31	
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348801	N/A	2016/08/02	
Conductance - water	AT/ALK	8346408	N/A	2016/07/31	
Fluoride	ISE/ISE	8348751	N/A	2016/08/02	
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/05	
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349766	N/A	2016/08/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	
Ion Balance	CALC	8345464	N/A	2016/08/04	
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8350125	2016/08/03	2016/08/05	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/05	
Ammonia-N (Preserved)	KONE/COL	8348574	N/A	2016/08/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	
Filter and HNO3 Preserve for Metals	ICP	8348252	N/A	2016/08/02	
pH Water	AT/ALK	8346409	N/A	2016/07/31	
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD2297
Sample ID: KZ-19
Matrix: Water

Collected:
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - unpreserved	KONE/COL	8348720	N/A	2016/08/02	Name Redacted
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	

Maxxam ID: PD2297 Dup
Sample ID: KZ-19
Matrix: Water

Collected:
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8348574	N/A	2016/08/02	Name Redacted

Maxxam ID: PD2298
Sample ID: KZ-28
Matrix: Water

Collected:
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8348731	N/A	2016/08/02	Name Redacted
Alkalinity - Water	AT/ALK	8346406	2016/07/30	2016/07/31	
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8348801	N/A	2016/08/02	
Conductance - water	AT/ALK	8346408	N/A	2016/07/31	
Fluoride	ISE/ISE	8348751	N/A	2016/08/02	
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/06	
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349766	N/A	2016/08/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	
Ion Balance	CALC	8345464	N/A	2016/08/04	
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/06	
Elements by ICPMS Low Level (total)	ICP/CRCM	8349895	N/A	2016/08/06	
Ammonia-N (Preserved)	KONE/COL	8355226	N/A	2016/08/08	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	
Filter and HNO3 Preserve for Metals	ICP	8348252	N/A	2016/08/02	
pH Water	AT/ALK	8346409	N/A	2016/07/31	
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	
Total Phosphorus - unpreserved	KONE/COL	8348720	N/A	2016/08/02	
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PD2298 Dup
Sample ID: KZ-28
Matrix: Water

Collected:
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8355226	N/A	2016/08/08	Name Redacted

Maxxam ID: PD2299
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/07/28
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8348731	N/A	2016/08/02	Name Redacted
Alkalinity - Water	AT/ALK	8346406	2016/07/30	2016/07/31	
Chloride by Automated Colourimetry	KONE/COL	8348761	N/A	2016/08/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8348144	N/A	2016/08/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8348171	N/A	2016/08/02	
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8346758	N/A	2016/08/02	
Conductance - water	AT/ALK	8346408	N/A	2016/07/31	
Fluoride	ISE/ISE	8348751	N/A	2016/08/02	
Hardness Total (calculated as CaCO3)	CALC	8344964	N/A	2016/08/06	
Hardness (calculated as CaCO3)	CALC	8344822	N/A	2016/08/04	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8349766	N/A	2016/08/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	
Ion Balance	CALC	8345464	N/A	2016/08/04	
Sum of cations, anions	CALC	8345465	N/A	2016/08/04	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8344823	N/A	2016/08/04	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8350070	N/A	2016/08/04	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8345216	N/A	2016/08/06	
Elements by ICPMS Low Level (total)	ICP/CRCM	8349895	N/A	2016/08/05	
Ammonia-N (Unpreserved)	KONE/COL	8346036	N/A	2016/08/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8349465	N/A	2016/07/30	
Nitrite (N) (low level)	TRAA/COL	8349466	N/A	2016/07/30	
Nitrogen - Nitrate (as N)	CALC	8344863	N/A	2016/08/03	
pH Water	AT/ALK	8346409	N/A	2016/07/31	
Sulphate by Automated Colourimetry	KONE/COL	8348772	N/A	2016/08/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8348728	2016/08/02	2016/08/02	
Total Phosphorus - unpreserved	KONE/COL	8348720	N/A	2016/08/02	
Total Suspended Solids-Low Level	BAL/BAL	8345978	2016/08/02	2016/08/03	

Maxxam ID: PD2299 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/07/28
Shipped:
Received: 2016/07/28

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8348731	N/A	2016/08/02	Name Redacted
Fluoride	ISE/ISE	8348751	N/A	2016/08/02	
Mercury (Total-LowLevel) by CVAF	CV/AF	8349989	2016/08/03	2016/08/03	
Ammonia-N (Unpreserved)	KONE/COL	8346036	N/A	2016/08/02	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	9.0°C
Package 2	7.0°C
Package 3	9.0°C

Sample PD2290-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PD2291-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PD2292-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PD2293-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PD2296-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PD2297-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PD2299-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

LL TOTAL METALS (DIGESTED) WITH CV HG Comments

Sample PD2290-07 Elements by ICPMS Digested LL (total): RDL raised due to sample matrix interference.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8345820	Alkalinity (PP as CaCO3)	2016/07/30					<0.50	mg/L	NC	20
8345820	Alkalinity (Total as CaCO3)	2016/07/30	NC	80 - 120	99	80 - 120	<0.50	mg/L	0.79	20
8345820	Bicarbonate (HCO3)	2016/07/30					<0.50	mg/L	0.79	20
8345820	Carbonate (CO3)	2016/07/30					<0.50	mg/L	NC	20
8345820	Hydroxide (OH)	2016/07/30					<0.50	mg/L	NC	20
8345821	Conductivity	2016/07/30			102	80 - 120	<1.0	uS/cm		
8345822	pH	2016/07/30			102	97 - 103			0.69	N/A
8345978	Total Suspended Solids	2016/08/03			101	80 - 120	<1.0	mg/L		
8346036	Total Ammonia (N)	2016/08/02	97	80 - 120	102	80 - 120	<0.0050	mg/L	NC	20
8346037	Acidity (pH 4.5)	2016/07/29					<0.50	mg/L		
8346037	Acidity (pH 8.3)	2016/07/29			100	80 - 120	<0.50	mg/L		
8346401	Alkalinity (PP as CaCO3)	2016/07/30					<0.50	mg/L	NC	20
8346401	Alkalinity (Total as CaCO3)	2016/07/30	92	80 - 120	102	80 - 120	<0.50	mg/L	1.8	20
8346401	Bicarbonate (HCO3)	2016/07/30					<0.50	mg/L	1.8	20
8346401	Carbonate (CO3)	2016/07/30					<0.50	mg/L	NC	20
8346401	Hydroxide (OH)	2016/07/30					<0.50	mg/L	NC	20
8346404	Conductivity	2016/07/30			102	80 - 120	1.2, RDL=1.0	uS/cm	0.97	20
8346405	pH	2016/07/30			101	97 - 103			0.38	N/A
8346406	Alkalinity (PP as CaCO3)	2016/07/31					<0.50	mg/L	NC	20
8346406	Alkalinity (Total as CaCO3)	2016/07/31	NC	80 - 120	99	80 - 120	<0.50	mg/L	1.5	20
8346406	Bicarbonate (HCO3)	2016/07/31					<0.50	mg/L	1.5	20
8346406	Carbonate (CO3)	2016/07/31					<0.50	mg/L	NC	20
8346406	Hydroxide (OH)	2016/07/31					<0.50	mg/L	NC	20
8346408	Conductivity	2016/07/31			101	80 - 120	<1.0	uS/cm	0.34	20
8346409	pH	2016/07/31			101	97 - 103			0.73	N/A
8346758	Dissolved Organic Carbon (C)	2016/08/02	109	80 - 120	104	80 - 120	<0.50	mg/L	NC	20
8348144	Strong Acid Dissoc. Cyanide (CN)	2016/08/02	99	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8348171	Weak Acid Dissoc. Cyanide (CN)	2016/08/02	99	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8348574	Total Ammonia (N)	2016/08/02	98	80 - 120	99	80 - 120	<0.0050	mg/L	NC	20
8348716	Fluoride (F)	2016/08/02	96	80 - 120	100	80 - 120	0.013, RDL=0.010	mg/L	1.1	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8348720	Total Phosphorus (P)	2016/08/02			109	80 - 120	<0.0020	mg/L		
8348728	Dissolved Phosphorus (P)	2016/08/02	104	80 - 120	104	80 - 120	<0.0020	mg/L	NC	20
8348731	Acidity (pH 4.5)	2016/08/02					<0.50	mg/L	NC	20
8348731	Acidity (pH 8.3)	2016/08/02			102	80 - 120	<0.50	mg/L	NC	20
8348732	Dissolved Phosphorus (P)	2016/08/02			110	80 - 120	<0.0020	mg/L		
8348751	Fluoride (F)	2016/08/02	93	80 - 120	96	80 - 120	<0.010	mg/L	0	20
8348761	Dissolved Chloride (Cl)	2016/08/02	102	80 - 120	101	80 - 120	<0.50	mg/L	NC	20
8348772	Dissolved Sulphate (SO4)	2016/08/02	NC	80 - 120	99	80 - 120	<0.50	mg/L	0.91	20
8348801	Dissolved Organic Carbon (C)	2016/08/02	105	80 - 120	109	80 - 120	<0.50	mg/L	NC	20
8348802	Dissolved Organic Carbon (C)	2016/08/02	110	80 - 120	111	80 - 120	<0.50	mg/L	NC	20
8349465	Nitrate plus Nitrite (N)	2016/07/30	101	80 - 120	99	80 - 120	<0.0020	mg/L	NC	25
8349466	Nitrite (N)	2016/07/30	96	80 - 120	95	80 - 120	<0.0020	mg/L	NC	25
8349728	Dissolved Mercury (Hg)	2016/08/03	100	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8349766	Dissolved Mercury (Hg)	2016/08/03	95	80 - 120	92	80 - 120	<0.0000020	mg/L	NC	20
8349895	Total Aluminum (Al)	2016/08/05	111	80 - 120	116	80 - 120	<0.00050	mg/L	NC	20
8349895	Total Antimony (Sb)	2016/08/05	102	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8349895	Total Arsenic (As)	2016/08/05	101	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8349895	Total Barium (Ba)	2016/08/05	105	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
8349895	Total Beryllium (Be)	2016/08/05	100	80 - 120	105	80 - 120	<0.000010	mg/L	NC	20
8349895	Total Bismuth (Bi)	2016/08/05	100	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8349895	Total Boron (B)	2016/08/05	102	80 - 120	110	80 - 120	<0.010	mg/L	NC	20
8349895	Total Cadmium (Cd)	2016/08/05	102	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8349895	Total Chromium (Cr)	2016/08/05	100	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
8349895	Total Cobalt (Co)	2016/08/05	94	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8349895	Total Copper (Cu)	2016/08/05	98	80 - 120	105	80 - 120	<0.000050	mg/L	NC	20
8349895	Total Iron (Fe)	2016/08/05	106	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20
8349895	Total Lead (Pb)	2016/08/05	104	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8349895	Total Lithium (Li)	2016/08/05	106	80 - 120	109	80 - 120	<0.00050	mg/L	NC	20
8349895	Total Manganese (Mn)	2016/08/05	101	80 - 120	106	80 - 120	<0.000050	mg/L	NC	20
8349895	Total Molybdenum (Mo)	2016/08/05	103	80 - 120	106	80 - 120	<0.000050	mg/L	NC	20
8349895	Total Nickel (Ni)	2016/08/05	100	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8349895	Total Phosphorus (P)	2016/08/06					<0.0020	mg/L		
8349895	Total Selenium (Se)	2016/08/05	102	80 - 120	108	80 - 120	<0.000040	mg/L	NC	20
8349895	Total Silicon (Si)	2016/08/05					<0.050	mg/L	NC	20
8349895	Total Silver (Ag)	2016/08/05	100	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8349895	Total Strontium (Sr)	2016/08/05	103	80 - 120	105	80 - 120	<0.000050	mg/L	NC	20
8349895	Total Thallium (Tl)	2016/08/05	101	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
8349895	Total Tin (Sn)	2016/08/05	94	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
8349895	Total Titanium (Ti)	2016/08/05	95	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8349895	Total Uranium (U)	2016/08/05	103	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
8349895	Total Vanadium (V)	2016/08/05	100	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
8349895	Total Zinc (Zn)	2016/08/05	100	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20
8349895	Total Zirconium (Zr)	2016/08/05					<0.00010	mg/L	NC	20
8349989	Total Mercury (Hg)	2016/08/03	92	80 - 120	90	80 - 120	<0.0000020	mg/L	NC	20
8350000	Total Phosphorus (P)	2016/08/03	93	80 - 120	100	80 - 120	<0.0020	mg/L	NC	20
8350070	Dissolved Aluminum (Al)	2016/08/04	107	80 - 120	116	80 - 120	<0.00050	mg/L	1.6	20
8350070	Dissolved Antimony (Sb)	2016/08/04	100	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
8350070	Dissolved Arsenic (As)	2016/08/04	99	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8350070	Dissolved Barium (Ba)	2016/08/04	NC	80 - 120	110	80 - 120	<0.000020	mg/L	0.046	20
8350070	Dissolved Beryllium (Be)	2016/08/04	101	80 - 120	106	80 - 120	<0.000010	mg/L	NC	20
8350070	Dissolved Bismuth (Bi)	2016/08/04	103	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8350070	Dissolved Boron (B)	2016/08/04	96	80 - 120	107	80 - 120	<0.010	mg/L	NC	20
8350070	Dissolved Cadmium (Cd)	2016/08/04	100	80 - 120	109	80 - 120	<0.0000050	mg/L	2.2	20
8350070	Dissolved Chromium (Cr)	2016/08/04	97	80 - 120	108	80 - 120	<0.00010	mg/L	NC	20
8350070	Dissolved Cobalt (Co)	2016/08/04	94	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8350070	Dissolved Copper (Cu)	2016/08/04	91	80 - 120	102	80 - 120	<0.000050	mg/L	1.2	20
8350070	Dissolved Iron (Fe)	2016/08/04	111	80 - 120	112	80 - 120	<0.0010	mg/L	NC	20
8350070	Dissolved Lead (Pb)	2016/08/04	102	80 - 120	109	80 - 120	<0.0000050	mg/L	NC	20
8350070	Dissolved Lithium (Li)	2016/08/04	100	80 - 120	109	80 - 120	<0.00050	mg/L	NC	20
8350070	Dissolved Manganese (Mn)	2016/08/04	96	80 - 120	109	80 - 120	<0.000050	mg/L	NC	20
8350070	Dissolved Molybdenum (Mo)	2016/08/04	NC	80 - 120	108	80 - 120	<0.000050	mg/L	2.9	20
8350070	Dissolved Nickel (Ni)	2016/08/04	95	80 - 120	107	80 - 120	<0.000020	mg/L	1.6	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8350070	Dissolved Phosphorus (P)	2016/08/04					<0.0020	mg/L	NC	20
8350070	Dissolved Selenium (Se)	2016/08/04	103	80 - 120	105	80 - 120	<0.000040	mg/L	2.8	20
8350070	Dissolved Silicon (Si)	2016/08/04					<0.050	mg/L	2.6	20
8350070	Dissolved Silver (Ag)	2016/08/04	101	80 - 120	109	80 - 120	<0.0000050	mg/L	NC	20
8350070	Dissolved Strontium (Sr)	2016/08/04	NC	80 - 120	101	80 - 120	<0.000050	mg/L	0.036	20
8350070	Dissolved Thallium (Tl)	2016/08/04	99	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
8350070	Dissolved Tin (Sn)	2016/08/04	101	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20
8350070	Dissolved Titanium (Ti)	2016/08/04	96	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8350070	Dissolved Uranium (U)	2016/08/04	106	80 - 120	111	80 - 120	<0.0000020	mg/L	1.6	20
8350070	Dissolved Vanadium (V)	2016/08/04	98	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20
8350070	Dissolved Zinc (Zn)	2016/08/04	NC	80 - 120	95	80 - 120	<0.00010	mg/L	0.21	20
8350070	Dissolved Zirconium (Zr)	2016/08/04					<0.00010	mg/L	NC	20
8350125	Total Aluminum (Al)	2016/08/05	104	80 - 120	110	80 - 120	<0.0030	mg/L	2.5	20
8350125	Total Antimony (Sb)	2016/08/05	103	80 - 120	99	80 - 120	<0.000020	mg/L	4.8	20
8350125	Total Arsenic (As)	2016/08/05	107	80 - 120	101	80 - 120	<0.000020	mg/L	5.5	20
8350125	Total Barium (Ba)	2016/08/05	NC	80 - 120	102	80 - 120	<0.000050	mg/L	0.53	20
8350125	Total Beryllium (Be)	2016/08/05	105	80 - 120	107	80 - 120	<0.000010	mg/L	NC	20
8350125	Total Bismuth (Bi)	2016/08/05	105	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20
8350125	Total Boron (B)	2016/08/05	97	80 - 120	102	80 - 120	<0.010	mg/L	NC	20
8350125	Total Cadmium (Cd)	2016/08/05	99	80 - 120	103	80 - 120	<0.0000050	mg/L	9.2	20
8350125	Total Chromium (Cr)	2016/08/05	103	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8350125	Total Cobalt (Co)	2016/08/05	99	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20
8350125	Total Copper (Cu)	2016/08/05	97	80 - 120	107	80 - 120	<0.00010	mg/L	NC	20
8350125	Total Iron (Fe)	2016/08/05	NC	80 - 120	105	80 - 120	<0.0050	mg/L	2.1	20
8350125	Total Lead (Pb)	2016/08/05	105	80 - 120	103	80 - 120	<0.000020	mg/L	0.29	20
8350125	Total Lithium (Li)	2016/08/05	NC	80 - 120	106	80 - 120	<0.00050	mg/L	1.2	20
8350125	Total Manganese (Mn)	2016/08/05	NC	80 - 120	103	80 - 120	<0.00010	mg/L	2.3	20
8350125	Total Molybdenum (Mo)	2016/08/05	106	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8350125	Total Nickel (Ni)	2016/08/05	99	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
8350125	Total Phosphorus (P)	2016/08/05					<0.0050	mg/L	NC	20
8350125	Total Selenium (Se)	2016/08/05	109	80 - 120	110	80 - 120	<0.000040	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8350125	Total Silicon (Si)	2016/08/05					<0.050	mg/L	1.3	20
8350125	Total Silver (Ag)	2016/08/05	102	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8350125	Total Strontium (Sr)	2016/08/05	NC	80 - 120	99	80 - 120	<0.000050	mg/L	2.8	20
8350125	Total Thallium (Tl)	2016/08/05	98	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8350125	Total Tin (Sn)	2016/08/05	100	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8350125	Total Titanium (Ti)	2016/08/05	93	80 - 120	96	80 - 120	<0.0020	mg/L	NC	20
8350125	Total Uranium (U)	2016/08/05	110	80 - 120	104	80 - 120	<0.0000050	mg/L	0.14	20
8350125	Total Vanadium (V)	2016/08/05	104	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8350125	Total Zinc (Zn)	2016/08/05	NC	80 - 120	107	80 - 120	<0.0010	mg/L	3.8	20
8350125	Total Zirconium (Zr)	2016/08/05					<0.00010	mg/L	NC	20
8350392	Acidity (pH 4.5)	2016/08/02					<0.50	mg/L	NC	20
8350392	Acidity (pH 8.3)	2016/08/02			104	80 - 120	<0.50	mg/L	NC	20
8355226	Total Ammonia (N)	2016/08/08	82	80 - 120	98	80 - 120	<0.0050	mg/L	NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B662843
Report Date: 2016/08/08

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Name Redacted Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY

COC #: 08425837

BBY FCD-00077/05

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: BMC MINERALS LTD.	Company Name: ALEXCO ENVIRONMENTAL	Quotation #: B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:	Contact Name: KAI WOLOSHYN	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 530-1130 WEST PENDER ST	Address: UNIT 3 151 INDUSTRIAL RD	Project #: BMC-15-01	Rush TAT (Surcharges will be applied)
Vancouver, BC PC: V6E 4A4	Whitehorse, YK PC: V1A 2V3	Site Location: Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:	Phone: (867) 668-6463	Site #:	
Email:	Email: kwoloshyn@alexcoresource.com	Sampled By: Signature Redacted	Date Required:
			Rush Confirmation #:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		2016/07/26	8:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3	KZ-6		2016/07/27	14:35	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
4	KZ-7		2016/07/27	12:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5	KZ-9		2016/07/27	8:10	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
6	KZ-13		2016/07/26	13:25	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
7	KZ-15		2016/07/26	9:45	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
8	KZ-16		2016/07/26	10:35	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
9	KZ-17		2016/07/26	11:25	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
10	KZ-19		—	—	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
	N/A	3,6,7
		8,7
		4,5,5

COOLING MEDIA PRESENT Y / N

B662843_COC

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2016/07/28	8:00	Signature Redacted	2016/07/29	09:20	B662843

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY I

COC #: 08425833

BBY FCD-00077/05

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL Y / N: Present / Intact

COOLER TEMPERATURES: N/A | 3,6,7 ; 8,7,7 ; 4,5,5

COOLING MEDIA PRESENT Y / N

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	~~KZ-21~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~11~~	
2	~~KZ-22~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~11~~	
3	~~KZ-26~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~11~~	
4	KZ-28		—	—	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	Trip Blank		—	—	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6																			
7																			
8																			
9																			
10																			

B662843_COC

COMMENTS

RECEIVED IN WHITEHORSE BY: Lylma @ 10:15 2016-07-28

cooler # 1 2 3

TEMP: 9 / 7 / 9 ; 9 / 7 / 9

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2016/07/28	8:00	Signature Redacted	2016/07/28	09:20	

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY

COC #: 08425838

BBY FCD-00077/05

Page 1

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Xudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:
						Rush Confirmation #:

Regulatory Criteria		Special Instructions
[ ] BC CSR Soil	[ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify)	[ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water	[ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	DISSOLVED LOW LEVEL METALS INCL. MERCURY	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-9_E-SEEP		2016/07/27	9:00	Water	x	x	x	x	4	
3	KZ-9_W-SEEP		2016/07/27	8:50	Water	x	x	x	x	4	
4	SEEP-3		2016/07/27	10:35	Water	x	x	x	x	4	
5	~~SEEP-4~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~		
6	SEEP-5		2016/07/27	9:30	Water	x	x	x	x	4	
7											
8											
9											
10											

LABORATORY USE ONLY

CUSTODY SEAL Y / N Present	Intact	COOLER TEMPERATURES
N/A		1.1.1

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Sylvana@1015
2016-07-28
TEMP: 9 / 9 / 9 cooler #

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2016/07/28	8:00	Signature Redacted	2016/07/29	09:20	B662693

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-16-01

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Your C.O.C. #: 502942-01-01, 502942-02-01, 503657-01-01

Report Date: 2016/09/09
Report #: R2257543
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B674606
Received: 2016/08/30, 10:35

Sample Matrix: Water
Samples Received: 20

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	10	N/A	2016/08/31	BBY6SOP-00037	SM 22 2310 B m
Acidity pH 4.5 & pH 8.3 (as CaCO3)	5	N/A	2016/09/01	BBY6SOP-00037	SM 22 2310 B m
Acidity pH 4.5 & pH 8.3 (as CaCO3)	5	N/A	2016/09/02	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	19	2016/09/01	2016/09/01	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	1	2016/09/01	2016/09/02	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	15	N/A	2016/08/31	BBY6SOP-00011	SM 22 4500-Cl- E m
Chloride by Automated Colourimetry	5	N/A	2016/09/06	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	20	N/A	2016/09/01	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	20	N/A	2016/09/01	BBY6SOP-00004	SM 22 4500-CN O m
COD by Colorimeter	5	2016/09/01	2016/09/02	BBY6SOP-00024	SM 22 5220 D m
Colour (True) by Kone Lab	20	N/A	2016/09/01	BBY6SOP-00057	SM 22 2120 C m
Carbon (DOC) - field filtered/preserved (1)	19	N/A	2016/09/07	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2016/09/07	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	19	N/A	2016/09/01	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	1	N/A	2016/09/02	BBY6SOP-00026	SM 22 2510 B m
Fluoride	20	N/A	2016/09/01	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	11	N/A	2016/09/02	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	1	N/A	2016/09/04	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	7	N/A	2016/09/06	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	1	N/A	2016/09/08	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	18	N/A	2016/09/02	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	1	N/A	2016/09/08	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	1	N/A	2016/09/09	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	20	N/A	2016/09/02	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	20	2016/09/02	2016/09/02	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Bromide as Bromine (Br) by ICPMS	5	N/A	2016/09/08	BBY7SOP-00002	EPA 6020B R2 m
Ion Balance	15	N/A	2016/09/02	BBY WI-00033	Auto Calc

Your Project #: BMC-16-01

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Your C.O.C. #: 502942-01-01, 502942-02-01, 503657-01-01

Report Date: 2016/09/09
Report #: R2257543
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B674606
Received: 2016/08/30, 10:35

Sample Matrix: Water
Samples Received: 20

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Ion Balance	3	N/A	2016/09/07	BBY WI-00033	Auto Calc
Ion Balance	1	N/A	2016/09/08	BBY WI-00033	Auto Calc
Ion Balance	1	N/A	2016/09/09	BBY WI-00033	Auto Calc
Sum of cations, anions	18	N/A	2016/09/02	Calc	
Sum of cations, anions	1	N/A	2016/09/08	Calc	
Sum of cations, anions	1	N/A	2016/09/09	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	18	N/A	2016/09/02	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2016/09/08	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2016/09/09	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	18	N/A	2016/09/02	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	2	N/A	2016/09/08	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	6	2016/09/01	2016/09/02	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Digested LL (total)	1	2016/09/01	2016/09/04	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Digested LL (total)	1	2016/09/02	2016/09/02	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	11	N/A	2016/09/02	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2016/09/04	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	7	N/A	2016/09/06	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2016/09/08	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	7	N/A	2016/09/01	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	4	N/A	2016/09/02	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	1	N/A	2016/09/08	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Nitrogen (Total)	5	2016/09/06	2016/09/06	BBY6SOP-00016	SM 22 4500-N C m
Ammonia-N (Unpreserved)	1	N/A	2016/08/31	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N Dissolved ((FF/FP)	1	N/A	2016/09/03	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	17	N/A	2016/09/03	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	1	N/A	2016/09/09	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	20	N/A	2016/09/01	BBY6SOP-00010	SM 22 4500-NO3- I m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-16-01

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Your C.O.C. #: 502942-01-01, 502942-02-01, 503657-01-01

Report Date: 2016/09/09
Report #: R2257543
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B674606
Received: 2016/08/30, 10:35

Sample Matrix: Water
Samples Received: 20

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrite (N) (low level)	20	N/A	2016/09/01	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	20	N/A	2016/09/02	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	19	N/A	2016/09/01	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	19	N/A	2016/09/01	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (2)	1	N/A	2016/09/02	BBY6SOP-00026	SM 22 4500-H+ B m
Orthophosphate by Konelab (low level)	5	N/A	2016/09/01	BBY6SOP-00013	SM 22 4500-P E m
Sulphate by Automated Colourimetry	15	N/A	2016/08/31	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	5	N/A	2016/09/06	BBY6SOP-00017	SM 22 4500-SO42- E m
Total Dissolved Solids - Low Level	5	N/A	2016/09/02	BBY6SOP-00033	SM 22 2540 C m
TKN (Calc. TN, N/N) total	5	N/A	2016/09/06	BBY WI-00033	Calculation
Carbon (Total Organic) (3)	5	N/A	2016/09/07	BBY6SOP-00003	SM 22 5310 C m
Phosphorus-P (LL Tot, dissolved) - UF/UP	19	2016/09/02	2016/09/02	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2016/09/08	2016/09/08	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	18	N/A	2016/09/02	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	2	N/A	2016/09/08	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	4	2016/08/31	2016/09/01	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	16	2016/09/01	2016/09/02	BBY6SOP-00034	SM 22 2540 D
Turbidity	5	N/A	2016/09/01	BBY6SOP-00027	SM 22 2130 B m

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.
(3) TOC present in the sample should be considered as non-purgeable TOC.

Your Project #: BMC-16-01

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Your C.O.C. #: 502942-01-01, 502942-02-01, 503657-01-01

Report Date: 2016/09/09
Report #: R2257543
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B674606
Received: 2016/08/30, 10:35

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK1911		PK1912		PK1913		
Sampling Date		2016/08/27 16:50		2016/08/26 15:00		2016/08/26 14:00		
COC Number		502942-01-01		502942-01-01		502942-01-01		
	UNITS	KZ-19	QC Batch	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	0.018	8383492	4.1	8383492	3.6	N/A	8383492
Cation Sum	meq/L	0.0019	8383492	4.5	8383492	3.7	N/A	8383492
Filter and HNO3 Preservation	N/A	LAB	8384538	LAB	8384538	LAB	N/A	8384538
Ion Balance	N/A	0.11 (1)	8383480	1.1	8383480	1.0	0.010	8383480
Nitrate (N)	mg/L	<0.0020	8383493	0.0044	8383493	0.0118	0.0020	8383493
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8384775	<0.00050	8384775	<0.00050	0.00050	8384775
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8384787	<0.00050	8384787	<0.00050	0.00050	8384787
Fluoride (F)	mg/L	0.011	8384568	0.130	8384568	0.096	0.010	8384568
Dissolved Organic Carbon (C)	mg/L	<0.50	8390300	11.1	8390300	5.14	0.50	8390296
Acidity (pH 4.5)	mg/L	<0.50	8383764	<0.50	8383764	<0.50	0.50	8383764
Alkalinity (Total as CaCO3)	mg/L	<0.50	8384947	169	8384947	147	0.50	8384947
Acidity (pH 8.3)	mg/L	<0.50	8383764	<0.50	8383764	<0.50	0.50	8383764
Alkalinity (PP as CaCO3)	mg/L	<0.50	8384947	<0.50	8384947	<0.50	0.50	8384947
Bicarbonate (HCO3)	mg/L	<0.50	8384947	207	8384947	179	0.50	8384947
Carbonate (CO3)	mg/L	<0.50	8384947	<0.50	8384947	<0.50	0.50	8384947
Hydroxide (OH)	mg/L	<0.50	8384947	<0.50	8384947	<0.50	0.50	8384947
Anions								
Dissolved Sulphate (SO4)	mg/L	<0.50	8384797	32.4	8384797	29.7	0.50	8384797
Dissolved Chloride (Cl)	mg/L	0.60	8384796	0.97	8384796	0.75	0.50	8384796
MISCELLANEOUS								
True Colour	Col. Unit	<5.0 (2)	8384556	42.4 (3)	8384556	18.3 (3)	5.0	8384556
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020 (2)	8386949	0.191 (3)	8386949	0.0726 (3)	0.0020	8386949
Total Ammonia (N)	mg/L	<0.0050	8392042	0.039	8387304	0.030	0.0050	8387298

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(3) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK1911		PK1912		PK1913		
Sampling Date		2016/08/27 16:50		2016/08/26 15:00		2016/08/26 14:00		
COC Number		502942-01-01		502942-01-01		502942-01-01		
	UNITS	KZ-19	QC Batch	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Nitrate plus Nitrite (N)	mg/L	<0.0020 (1)	8385360	0.0044 (2)	8385360	0.0118 (2)	0.0020	8385360
Nitrite (N)	mg/L	<0.0020 (1)	8385384	<0.0020 (2)	8385384	<0.0020 (2)	0.0020	8385384
Total Phosphorus (P)	mg/L	<0.0020 (1)	8386952	0.194 (2)	8386952	0.0683 (2)	0.0020	8386952
Physical Properties								
Conductivity	uS/cm	1.2	8384957	389	8384957	333	1.0	8384957
pH	pH	5.71	8384956	8.18	8384956	8.21		8384956
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8383802	81.5	8383802	33.8 (3)	1.0	8383802

RDL = Reportable Detection Limit

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(2) Sample arrived to laboratory past recommended hold time.

(3) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK1914			PK1915		PK1916		
Sampling Date		2016/08/26 14:15			2016/08/27 15:33		2016/08/30 10:35		
COC Number		502942-01-01			502942-01-01		502942-01-01		
	UNITS	KZ-28	RDL	QC Batch	KZ-6	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	3.6	N/A	8383492	2.7	8383492	0.00060	N/A	8383492
Cation Sum	meq/L	3.6	N/A	8383492	2.4	8383492	0.0036	N/A	8383492
Filter and HNO3 Preservation	N/A	LAB	N/A	8384538	LAB	8384538		N/A	8384538
Ion Balance	N/A	1.0	0.010	8383480	0.88	8383480	NC	0.010	8383480
Nitrate (N)	mg/L	0.0138	0.0020	8383493	0.0046	8383493	<0.0020	0.0020	8383493
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8384775	<0.00050	8384775	<0.00050	0.00050	8384775
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8384787	<0.00050	8384787	<0.00050	0.00050	8384787
Fluoride (F)	mg/L	0.095	0.010	8384568	0.051	8384568	0.011	0.010	8384568
Dissolved Organic Carbon (C)	mg/L	5.50	0.50	8390300	3.67	8390296	<0.50 (1)	0.50	8390148
Acidity (pH 4.5)	mg/L	<0.50	0.50	8383764	<0.50	8383764	<0.50	0.50	8383764
Alkalinity (Total as CaCO3)	mg/L	147	0.50	8384947	120	8384947	<0.50	0.50	8384947
Acidity (pH 8.3)	mg/L	<0.50	0.50	8383764	<0.50	8383764	<0.50	0.50	8383764
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8384947	<0.50	8384947	<0.50	0.50	8384947
Bicarbonate (HCO3)	mg/L	179	0.50	8384947	147	8384947	<0.50	0.50	8384947
Carbonate (CO3)	mg/L	<0.50	0.50	8384947	<0.50	8384947	<0.50	0.50	8384947
Hydroxide (OH)	mg/L	<0.50	0.50	8384947	<0.50	8384947	<0.50	0.50	8384947
Anions									
Dissolved Sulphate (SO4)	mg/L	29.5	0.50	8384797	13.8	8384797	<0.50	0.50	8384797
Dissolved Chloride (Cl)	mg/L	0.79	0.50	8384796	0.98	8384796	<0.50	0.50	8384796
MISCELLANEOUS									
True Colour	Col. Unit	17.8 (2)	5.0	8384556	19.7 (3)	8384556	<5.0	5.0	8384556
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0472 (2)	0.0020	8386949	0.0071 (3)	8386949	<0.0020	0.0020	8386949
Total Ammonia (N)	mg/L	0.045	0.0050	8387298	0.015	8387303	<0.0050	0.0050	8382961
Nitrate plus Nitrite (N)	mg/L	0.0138 (2)	0.0020	8385360	0.0046 (3)	8385360	<0.0020	0.0020	8385360

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.
(2) Sample arrived to laboratory past recommended hold time.
(3) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK1914			PK1915		PK1916		
Sampling Date		2016/08/26 14:15			2016/08/27 15:33		2016/08/30 10:35		
COC Number		502942-01-01			502942-01-01		502942-01-01		
	UNITS	KZ-28	RDL	QC Batch	KZ-6	QC Batch	TRIP BLANK	RDL	QC Batch
Nitrite (N)	mg/L	<0.0020 (1)	0.0020	8385384	<0.0020 (2)	8385384	<0.0020	0.0020	8385384
Total Phosphorus (P)	mg/L	0.0498 (1)	0.0020	8386952	0.0065 (2)	8386952	<0.0020	0.0020	8386952
Physical Properties									
Conductivity	uS/cm	331	1.0	8384957	229	8384957	1.2	1.0	8384957
pH	pH	8.21		8384956	8.17	8384956	5.44		8384956
Physical Properties									
Total Suspended Solids	mg/L	43.4 (3)	1.1	8383802	1.5	8383845	<1.0	1.0	8383845

RDL = Reportable Detection Limit

(1) Sample arrived to laboratory past recommended hold time.

(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(3) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK1917		PK1918		PK1919		
Sampling Date		2016/08/27 16:30		2016/08/26 12:15		2016/08/27 14:32		
COC Number		502942-01-01		502942-01-01		502942-01-01		
	UNITS	KZ-2	QC Batch	KZ-26	QC Batch	KZ-7	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	1.7	8383492	4.0	8383492	2.4	N/A	8383492
Cation Sum	meq/L	1.7	8383492	4.1	8383492	2.6	N/A	8383492
Filter and HNO3 Preservation	N/A	LAB	8384538	LAB	8384538	LAB	N/A	8384538
Ion Balance	N/A	1.0	8383480	1.0	8383480	1.1	0.010	8383480
Nitrate (N)	mg/L	0.105	8383493	0.0124	8383493	0.0157	0.0020	8383493
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8384775	<0.00050	8384775	<0.00050	0.00050	8384775
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8384787	<0.00050	8384787	<0.00050	0.00050	8384787
Fluoride (F)	mg/L	0.033	8384568	0.099	8384568	0.047	0.010	8384568
Dissolved Organic Carbon (C)	mg/L	2.07	8390300	5.08	8390296	2.92	0.50	8390296
Acidity (pH 4.5)	mg/L	<0.50	8383764	<0.50	8383764	<0.50	0.50	8383764
Alkalinity (Total as CaCO3)	mg/L	38.9	8384947	166	8384947	85.6	0.50	8385000
Acidity (pH 8.3)	mg/L	<0.50	8383764	<0.50	8383764	<0.50	0.50	8383764
Alkalinity (PP as CaCO3)	mg/L	<0.50	8384947	<0.50	8384947	<0.50	0.50	8385000
Bicarbonate (HCO3)	mg/L	47.4	8384947	203	8384947	104	0.50	8385000
Carbonate (CO3)	mg/L	<0.50	8384947	<0.50	8384947	<0.50	0.50	8385000
Hydroxide (OH)	mg/L	<0.50	8384947	<0.50	8384947	<0.50	0.50	8385000
Anions								
Dissolved Sulphate (SO4)	mg/L	42.2	8384797	31.9	8384797	33.6	0.50	8384797
Dissolved Chloride (Cl)	mg/L	0.60	8384796	0.96	8384796	0.90	0.50	8384796
MISCELLANEOUS								
True Colour	Col. Unit	<5.0 (1)	8384556	14.6 (2)	8384556	15.9 (1)	5.0	8384556
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0081 (1)	8386947	0.0354 (2)	8386949	0.0175 (1)	0.0020	8386947
Total Ammonia (N)	mg/L	0.015	8387303	0.011	8387303	0.052	0.0050	8387298
Nitrate plus Nitrite (N)	mg/L	0.105 (1)	8385360	0.0124 (2)	8385360	0.0187 (1)	0.0020	8385360
Nitrite (N)	mg/L	<0.0020 (1)	8385384	<0.0020 (2)	8385384	0.0030 (1)	0.0020	8385384

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(2) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK1917		PK1918		PK1919		
Sampling Date		2016/08/27 16:30		2016/08/26 12:15		2016/08/27 14:32		
COC Number		502942-01-01		502942-01-01		502942-01-01		
	UNITS	KZ-2	QC Batch	KZ-26	QC Batch	KZ-7	RDL	QC Batch
Total Phosphorus (P)	mg/L	0.0069 (1)	8386952	0.0371 (2)	8386952	0.0180 (1)	0.0020	8386952
Physical Properties								
Conductivity	uS/cm	179	8384957	368	8384957	248	1.0	8385004
pH	pH	7.76	8384956	8.29	8384956	8.11		8385003
Physical Properties								
Total Suspended Solids	mg/L	9.9	8383845	29.0	8383845	8.8	1.0	8383845

RDL = Reportable Detection Limit

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(2) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK1920		PK1921		PK1922		
Sampling Date		2016/08/27 11:55		2016/08/28 07:35		2016/08/27 07:30		
COC Number		502942-01-01		502942-02-01		502942-02-01		
	UNITS	KZ-9	QC Batch	KZ-13	QC Batch	KZ-15	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.5	8383492	1.4	8383492	2.1	N/A	8383492
Cation Sum	meq/L	2.6	8383492	1.4	8383492	2.2	N/A	8383492
Filter and HNO3 Preservation	N/A	LAB	8384538	LAB	8384538	LAB	N/A	8384538
Ion Balance	N/A	1.1	8383480	1.0	8383480	1.0	0.010	8383480
Nitrate (N)	mg/L	0.0197	8383493	0.0452	8383493	0.0221	0.0020	8383493
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8384775	<0.00050	8384775	<0.00050	0.00050	8384775
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8384787	<0.00050	8384787	<0.00050	0.00050	8384787
Fluoride (F)	mg/L	0.054	8384568	0.042	8384568	0.052	0.010	8384568
Dissolved Organic Carbon (C)	mg/L	3.93	8390296	4.63	8390296	4.13	0.50	8390296
Acidity (pH 4.5)	mg/L	<0.50	8383764	<0.50	8383764	<0.50	0.50	8383764
Alkalinity (Total as CaCO3)	mg/L	92.9	8384947	54.4	8384947	81.6	0.50	8384947
Acidity (pH 8.3)	mg/L	<0.50	8383764	<0.50	8383764	<0.50	0.50	8383764
Alkalinity (PP as CaCO3)	mg/L	<0.50	8384947	<0.50	8384947	<0.50	0.50	8384947
Bicarbonate (HCO3)	mg/L	113	8384947	66.4	8384947	99.6	0.50	8384947
Carbonate (CO3)	mg/L	<0.50	8384947	<0.50	8384947	<0.50	0.50	8384947
Hydroxide (OH)	mg/L	<0.50	8384947	<0.50	8384947	<0.50	0.50	8384947
Anions								
Dissolved Sulphate (SO4)	mg/L	30.3	8384797	11.5	8384797	22.6	0.50	8384797
Dissolved Chloride (Cl)	mg/L	0.71	8384796	0.72	8384796	0.96	0.50	8384796
MISCELLANEOUS								
True Colour	Col. Unit	15.5 (1)	8384556	11.8 (2)	8384556	18.0 (1)	5.0	8384556
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0231 (1)	8386949	0.0088 (3)	8386949	0.0062 (1)	0.0020	8386949
Total Ammonia (N)	mg/L	0.10	8387304	0.030	8387299	0.11	0.0050	8387304
Nitrate plus Nitrite (N)	mg/L	0.0220 (1)	8385360	0.0452 (2)	8385360	0.0221 (1)	0.0020	8385360

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.
(2) Sample analysed past recommended hold time.
(3) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK1920		PK1921		PK1922		
Sampling Date		2016/08/27 11:55		2016/08/28 07:35		2016/08/27 07:30		
COC Number		502942-01-01		502942-02-01		502942-02-01		
	UNITS	KZ-9	QC Batch	KZ-13	QC Batch	KZ-15	RDL	QC Batch
Nitrite (N)	mg/L	0.0023 (1)	8385384	<0.0020 (2)	8385384	<0.0020 (1)	0.0020	8385384
Total Phosphorus (P)	mg/L	0.0308 (3)	8391524	<0.0020 (4)	8386952	0.0069 (1)	0.0020	8386952
Physical Properties								
Conductivity	uS/cm	251	8384957	135	8384957	208	1.0	8384957
pH	pH	8.05	8384956	7.95	8384956	8.05		8384956
Physical Properties								
Total Suspended Solids	mg/L	19.1	8383845	3.0	8383845	4.7	1.0	8383845

RDL = Reportable Detection Limit

(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(2) Sample analysed past recommended hold time.

(3) Sample arrived to laboratory past recommended hold time.

(4) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK1923		PK1924			PK1925		
Sampling Date		2016/08/27 08:20		2016/08/27 09:04			2016/08/27 12:07		
COC Number		502942-02-01		502942-02-01			502942-02-01		
	UNITS	KZ-16	QC Batch	KZ-17	RDL	QC Batch	KZ-18	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	1.8	8383492	3.0	N/A	8383492	3.6	N/A	8383492
Cation Sum	meq/L	1.8	8383492	3.0	N/A	8383492	3.8	N/A	8383492
Filter and HNO3 Preservation	N/A	LAB	8384538	LAB	N/A	8384538	LAB	N/A	8384538
Ion Balance	N/A	1.0	8383480	1.0	0.010	8383480	1.0	0.010	8383480
Nitrate (N)	mg/L	0.0248	8383493	0.0189	0.0020	8383493	0.0415	0.0020	8383493
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8384775	<0.00050	0.00050	8384775	<0.00050	0.00050	8384775
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8384787	<0.00050	0.00050	8384787	<0.00050	0.00050	8384787
Fluoride (F)	mg/L	0.042	8384568	0.082	0.010	8384568	0.061	0.010	8384568
Dissolved Organic Carbon (C)	mg/L	3.62	8390296	4.79	0.50	8390296	3.14	0.50	8390294
Acidity (pH 4.5)	mg/L	<0.50	8383764	<0.50	0.50	8383764	<0.50	0.50	8383764
Alkalinity (Total as CaCO3)	mg/L	68.0	8384947	118	0.50	8384947	161	0.50	8384947
Acidity (pH 8.3)	mg/L	<0.50	8383764	<0.50	0.50	8383764	1.13	0.50	8383764
Alkalinity (PP as CaCO3)	mg/L	<0.50	8384947	<0.50	0.50	8384947	<0.50	0.50	8384947
Bicarbonate (HCO3)	mg/L	83.0	8384947	144	0.50	8384947	196	0.50	8384947
Carbonate (CO3)	mg/L	<0.50	8384947	<0.50	0.50	8384947	<0.50	0.50	8384947
Hydroxide (OH)	mg/L	<0.50	8384947	<0.50	0.50	8384947	<0.50	0.50	8384947
Anions									
Dissolved Sulphate (SO4)	mg/L	21.2	8384797	26.6	0.50	8384797	17.9	0.50	8384797
Dissolved Chloride (Cl)	mg/L	0.95	8384796	1.1	0.50	8384796	0.72	0.50	8384796
MISCELLANEOUS									
True Colour	Col. Unit	15.5 (1)	8384556	16.0 (1)	5.0	8384556	12.3 (1)	5.0	8384556
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0046 (1)	8386949	0.0096 (1)	0.0020	8386949	0.0206 (1)	0.0020	8386949
Total Ammonia (N)	mg/L	0.033	8387299	0.028	0.0050	8387304	0.014	0.0050	8387304
Nitrate plus Nitrite (N)	mg/L	0.0248 (1)	8385360	0.0189 (1)	0.0020	8385360	0.0415 (1)	0.0020	8385360
Nitrite (N)	mg/L	<0.0020 (1)	8385384	<0.0020 (1)	0.0020	8385384	<0.0020 (1)	0.0020	8385384
Total Phosphorus (P)	mg/L	0.0040 (1)	8386952	0.0096 (1)	0.0020	8386952	0.0206 (1)	0.0020	8386952

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK1923		PK1924			PK1925		
Sampling Date		2016/08/27 08:20		2016/08/27 09:04			2016/08/27 12:07		
COC Number		502942-02-01		502942-02-01			502942-02-01		
	UNITS	KZ-16	QC Batch	KZ-17	RDL	QC Batch	KZ-18	RDL	QC Batch
Physical Properties									
Conductivity	uS/cm	183	8384957	282	1.0	8384957	339	1.0	8384957
pH	pH	8.00	8384956	8.14		8384956	8.04		8384956
Physical Properties									
Total Suspended Solids	mg/L	2.1	8383845	5.6	1.0	8383845	1.3 (1)	1.2	8383845

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK2591			PK2592		
Sampling Date		2016/08/27 11:20			2016/08/27 12:30		
COC Number		503657-01-01			503657-01-01		
	UNITS	KZ-9 WEST SEEP	RDL	QC Batch	KZ-9 EAST SEEP	RDL	QC Batch
Calculated Parameters							
Anion Sum	meq/L	4.9	N/A	8383492	14	N/A	8390534
Cation Sum	meq/L	4.8	N/A	8383492	18	N/A	8390534
Filter and HNO3 Preservation	N/A	LAB	N/A	8384538	LAB	N/A	8384538
Ion Balance	N/A	1.0	0.010	8383480	1.3 (1)	0.010	8390533
Nitrate (N)	mg/L	0.390	0.0020	8383918	0.0489	0.0020	8383918
Demand Parameters							
Chemical Oxygen Demand	mg/L	<10	10	8384442	<10	10	8384442
Misc. Inorganics							
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8384775	<0.00050	0.00050	8384775
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8384787	<0.00050	0.00050	8384787
Fluoride (F)	mg/L	0.067	0.010	8384579	0.970	0.010	8384579
Dissolved Organic Carbon (C)	mg/L	0.91	0.50	8390296	<0.50	0.50	8390296
Acidity (pH 4.5)	mg/L	<0.50	0.50	8386197	<0.50	0.50	8386197
Alkalinity (Total as CaCO3)	mg/L	213	0.50	8384980	686	0.50	8384980
Total Organic Carbon (C)	mg/L	1.03	0.50	8390286	2.71	0.50	8390286
Acidity (pH 8.3)	mg/L	1.50	0.50	8386197	131	0.50	8386197
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8384980	<0.50	0.50	8384980
Bicarbonate (HCO3)	mg/L	260	0.50	8384980	836	0.50	8384980
Carbonate (CO3)	mg/L	<0.50	0.50	8384980	<0.50	0.50	8384980
Hydroxide (OH)	mg/L	<0.50	0.50	8384980	<0.50	0.50	8384980
Anions							
Orthophosphate (P)	mg/L	<0.0010 (2)	0.0010	8384843	0.0022 (2)	0.0010	8384843
Dissolved Sulphate (SO4)	mg/L	26.0	0.50	8389104	16.2	0.50	8389104
Dissolved Chloride (Cl)	mg/L	0.77	0.50	8389102	1.4	0.50	8389102
MISCELLANEOUS							
True Colour	Col. Unit	<5.0	5.0	8384569	80.5 (2)	5.0	8384569

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Anion - Cation balance exceeds normal acceptance limits, major ions reanalyzed, possible matrix interference

(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK2591			PK2592		
Sampling Date		2016/08/27 11:20			2016/08/27 12:30		
COC Number		503657-01-01			503657-01-01		
	UNITS	KZ-9 WEST SEEP	RDL	QC Batch	KZ-9 EAST SEEP	RDL	QC Batch
Nutrients							
Dissolved Ammonia (N)	mg/L		0.0050		0.079	0.0050	8387315
Dissolved Phosphorus (P)	mg/L	0.0071 (1)	0.0020	8391522	0.0138 (2)	0.0020	8386948
Total Total Kjeldahl Nitrogen (Calc)	mg/L	0.078	0.020	8383315	0.148	0.020	8383315
Total Ammonia (N)	mg/L	0.070	0.0050	8387300		0.0050	
Nitrate plus Nitrite (N)	mg/L	0.392 (2)	0.0020	8385393	0.0489 (2)	0.0020	8385393
Nitrite (N)	mg/L	0.0024 (2)	0.0020	8385394	<0.0020 (2)	0.0020	8385394
Total Nitrogen (N)	mg/L	0.470	0.020	8389177	0.197	0.020	8389177
Total Phosphorus (P)	mg/L	0.0081 (1)	0.0020	8391524	0.0116 (2)	0.0020	8386952
Physical Properties							
Conductivity	uS/cm	457	1.0	8384985	1260	1.0	8384985
pH	pH	8.14		8384984	6.70		8384984
Physical Properties							
Total Suspended Solids	mg/L	2.1	1.0	8385244	68.6 (3)	1.1	8385244
Total Dissolved Solids	mg/L	262	1.0	8384591	700	1.0	8384591
Turbidity	NTU	0.49 (2)	0.10	8384575	9.49 (2)	0.10	8384575

RDL = Reportable Detection Limit

(1) Sample arrived to laboratory past recommended hold time.

(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

(3) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK2593		PK2594		PK2595		
Sampling Date		2016/08/28 18:05		2016/08/27 15:55		2016/08/27 14:13		
COC Number		503657-01-01		503657-01-01		503657-01-01		
	UNITS	SEEP 3	QC Batch	SEEP 4	QC Batch	SEEP 5	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	3.3	8392851	3.2	8383492	2.3	N/A	8383492
Cation Sum	meq/L	3.3	8392851	3.3	8383492	2.4	N/A	8383492
Filter and HNO3 Preservation	N/A	LAB	8384538	LAB	8384538	LAB	N/A	8384538
Ion Balance	N/A	0.98	8392850	1.0	8383480	1.1	0.010	8383480
Nitrate (N)	mg/L	0.587	8383918	0.378	8383918	<0.0020	0.0020	8383918
Demand Parameters								
Chemical Oxygen Demand	mg/L	<10	8384442	10	8384442	18	10	8384442
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8384775	<0.00050	8384775	0.00113	0.00050	8384775
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8384787	<0.00050	8384787	0.00115	0.00050	8384787
Fluoride (F)	mg/L	0.032	8384579	0.038	8384579	0.084	0.010	8384572
Dissolved Organic Carbon (C)	mg/L	1.43	8390296	1.80	8390296	9.67	0.50	8390296
Acidity (pH 4.5)	mg/L	<0.50	8386197	<0.50	8386197	<0.50	0.50	8386197
Alkalinity (Total as CaCO3)	mg/L	133	8384980	118	8384980	92.8	0.50	8384980
Total Organic Carbon (C)	mg/L	1.28	8390286	5.40	8390286	9.70	0.50	8390286
Acidity (pH 8.3)	mg/L	<0.50	8386197	0.67	8386197	6.37	0.50	8386197
Alkalinity (PP as CaCO3)	mg/L	<0.50	8384980	<0.50	8384980	<0.50	0.50	8384980
Bicarbonate (HCO3)	mg/L	163	8384980	144	8384980	113	0.50	8384980
Carbonate (CO3)	mg/L	<0.50	8384980	<0.50	8384980	<0.50	0.50	8384980
Hydroxide (OH)	mg/L	<0.50	8384980	<0.50	8384980	<0.50	0.50	8384980
Anions								
Orthophosphate (P)	mg/L	<0.0010 (1)	8384843	<0.0010 (2)	8384843	0.0052 (2)	0.0010	8384843
Dissolved Sulphate (SO4)	mg/L	27.7	8389104	38.4	8389104	17.7	0.50	8389104
Dissolved Chloride (Cl)	mg/L	0.75	8389102	<0.50	8389102	2.6	0.50	8389102
MISCELLANEOUS								
True Colour	Col. Unit	5.2 (1)	8384569	6.9 (2)	8384569	64.6 (2)	5.0	8384569
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	8386948	0.0031 (2)	8386948	0.0227 (2)	0.0020	8386948

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Sample analysed past recommended hold time.

(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PK2593		PK2594		PK2595		
Sampling Date		2016/08/28 18:05		2016/08/27 15:55		2016/08/27 14:13		
COC Number		503657-01-01		503657-01-01		503657-01-01		
	UNITS	SEEP 3	QC Batch	SEEP 4	QC Batch	SEEP 5	RDL	QC Batch
Total Total Kjeldahl Nitrogen (Calc)	mg/L	<0.020	8383315	0.145	8383315	0.439	0.020	8383315
Total Ammonia (N)	mg/L	0.017	8387300	0.036	8387300	0.16	0.0050	8387300
Nitrate plus Nitrite (N)	mg/L	0.587 (1)	8385393	0.378 (2)	8385393	0.0025 (2)	0.0020	8385385
Nitrite (N)	mg/L	<0.0020 (1)	8385394	<0.0020 (2)	8385394	0.0030 (2)	0.0020	8385386
Total Nitrogen (N)	mg/L	0.603	8389177	0.523	8389177	0.442	0.020	8389177
Total Phosphorus (P)	mg/L	<0.0020 (1)	8386951	0.0061 (2)	8386951	0.0223 (2)	0.0020	8386951
Physical Properties								
Conductivity	uS/cm	319	8384985	320	8384985	233	1.0	8384985
pH	pH	8.19	8384984	8.06	8384984	7.56		8384984
Physical Properties								
Total Suspended Solids	mg/L	1.4	8385244	8.4	8385244	3.1	1.0	8385244
Total Dissolved Solids	mg/L	190	8384591	198	8384591	132	1.0	8384591
Turbidity	NTU	0.19 (1)	8384575	0.25 (2)	8384575	7.29 (2)	0.10	8384575

RDL = Reportable Detection Limit

(1) Sample analysed past recommended hold time.

(2) Sample analysed past hold time: sample was received on the hold time expiry date which did not allow sufficient time for preparation and analysis.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		PK2591	PK2592	PK2593	PK2594	PK2595		
Sampling Date		2016/08/27 11:20	2016/08/27 12:30	2016/08/28 18:05	2016/08/27 15:55	2016/08/27 14:13		
COC Number		503657-01-01	503657-01-01	503657-01-01	503657-01-01	503657-01-01		
	UNITS	KZ-9 WEST SEEP	KZ-9 EAST SEEP	SEEP 3	SEEP 4	SEEP 5	RDL	QC Batch
ANIONS								
Bromide (Br)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8390650
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PK1911		PK1912	PK1913	PK1914		
Sampling Date		2016/08/27 16:50		2016/08/26 15:00	2016/08/26 14:00	2016/08/26 14:15		
COC Number		502942-01-01		502942-01-01	502942-01-01	502942-01-01		
	UNITS	KZ-19	QC Batch	KZ-21	KZ-22	KZ-28	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	<0.50	8383209	219	183	178	0.50	8383209
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8386342	<0.0000020	<0.0000020	<0.0000020	0.0000020	8386342
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	<0.00050	8385058	0.00349	0.00163	0.00191	0.00050	8385058
Dissolved Antimony (Sb)	mg/L	<0.000020	8385058	0.000134	0.000064	0.000069	0.000020	8385058
Dissolved Arsenic (As)	mg/L	<0.000020	8385058	0.00169	0.00102	0.000996	0.000020	8385058
Dissolved Barium (Ba)	mg/L	<0.000020	8392434	0.0529	0.0554	0.0562	0.000020	8385058
Dissolved Beryllium (Be)	mg/L	<0.000010	8385058	<0.000010	<0.000010	<0.000010	0.000010	8385058
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8385058	<0.0000050	<0.0000050	<0.0000050	0.0000050	8385058
Dissolved Boron (B)	mg/L	<0.010	8385058	<0.010	<0.010	<0.010	0.010	8385058
Dissolved Cadmium (Cd)	mg/L	<0.0000050	8385058	0.0000060	0.0000050	0.0000060	0.0000050	8385058
Dissolved Chromium (Cr)	mg/L	<0.00010	8385058	<0.00010	<0.00010	<0.00010	0.00010	8385058
Dissolved Cobalt (Co)	mg/L	<0.0000050	8385058	0.0000210	0.0000100	0.0000150	0.0000050	8385058
Dissolved Copper (Cu)	mg/L	<0.000050	8385058	0.000792	0.000545	0.000571	0.000050	8385058
Dissolved Iron (Fe)	mg/L	<0.0010	8385058	0.156	0.0559	0.0591	0.0010	8385058
Dissolved Lead (Pb)	mg/L	<0.0000050	8385058	0.0000110	<0.0000050	0.0000170	0.0000050	8385058
Dissolved Lithium (Li)	mg/L	<0.00050	8385058	0.00342	0.00303	0.00274	0.00050	8385058
Dissolved Manganese (Mn)	mg/L	<0.000050	8385058	0.00195	0.000612	0.00118	0.000050	8385058
Dissolved Molybdenum (Mo)	mg/L	<0.000050	8385058	0.00135	0.000939	0.000927	0.000050	8385058
Dissolved Nickel (Ni)	mg/L	<0.000020	8385058	0.00296	0.00126	0.00129	0.000020	8385058
Dissolved Phosphorus (P)	mg/L	<0.0020	8385058	0.0082	0.0065	0.0028	0.0020	8385058
Dissolved Selenium (Se)	mg/L	<0.000040	8385058	0.000414	0.000417	0.000410	0.000040	8385058
Dissolved Silicon (Si)	mg/L	<0.050	8385058	4.12	3.22	3.22	0.050	8385058
Dissolved Silver (Ag)	mg/L	<0.0000050	8385058	<0.0000050	<0.0000050	<0.0000050	0.0000050	8385058
Dissolved Strontium (Sr)	mg/L	<0.000050	8392434	0.162	0.165	0.159	0.000050	8385058
Dissolved Thallium (Tl)	mg/L	<0.0000020	8385058	<0.0000020	<0.0000020	<0.0000020	0.0000020	8385058
Dissolved Tin (Sn)	mg/L	<0.00020	8385058	<0.00020	<0.00020	<0.00020	0.00020	8385058
Dissolved Titanium (Ti)	mg/L	<0.00050	8385058	<0.00050	<0.00050	<0.00050	0.00050	8385058
Dissolved Uranium (U)	mg/L	<0.0000020	8385058	0.00231	0.00177	0.00172	0.0000020	8385058
Dissolved Vanadium (V)	mg/L	<0.00020	8385058	<0.00020	<0.00020	<0.00020	0.00020	8385058

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PK1911		PK1912	PK1913	PK1914		
Sampling Date		2016/08/27 16:50		2016/08/26 15:00	2016/08/26 14:00	2016/08/26 14:15		
COC Number		502942-01-01		502942-01-01	502942-01-01	502942-01-01		
	UNITS	KZ-19	QC Batch	KZ-21	KZ-22	KZ-28	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	<0.00010	8385058	0.00089	0.00052	0.00079	0.00010	8385058
Dissolved Zirconium (Zr)	mg/L	<0.00010	8385058	0.00013	<0.00010	<0.00010	0.00010	8385058
Dissolved Calcium (Ca)	mg/L	<0.050	8383437	54.2	51.2	48.0	0.050	8383437
Dissolved Magnesium (Mg)	mg/L	<0.050	8383437	20.3	13.5	14.0	0.050	8383437
Dissolved Potassium (K)	mg/L	<0.050	8383437	1.03	1.11	1.10	0.050	8383437
Dissolved Sodium (Na)	mg/L	<0.050	8383437	1.27	1.07	1.09	0.050	8383437
Dissolved Sulphur (S)	mg/L	<3.0	8383437	11.8	9.5	9.8	3.0	8383437
RDL = Reportable Detection Limit								

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PK1915	PK1916	PK1917	PK1918	PK1919		
Sampling Date		2016/08/27 15:33	2016/08/30 10:35	2016/08/27 16:30	2016/08/26 12:15	2016/08/27 14:32		
COC Number		502942-01-01	502942-01-01	502942-01-01	502942-01-01	502942-01-01		
	UNITS	KZ-6	TRIP BLANK	KZ-2	KZ-26	KZ-7	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	118	<0.50	80.9	202	125	0.50	8383209
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8386342
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00465	<0.00050	0.0221	0.00304	0.00748	0.00050	8385058
Dissolved Antimony (Sb)	mg/L	<0.000020	<0.000020	0.000032	0.000091	0.000072	0.000020	8385058
Dissolved Arsenic (As)	mg/L	0.000093	<0.000020	0.000109	0.000863	0.000288	0.000020	8385058
Dissolved Barium (Ba)	mg/L	0.0340	<0.000020	0.0455	0.0663	0.0555	0.000020	8385058
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8385058
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8385058
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8385058
Dissolved Cadmium (Cd)	mg/L	0.0000120	<0.0000050	0.000542	0.0000080	0.000151	0.0000050	8385058
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8385058
Dissolved Cobalt (Co)	mg/L	0.0000150	<0.0000050	0.000106	0.0000170	0.0000240	0.0000050	8385058
Dissolved Copper (Cu)	mg/L	0.000345	<0.000050	0.00150	0.000711	0.00165	0.000050	8385058
Dissolved Iron (Fe)	mg/L	0.0193	<0.0010	0.0042	0.0335	0.0372	0.0010	8385058
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000580	0.0000060	0.000155	0.0000050	8385058
Dissolved Lithium (Li)	mg/L	<0.00050	<0.00050	0.00080	0.00378	0.00070	0.00050	8385058
Dissolved Manganese (Mn)	mg/L	0.000677	<0.000050	0.00594	0.000673	0.0128	0.000050	8385058
Dissolved Molybdenum (Mo)	mg/L	0.000300	<0.000050	0.000555	0.00102	0.000396	0.000050	8385058
Dissolved Nickel (Ni)	mg/L	0.000270	<0.000020	0.000848	0.00119	0.000472	0.000020	8385058
Dissolved Phosphorus (P)	mg/L	<0.0020	<0.0020	0.0032	0.0029	<0.0020	0.0020	8385058
Dissolved Selenium (Se)	mg/L	0.000301	<0.000040	0.000427	0.000388	0.000638	0.000040	8385058
Dissolved Silicon (Si)	mg/L	2.47	<0.050	1.73	3.36	2.51	0.050	8385058
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8385058
Dissolved Strontium (Sr)	mg/L	0.120	<0.000050	0.0767	0.178	0.122	0.000050	8385058
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000060	<0.0000020	0.0000030	0.0000020	8385058
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8385058
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8385058
Dissolved Uranium (U)	mg/L	0.000424	<0.0000020	0.00132	0.00194	0.000679	0.0000020	8385058
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8385058

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PK1915	PK1916	PK1917	PK1918	PK1919		
Sampling Date		2016/08/27 15:33	2016/08/30 10:35	2016/08/27 16:30	2016/08/26 12:15	2016/08/27 14:32		
COC Number		502942-01-01	502942-01-01	502942-01-01	502942-01-01	502942-01-01		
	UNITS	KZ-6	TRIP BLANK	KZ-2	KZ-26	KZ-7	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00036	<0.00010	0.0974	0.00034	0.0281	0.00010	8385058
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8385058
Dissolved Calcium (Ca)	mg/L	39.2	<0.050	28.4	54.5	40.8	0.050	8383437
Dissolved Magnesium (Mg)	mg/L	4.76	<0.050	2.45	15.9	5.53	0.050	8383437
Dissolved Potassium (K)	mg/L	0.738	<0.050	1.09	1.14	1.21	0.050	8383437
Dissolved Sodium (Na)	mg/L	0.607	<0.050	0.508	1.30	0.753	0.050	8383437
Dissolved Sulphur (S)	mg/L	4.6	<3.0	14.1	10.8	11.9	3.0	8383437

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PK1920	PK1921	PK1922	PK1923	PK1924		
Sampling Date		2016/08/27 11:55	2016/08/28 07:35	2016/08/27 07:30	2016/08/27 08:20	2016/08/27 09:04		
COC Number		502942-01-01	502942-02-01	502942-02-01	502942-02-01	502942-02-01		
	UNITS	KZ-9	KZ-13	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	128	64.0	108	88.9	147	0.50	8383209
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8386342
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00581	0.00879	0.00556	0.00510	0.00488	0.00050	8385058
Dissolved Antimony (Sb)	mg/L	0.000070	0.000028	0.000031	0.000020	0.000062	0.000020	8385058
Dissolved Arsenic (As)	mg/L	0.000250	0.000202	0.000316	0.000221	0.000441	0.000020	8385058
Dissolved Barium (Ba)	mg/L	0.0597	0.0920	0.0446	0.0407	0.0572	0.000020	8385058
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8385058
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8385058
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8385058
Dissolved Cadmium (Cd)	mg/L	0.0000630	0.0000150	0.0000210	0.0000160	0.0000220	0.0000050	8385058
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8385058
Dissolved Cobalt (Co)	mg/L	0.0000300	0.0000180	0.0000170	0.0000180	0.0000180	0.0000050	8385058
Dissolved Copper (Cu)	mg/L	0.00141	0.000558	0.000962	0.000851	0.00105	0.000050	8385058
Dissolved Iron (Fe)	mg/L	0.0475	0.0215	0.0208	0.0089	0.0298	0.0010	8385058
Dissolved Lead (Pb)	mg/L	0.000153	0.0000190	0.0000340	<0.0000050	0.0000720	0.0000050	8385058
Dissolved Lithium (Li)	mg/L	0.00150	0.00115	0.00106	0.00103	0.00170	0.00050	8385058
Dissolved Manganese (Mn)	mg/L	0.0153	0.00566	0.00608	0.00179	0.0111	0.000050	8385058
Dissolved Molybdenum (Mo)	mg/L	0.000443	0.000463	0.000496	0.000265	0.00106	0.000050	8385058
Dissolved Nickel (Ni)	mg/L	0.000435	0.000439	0.000512	0.000390	0.000756	0.000020	8385058
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0029	0.0044	0.0024	0.0035	0.0020	8385058
Dissolved Selenium (Se)	mg/L	0.000638	0.000128	0.000346	0.000255	0.000533	0.000040	8385058
Dissolved Silicon (Si)	mg/L	2.86	2.24	2.51	2.13	3.05	0.050	8385058
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8385058
Dissolved Strontium (Sr)	mg/L	0.127	0.0660	0.109	0.0937	0.143	0.000050	8385058
Dissolved Thallium (Tl)	mg/L	0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8385058
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8385058
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8385058
Dissolved Uranium (U)	mg/L	0.000661	0.000473	0.000682	0.000360	0.00159	0.0000020	8385058
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8385058

RDL = Reportable Detection Limit

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PK1920	PK1921	PK1922	PK1923	PK1924		
Sampling Date		2016/08/27 11:55	2016/08/28 07:35	2016/08/27 07:30	2016/08/27 08:20	2016/08/27 09:04		
COC Number		502942-01-01	502942-02-01	502942-02-01	502942-02-01	502942-02-01		
	UNITS	KZ-9	KZ-13	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0126	0.00315	0.00176	0.00077	0.00315	0.00010	8385058
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00011	<0.00010	<0.00010	0.00010	8385058
Dissolved Calcium (Ca)	mg/L	43.0	21.5	34.4	28.9	44.4	0.050	8383437
Dissolved Magnesium (Mg)	mg/L	5.09	2.52	5.42	4.03	8.68	0.050	8383437
Dissolved Potassium (K)	mg/L	1.22	1.22	1.05	1.01	1.14	0.050	8383437
Dissolved Sodium (Na)	mg/L	0.837	0.914	0.725	0.641	0.919	0.050	8383437
Dissolved Sulphur (S)	mg/L	9.9	3.8	7.6	7.1	8.5	3.0	8383437

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PK1925		PK2591		PK2592		
Sampling Date		2016/08/27 12:07		2016/08/27 11:20		2016/08/27 12:30		
COC Number		502942-02-01		503657-01-01		503657-01-01		
	UNITS	KZ-18	QC Batch	KZ-9 WEST SEEP	QC Batch	KZ-9 EAST SEEP	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	186	8383209	238	8383917	852	0.50	8390478
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8386342	<0.0000020	8385941	<0.0000020	0.0000020	8385941
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00725	8385058	0.00107	8385098	0.0952	0.00050	8390612
Dissolved Antimony (Sb)	mg/L	0.000029	8385058	0.000021	8385098	<0.000020	0.000020	8390612
Dissolved Arsenic (As)	mg/L	0.000493	8385058	0.000085	8385098	0.000579	0.000020	8390612
Dissolved Barium (Ba)	mg/L	0.0435	8385058	0.161	8385098	0.147	0.000020	8390612
Dissolved Beryllium (Be)	mg/L	<0.000010	8385058	<0.000010	8385098	0.000279	0.000010	8390612
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8385058	<0.0000050	8385098	<0.0000050	0.0000050	8390612
Dissolved Boron (B)	mg/L	<0.010	8385058	<0.010	8385098	<0.010	0.010	8390612
Dissolved Cadmium (Cd)	mg/L	0.0000230	8385058	0.0000550	8385098	0.0000620	0.0000050	8390612
Dissolved Chromium (Cr)	mg/L	<0.00010	8385058	0.00015	8385098	<0.00010	0.00010	8390612
Dissolved Cobalt (Co)	mg/L	0.0000140	8385058	0.0000060	8385098	0.00230	0.0000050	8390612
Dissolved Copper (Cu)	mg/L	0.000306	8385058	0.000157	8385098	0.000052	0.000050	8390612
Dissolved Iron (Fe)	mg/L	0.0089	8385058	0.0027	8385098	6.64	0.0010	8390612
Dissolved Lead (Pb)	mg/L	0.0000410	8385058	<0.0000050	8385098	<0.0000050	0.0000050	8390612
Dissolved Lithium (Li)	mg/L	0.00158	8385058	0.00171	8385098	0.0806	0.00050	8390612
Dissolved Manganese (Mn)	mg/L	0.00411	8385058	0.000533	8385098	1.96	0.000050	8390612
Dissolved Molybdenum (Mo)	mg/L	0.00104	8385058	0.00157	8385098	0.000459	0.000050	8390612
Dissolved Nickel (Ni)	mg/L	0.000568	8385058	0.000094	8385098	0.00718	0.000020	8390612
Dissolved Phosphorus (P)	mg/L	0.0183	8385058	<0.0020	8385098	<0.0020	0.0020	8390612
Dissolved Selenium (Se)	mg/L	0.000712	8385058	0.00343	8385098	<0.000040	0.000040	8390612
Dissolved Silicon (Si)	mg/L	2.98	8385058	3.46	8385098	19.3	0.050	8390612
Dissolved Silver (Ag)	mg/L	<0.0000050	8385058	<0.0000050	8385098	<0.0000050	0.0000050	8390612
Dissolved Strontium (Sr)	mg/L	0.162	8385058	0.249	8385098	1.28	0.000050	8390612
Dissolved Thallium (Tl)	mg/L	<0.0000020	8385058	<0.0000020	8385098	0.0000020	0.0000020	8390612
Dissolved Tin (Sn)	mg/L	<0.00020	8385058	<0.00020	8385098	<0.00020	0.00020	8390612
Dissolved Titanium (Ti)	mg/L	<0.00050	8385058	<0.00050	8385098	<0.00050	0.00050	8390612
Dissolved Uranium (U)	mg/L	0.00165	8385058	0.00279	8385098	0.00183	0.0000020	8390612
Dissolved Vanadium (V)	mg/L	<0.00020	8385058	<0.00020	8385098	<0.00020	0.00020	8390612

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PK1925		PK2591		PK2592		
Sampling Date		2016/08/27 12:07		2016/08/27 11:20		2016/08/27 12:30		
COC Number		502942-02-01		503657-01-01		503657-01-01		
	UNITS	**KZ-18**	**QC Batch**	**KZ-9 WEST SEEP**	**QC Batch**	**KZ-9 EAST SEEP**	**RDL**	**QC Batch**
Dissolved Zinc (Zn)	mg/L	0.00095	8385058	0.00115	8390612	0.0282	0.00010	8390612
Dissolved Zirconium (Zr)	mg/L	<0.00010	8385058	<0.00010	8385098	0.00040	0.00010	8390612
Dissolved Calcium (Ca)	mg/L	48.1	8383437	78.2	8383437	290	0.050	8389462
Dissolved Magnesium (Mg)	mg/L	16.0	8383437	10.4	8383437	30.8	0.050	8389462
Dissolved Potassium (K)	mg/L	0.506	8383437	1.08	8383437	4.89	0.050	8389462
Dissolved Sodium (Na)	mg/L	0.839	8383437	0.994	8383437	8.18	0.050	8389462
Dissolved Sulphur (S)	mg/L	6.0	8383437	9.3	8383437	7.2	3.0	8389462
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PK2593		PK2594	PK2595		
Sampling Date		2016/08/28 18:05		2016/08/27 15:55	2016/08/27 14:13		
COC Number		503657-01-01		503657-01-01	503657-01-01		
	UNITS	SEEP 3	QC Batch	SEEP 4	SEEP 5	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	163	8392311	159	110	0.50	8383917
Elements							
Dissolved Mercury (Hg)	mg/L	0.0000020	8385941	<0.0000020	<0.0000020	0.0000020	8385941
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00217	8390612	0.00234	0.0126	0.00050	8385098
Dissolved Antimony (Sb)	mg/L	<0.000020	8390612	<0.000020	0.000064	0.000020	8385098
Dissolved Arsenic (As)	mg/L	0.000125	8390612	0.000052	0.000308	0.000020	8385098
Dissolved Barium (Ba)	mg/L	0.120	8390612	0.122	0.0693	0.000020	8385098
Dissolved Beryllium (Be)	mg/L	<0.000010	8390612	<0.000010	<0.000010	0.000010	8385098
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8390612	<0.0000050	<0.0000050	0.0000050	8385098
Dissolved Boron (B)	mg/L	<0.010	8390612	<0.010	<0.010	0.010	8385098
Dissolved Cadmium (Cd)	mg/L	0.0000080	8390612	0.0000130	0.000345	0.0000050	8385098
Dissolved Chromium (Cr)	mg/L	<0.00010	8390612	<0.00010	0.00014	0.00010	8385098
Dissolved Cobalt (Co)	mg/L	0.0000070	8390612	0.0000100	0.000366	0.0000050	8385098
Dissolved Copper (Cu)	mg/L	0.000131	8390612	0.000347	0.00235	0.000050	8385098
Dissolved Iron (Fe)	mg/L	<0.0010	8390612	0.0025	1.11	0.0010	8385098
Dissolved Lead (Pb)	mg/L	<0.0000050	8390612	0.0000060	0.0000350	0.0000050	8385098
Dissolved Lithium (Li)	mg/L	<0.00050	8390612	<0.00050	0.00359	0.00050	8385098
Dissolved Manganese (Mn)	mg/L	<0.000050	8390612	0.000073	0.131	0.000050	8385098
Dissolved Molybdenum (Mo)	mg/L	0.000506	8390612	0.000537	0.000538	0.000050	8385098
Dissolved Nickel (Ni)	mg/L	0.000042	8390612	0.000133	0.00275	0.000020	8385098
Dissolved Phosphorus (P)	mg/L	<0.0020	8390612	<0.0020	0.0086	0.0020	8385098
Dissolved Selenium (Se)	mg/L	0.000765	8390612	0.000860	0.000237	0.000040	8385098
Dissolved Silicon (Si)	mg/L	2.43	8390612	3.01	5.42	0.050	8385098
Dissolved Silver (Ag)	mg/L	<0.0000050	8390612	<0.0000050	<0.0000050	0.0000050	8385098
Dissolved Strontium (Sr)	mg/L	0.223	8390612	0.237	0.139	0.000050	8385098
Dissolved Thallium (Tl)	mg/L	<0.0000020	8390612	<0.0000020	0.0000030	0.0000020	8385098
Dissolved Tin (Sn)	mg/L	<0.00020	8390612	<0.00020	<0.00020	0.00020	8385098
Dissolved Titanium (Ti)	mg/L	<0.00050	8390612	<0.00050	<0.00050	0.00050	8385098
Dissolved Uranium (U)	mg/L	0.000923	8390612	0.00119	0.000218	0.0000020	8385098
Dissolved Vanadium (V)	mg/L	<0.00020	8390612	<0.00020	<0.00020	0.00020	8385098

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PK2593		PK2594	PK2595		
Sampling Date		2016/08/28 18:05		2016/08/27 15:55	2016/08/27 14:13		
COC Number		503657-01-01		503657-01-01	503657-01-01		
	UNITS	SEEP 3	QC Batch	SEEP 4	SEEP 5	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00064	8390612	0.00084	0.0681	0.00010	8385098
Dissolved Zirconium (Zr)	mg/L	<0.00010	8390612	<0.00010	0.00016	0.00010	8385098
Dissolved Calcium (Ca)	mg/L	61.7	8392503	59.1	36.1	0.050	8383437
Dissolved Magnesium (Mg)	mg/L	2.14	8392503	2.81	4.81	0.050	8383437
Dissolved Potassium (K)	mg/L	1.25	8392503	1.79	0.830	0.050	8383437
Dissolved Sodium (Na)	mg/L	0.713	8392503	0.687	3.73	0.050	8383437
Dissolved Sulphur (S)	mg/L	9.4	8392503	14.2	5.9	3.0	8383437
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PK1911		PK1915	PK1916	PK1921		
Sampling Date		2016/08/27 16:50		2016/08/27 15:33	2016/08/30 10:35	2016/08/28 07:35		
COC Number		502942-01-01		502942-01-01	502942-01-01	502942-02-01		
	UNITS	KZ-19	QC Batch	KZ-6	TRIP BLANK	KZ-13	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	<0.50	8383182	123	<0.50	68.0	0.50	8383182
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	8386318	<0.0000020	<0.0000020	<0.0000020	0.0000020	8386318
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	<0.00050	8385137	0.00837	<0.00050	0.0261	0.00050	8385137
Total Antimony (Sb)	mg/L	<0.000020	8385137	<0.000020	<0.000020	0.000023	0.000020	8385137
Total Arsenic (As)	mg/L	<0.000020	8385137	0.000101	<0.000020	0.000231	0.000020	8385137
Total Barium (Ba)	mg/L	<0.000020	8385137	0.0350	<0.000020	0.0930	0.000020	8385137
Total Beryllium (Be)	mg/L	<0.000010	8385137	<0.000010	<0.000010	<0.000010	0.000010	8385137
Total Bismuth (Bi)	mg/L	<0.0000050	8385137	<0.0000050	<0.0000050	<0.0000050	0.0000050	8385137
Total Boron (B)	mg/L	<0.010	8385137	<0.010	<0.010	<0.010	0.010	8385137
Total Cadmium (Cd)	mg/L	<0.0000050	8385137	0.0000200	<0.0000050	0.0000340	0.0000050	8385137
Total Chromium (Cr)	mg/L	<0.00010	8385137	<0.00010	<0.00010	<0.00010	0.00010	8385137
Total Cobalt (Co)	mg/L	<0.0000050	8385137	0.0000200	<0.0000050	0.0000370	0.0000050	8385137
Total Copper (Cu)	mg/L	<0.000050	8385137	0.000392	<0.000050	0.000596	0.000050	8385137
Total Iron (Fe)	mg/L	<0.0010	8385137	0.0805	<0.0010	0.0877	0.0010	8385137
Total Lead (Pb)	mg/L	<0.0000050	8391299	0.0000150	<0.0000050	0.0000560	0.0000050	8385137
Total Lithium (Li)	mg/L	<0.00050	8385137	0.00060	0.00076	0.00137	0.00050	8385137
Total Manganese (Mn)	mg/L	<0.000050	8385137	0.00957	<0.000050	0.0175	0.000050	8385137
Total Molybdenum (Mo)	mg/L	<0.000050	8385137	0.000304	<0.000050	0.000462	0.000050	8385137
Total Nickel (Ni)	mg/L	<0.000020	8385137	0.000315	<0.000020	0.000498	0.000020	8385137
Total Phosphorus (P)	mg/L	<0.0020	8385137	0.0033	<0.0020	0.0055	0.0020	8385137
Total Selenium (Se)	mg/L	<0.000040	8385137	0.000333	<0.000040	0.000143	0.000040	8385137
Total Silicon (Si)	mg/L	<0.050	8385137	2.54	<0.050	2.31	0.050	8385137
Total Silver (Ag)	mg/L	<0.0000050	8385137	<0.0000050	<0.0000050	<0.0000050	0.0000050	8385137
Total Strontium (Sr)	mg/L	<0.000050	8385137	0.124	<0.000050	0.0700	0.000050	8385137
Total Thallium (Tl)	mg/L	<0.0000020	8385137	<0.0000020	<0.0000020	<0.0000020	0.0000020	8385137
Total Tin (Sn)	mg/L	<0.00020	8385137	<0.00020	<0.00020	<0.00020	0.00020	8385137
Total Titanium (Ti)	mg/L	<0.00050	8385137	<0.00050	<0.00050	0.00111	0.00050	8385137
Total Uranium (U)	mg/L	<0.0000020	8385137	0.000439	<0.0000020	0.000490	0.0000020	8385137
Total Vanadium (V)	mg/L	<0.00020	8385137	<0.00020	<0.00020	<0.00020	0.00020	8385137

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PK1911		PK1915	PK1916	PK1921		
Sampling Date		2016/08/27 16:50		2016/08/27 15:33	2016/08/30 10:35	2016/08/28 07:35		
COC Number		502942-01-01		502942-01-01	502942-01-01	502942-02-01		
	UNITS	KZ-19	QC Batch	KZ-6	TRIP BLANK	KZ-13	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00014	8385137	0.00089	0.00011	0.00461	0.00010	8385137
Total Zirconium (Zr)	mg/L	<0.00010	8385137	<0.00010	<0.00010	<0.00010	0.00010	8385137
Total Calcium (Ca)	mg/L	<0.050	8383438	41.2	<0.050	23.1	0.050	8383438
Total Magnesium (Mg)	mg/L	<0.050	8383438	4.99	<0.050	2.50	0.050	8383438
Total Potassium (K)	mg/L	<0.050	8383438	0.754	<0.050	1.22	0.050	8383438
Total Sodium (Na)	mg/L	<0.050	8383438	0.606	<0.050	0.871	0.050	8383438
Total Sulphur (S)	mg/L	<3.0	8383438	4.8	<3.0	4.1	3.0	8383438
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PK1922	PK1923	PK1925		PK2591		
Sampling Date		2016/08/27 07:30	2016/08/27 08:20	2016/08/27 12:07		2016/08/27 11:20		
COC Number		502942-02-01	502942-02-01	502942-02-01		503657-01-01		
	UNITS	KZ-15	KZ-16	KZ-18	QC Batch	KZ-9 WEST SEEP	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	109	94.2	187	8383182	241	0.50	8383916
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8386318	<0.0000020	0.0000020	8386276
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0271	0.00981	0.0113	8385137	0.00473	0.00050	8386259
Total Antimony (Sb)	mg/L	0.000030	<0.000020	0.000025	8385137	0.000020	0.000020	8386259
Total Arsenic (As)	mg/L	0.000473	0.000260	0.000468	8385137	0.000093	0.000020	8386259
Total Barium (Ba)	mg/L	0.0477	0.0413	0.0450	8385137	0.156	0.000020	8386259
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8385137	<0.000010	0.000010	8386259
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8385137	<0.0000050	0.0000050	8386259
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	8385137	<0.010	0.010	8386259
Total Cadmium (Cd)	mg/L	0.0000360	0.0000300	0.0000720	8385137	0.0000890	0.0000050	8386259
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8385137	0.00018	0.00010	8386259
Total Cobalt (Co)	mg/L	0.0000560	0.0000320	0.0000210	8385137	0.0000100	0.0000050	8386259
Total Copper (Cu)	mg/L	0.00110	0.000903	0.000325	8385137	0.000203	0.000050	8386259
Total Iron (Fe)	mg/L	0.126	0.0301	0.0174	8385137	0.0134	0.0010	8386259
Total Lead (Pb)	mg/L	0.000324	0.0000190	0.000132	8385137	0.0000140	0.0000050	8386259
Total Lithium (Li)	mg/L	0.00138	0.00099	0.00172	8385137	0.00130	0.00050	8386259
Total Manganese (Mn)	mg/L	0.0251	0.00651	0.00648	8385137	0.00211	0.000050	8386259
Total Molybdenum (Mo)	mg/L	0.000474	0.000274	0.00107	8385137	0.00151	0.000050	8386259
Total Nickel (Ni)	mg/L	0.000614	0.000426	0.000584	8385137	0.000117	0.000020	8386259
Total Phosphorus (P)	mg/L	0.0068	0.0040	0.0243	8385137	0.0053	0.0020	8386259
Total Selenium (Se)	mg/L	0.000335	0.000267	0.000729	8385137	0.00308	0.000040	8386259
Total Silicon (Si)	mg/L	2.72	2.30	3.28	8385137	3.25	0.050	8386259
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8385137	<0.0000050	0.0000050	8386259
Total Strontium (Sr)	mg/L	0.113	0.0989	0.167	8385137	0.238	0.000050	8386259
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8385137	<0.0000020	0.0000020	8386259
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8385137	<0.00020	0.00020	8386259
Total Titanium (Ti)	mg/L	0.00089	<0.00050	<0.00050	8385137	<0.00050	0.00050	8386259
Total Uranium (U)	mg/L	0.000713	0.000389	0.00166	8385137	0.00272	0.0000020	8386259
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8385137	<0.00020	0.00020	8386259
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PK1922	PK1923	PK1925		PK2591		
Sampling Date		2016/08/27 07:30	2016/08/27 08:20	2016/08/27 12:07		2016/08/27 11:20		
COC Number		502942-02-01	502942-02-01	502942-02-01		503657-01-01		
	UNITS	KZ-15	KZ-16	KZ-18	QC Batch	KZ-9 WEST SEEP	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00341	0.00091	0.00376	8385137	0.00132	0.00010	8386259
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8385137	<0.00010	0.00010	8386259
Total Calcium (Ca)	mg/L	34.6	31.0	49.6	8383438	79.2	0.050	8383438
Total Magnesium (Mg)	mg/L	5.40	4.10	15.4	8383438	10.4	0.050	8383438
Total Potassium (K)	mg/L	1.07	1.02	0.545	8383438	1.08	0.050	8383438
Total Sodium (Na)	mg/L	0.709	0.640	0.800	8383438	0.990	0.050	8383438
Total Sulphur (S)	mg/L	7.8	7.7	6.2	8383438	8.5	3.0	8383438
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PK2592		PK2593	PK2594	PK2595		
Sampling Date		2016/08/27 12:30		2016/08/28 18:05	2016/08/27 15:55	2016/08/27 14:13		
COC Number		503657-01-01		503657-01-01	503657-01-01	503657-01-01		
	UNITS	KZ-9 EAST SEEP	QC Batch	SEEP 3	SEEP 4	SEEP 5	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	818	8389856	159	156	109	0.50	8383916
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	8386276	<0.0000020	<0.0000020	<0.0000020	0.0000020	8386276
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.148	8390508	0.00784	0.0129	0.0334	0.00050	8386259
Total Antimony (Sb)	mg/L	<0.000020	8390508	<0.000020	<0.000020	0.000065	0.000020	8386259
Total Arsenic (As)	mg/L	0.0141	8390508	0.000148	0.000069	0.000423	0.000020	8386259
Total Barium (Ba)	mg/L	0.160	8390508	0.118	0.124	0.0737	0.000020	8386259
Total Beryllium (Be)	mg/L	0.000339	8390508	<0.000010	<0.000010	<0.000010	0.000010	8386259
Total Bismuth (Bi)	mg/L	<0.0000050	8390508	<0.0000050	<0.0000050	<0.0000050	0.0000050	8386259
Total Boron (B)	mg/L	<0.010	8390508	<0.010	<0.010	<0.010	0.010	8386259
Total Cadmium (Cd)	mg/L	0.0000760	8390508	0.0000110	0.0000130	0.000352	0.0000050	8386259
Total Chromium (Cr)	mg/L	<0.00010	8390508	<0.00010	<0.00010	0.00017	0.00010	8386259
Total Cobalt (Co)	mg/L	0.00226	8390508	0.0000140	0.0000220	0.000374	0.0000050	8386259
Total Copper (Cu)	mg/L	0.000071	8390508	0.000158	0.000494	0.00298	0.000050	8386259
Total Iron (Fe)	mg/L	13.3	8390508	0.0084	0.0178	1.96	0.0010	8386259
Total Lead (Pb)	mg/L	0.0000560	8390508	0.0000370	0.0000570	0.000238	0.0000050	8386259
Total Lithium (Li)	mg/L	0.0761	8390508	0.00060	<0.00050	0.00401	0.00050	8386259
Total Manganese (Mn)	mg/L	1.93	8390508	0.000522	0.00272	0.124	0.000050	8386259
Total Molybdenum (Mo)	mg/L	0.000483	8390508	0.000477	0.000545	0.000587	0.000050	8386259
Total Nickel (Ni)	mg/L	0.00692	8390508	0.000062	0.000216	0.00283	0.000020	8386259
Total Phosphorus (P)	mg/L	0.0153	8390508	0.0048	0.0104	0.0223	0.0020	8386259
Total Selenium (Se)	mg/L	<0.000040	8390508	0.000734	0.000839	0.000291	0.000040	8386259
Total Silicon (Si)	mg/L	18.6	8390508	2.24	2.82	5.59	0.050	8386259
Total Silver (Ag)	mg/L	<0.0000050	8390508	<0.0000050	<0.0000050	0.0000050	0.0000050	8386259
Total Strontium (Sr)	mg/L	1.17	8390508	0.204	0.222	0.135	0.000050	8386259
Total Thallium (Tl)	mg/L	0.0000030	8390508	<0.0000020	<0.0000020	0.0000030	0.0000020	8386259
Total Tin (Sn)	mg/L	<0.00020	8390508	<0.00020	<0.00020	<0.00020	0.00020	8386259
Total Titanium (Ti)	mg/L	0.00072	8390508	<0.00050	<0.00050	0.00125	0.00050	8386259
Total Uranium (U)	mg/L	0.00185	8390508	0.000838	0.00125	0.000251	0.0000020	8386259
Total Vanadium (V)	mg/L	<0.00020	8390508	<0.00020	<0.00020	<0.00020	0.00020	8386259

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PK2592		PK2593	PK2594	PK2595		
Sampling Date		2016/08/27 12:30		2016/08/28 18:05	2016/08/27 15:55	2016/08/27 14:13		
COC Number		503657-01-01		503657-01-01	503657-01-01	503657-01-01		
	UNITS	**KZ-9 EAST SEEP**	**QC Batch**	**SEEP 3**	**SEEP 4**	**SEEP 5**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.0279	8390508	0.00056	0.00165	0.0710	0.00010	8386259
Total Zirconium (Zr)	mg/L	0.00063	8390508	<0.00010	<0.00010	0.00017	0.00010	8386259
Total Calcium (Ca)	mg/L	278	8389482	60.2	57.7	35.6	0.050	8383438
Total Magnesium (Mg)	mg/L	30.2	8389482	2.23	2.87	4.88	0.050	8383438
Total Potassium (K)	mg/L	4.80	8389482	1.17	1.78	0.823	0.050	8383438
Total Sodium (Na)	mg/L	7.85	8389482	0.726	0.663	3.49	0.050	8383438
Total Sulphur (S)	mg/L	7.5	8389482	9.4	13.4	6.5	3.0	8383438
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PK1912	PK1913	PK1914	PK1917	PK1918		
Sampling Date		2016/08/26 15:00	2016/08/26 14:00	2016/08/26 14:15	2016/08/27 16:30	2016/08/26 12:15		
COC Number		502942-01-01	502942-01-01	502942-01-01	502942-01-01	502942-01-01		
	UNITS	KZ-21	KZ-22	KZ-28	KZ-2	KZ-26	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	209	174	177	78.6	194	0.50	8383182
Elements								
Total Mercury (Hg)	mg/L	0.0000021	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8386318
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.538	0.200	0.153	0.168	0.193	0.0030	8385343
Total Antimony (Sb)	mg/L	0.000262	0.000097	0.000095	0.000039	0.000125	0.000020	8385343
Total Arsenic (As)	mg/L	0.0331	0.00906	0.00752	0.000322	0.00211	0.000020	8385343
Total Barium (Ba)	mg/L	0.140	0.0875	0.0795	0.0493	0.0766	0.000050	8385343
Total Beryllium (Be)	mg/L	0.000045	0.000018	0.000014	0.000015	0.000020	0.000010	8385343
Total Bismuth (Bi)	mg/L	0.000013	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8385343
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8385343
Total Cadmium (Cd)	mg/L	0.000200	0.000144	0.000102	0.000597	0.0000410	0.0000050	8385343
Total Chromium (Cr)	mg/L	0.00180	0.00067	0.00054	0.00026	0.00054	0.00010	8385343
Total Cobalt (Co)	mg/L	0.00271	0.000990	0.000732	0.000193	0.000302	0.000010	8385343
Total Copper (Cu)	mg/L	0.00310	0.00182	0.00161	0.00225	0.00182	0.00010	8385343
Total Iron (Fe)	mg/L	9.98	3.05	2.38	0.228	0.692	0.0050	8385343
Total Lead (Pb)	mg/L	0.000841	0.000449	0.000443	0.000983	0.000338	0.000020	8385343
Total Lithium (Li)	mg/L	0.00410	0.00319	0.00288	<0.00050	0.00379	0.00050	8385343
Total Manganese (Mn)	mg/L	1.84	0.552	0.428	0.0125	0.0555	0.00010	8385343
Total Molybdenum (Mo)	mg/L	0.00171	0.00100	0.000995	0.000559	0.000982	0.000050	8385343
Total Nickel (Ni)	mg/L	0.0113	0.00417	0.00347	0.00107	0.00250	0.00010	8385343
Total Phosphorus (P)	mg/L	0.251	0.0795	0.0532	0.0084	0.0255	0.0050	8385343
Total Selenium (Se)	mg/L	0.000836	0.000519	0.000532	0.000443	0.000401	0.000040	8385343
Total Silicon (Si)	mg/L	5.34	4.05	3.95	2.06	3.93	0.050	8385343
Total Silver (Ag)	mg/L	0.000016	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8385343
Total Strontium (Sr)	mg/L	0.180	0.162	0.162	0.0779	0.182	0.000050	8385343
Total Thallium (Tl)	mg/L	0.0000100	0.0000050	0.0000040	0.0000090	0.0000030	0.0000020	8385343
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8385343
Total Titanium (Ti)	mg/L	0.0212	0.0096	0.0067	0.0063	0.0045	0.0020	8385343
Total Uranium (U)	mg/L	0.00252	0.00170	0.00173	0.00139	0.00179	0.0000050	8385343
Total Vanadium (V)	mg/L	0.00220	0.00088	0.00068	0.00030	0.00063	0.00020	8385343
Total Zinc (Zn)	mg/L	0.0317	0.0153	0.0122	0.118	0.0045	0.0010	8385343

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PK1912	PK1913	PK1914	PK1917	PK1918		
Sampling Date		2016/08/26 15:00	2016/08/26 14:00	2016/08/26 14:15	2016/08/27 16:30	2016/08/26 12:15		
COC Number		502942-01-01	502942-01-01	502942-01-01	502942-01-01	502942-01-01		
	UNITS	KZ-21	KZ-22	KZ-28	KZ-2	KZ-26	RDL	QC Batch
Total Zirconium (Zr)	mg/L	0.00106	0.00022	0.00022	<0.00010	0.00017	0.00010	8385343
Total Calcium (Ca)	mg/L	54.7	48.4	49.2	27.6	52.2	0.25	8383438
Total Magnesium (Mg)	mg/L	17.7	13.0	13.1	2.34	15.3	0.25	8383438
Total Potassium (K)	mg/L	1.11	1.17	1.15	1.14	1.19	0.25	8383438
Total Sodium (Na)	mg/L	1.14	1.04	1.06	0.48	1.25	0.25	8383438
Total Sulphur (S)	mg/L	10.6	10.3	10.3	14.5	11.0	3.0	8383438

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PK1919	PK1920		PK1924		
Sampling Date		2016/08/27 14:32	2016/08/27 11:55		2016/08/27 09:04		
COC Number		502942-01-01	502942-01-01		502942-02-01		
	UNITS	KZ-7	KZ-9	QC Batch	KZ-17	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	121	123	8383182	152	0.50	8383182
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8386318	<0.0000020	0.0000020	8386318
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.333	0.216	8385343	0.0612	0.0030	8386114
Total Antimony (Sb)	mg/L	0.000124	0.000117	8385343	0.000079	0.000020	8386114
Total Arsenic (As)	mg/L	0.00105	0.000925	8385343	0.000805	0.000020	8386114
Total Barium (Ba)	mg/L	0.0629	0.0682	8385343	0.0628	0.000050	8386114
Total Beryllium (Be)	mg/L	0.000022	0.000014	8385343	<0.000010	0.000010	8386114
Total Bismuth (Bi)	mg/L	0.000012	0.000010	8385343	<0.000010	0.000010	8386114
Total Boron (B)	mg/L	<0.010	<0.010	8385343	<0.010	0.010	8386114
Total Cadmium (Cd)	mg/L	0.000319	0.000145	8385343	0.0000530	0.0000050	8386114
Total Chromium (Cr)	mg/L	0.00063	0.00044	8385343	0.00018	0.00010	8386114
Total Cobalt (Co)	mg/L	0.000301	0.000239	8385343	0.000090	0.000010	8386114
Total Copper (Cu)	mg/L	0.00358	0.00291	8385343	0.00158	0.00010	8386114
Total Iron (Fe)	mg/L	0.890	0.804	8385343	0.234	0.0050	8386114
Total Lead (Pb)	mg/L	0.00275	0.00233	8385343	0.000669	0.000020	8386114
Total Lithium (Li)	mg/L	0.00131	0.00195	8385343	0.00241	0.00050	8386114
Total Manganese (Mn)	mg/L	0.0617	0.0487	8385343	0.0453	0.00010	8386114
Total Molybdenum (Mo)	mg/L	0.000405	0.000438	8385343	0.00110	0.000050	8386114
Total Nickel (Ni)	mg/L	0.00111	0.00089	8385343	0.00092	0.00010	8386114
Total Phosphorus (P)	mg/L	0.0145	0.0168	8385343	0.0109	0.0050	8386114
Total Selenium (Se)	mg/L	0.000645	0.000655	8385343	0.000544	0.000040	8386114
Total Silicon (Si)	mg/L	3.13	3.44	8385343	3.43	0.050	8386114
Total Silver (Ag)	mg/L	0.000020	0.000017	8385343	<0.000010	0.000010	8386114
Total Strontium (Sr)	mg/L	0.119	0.134	8385343	0.151	0.000050	8386114
Total Thallium (Tl)	mg/L	0.0000090	0.0000060	8385343	0.0000040	0.0000020	8386114
Total Tin (Sn)	mg/L	<0.00020	<0.00020	8385343	<0.00020	0.00020	8386114
Total Titanium (Ti)	mg/L	0.0170	0.0122	8385343	0.0029	0.0020	8386114
Total Uranium (U)	mg/L	0.000647	0.000657	8385343	0.00148	0.0000050	8386114
Total Vanadium (V)	mg/L	0.00080	0.00062	8385343	<0.00020	0.00020	8386114
Total Zinc (Zn)	mg/L	0.0642	0.0343	8385343	0.0079	0.0010	8386114
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PK1919	PK1920		PK1924		
Sampling Date		2016/08/27 14:32	2016/08/27 11:55		2016/08/27 09:04		
COC Number		502942-01-01	502942-01-01		502942-02-01		
	UNITS	KZ-7	KZ-9	QC Batch	KZ-17	RDL	QC Batch
Total Zirconium (Zr)	mg/L	0.00014	0.00015	8385343	0.00011	0.00010	8386114
Total Calcium (Ca)	mg/L	39.7	41.1	8383438	47.0	0.25	8383438
Total Magnesium (Mg)	mg/L	5.27	4.94	8383438	8.31	0.25	8383438
Total Potassium (K)	mg/L	1.27	1.28	8383438	1.16	0.25	8383438
Total Sodium (Na)	mg/L	0.71	0.81	8383438	0.89	0.25	8383438
Total Sulphur (S)	mg/L	11.8	10.3	8383438	9.2	3.0	8383438
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1911
Sample ID: KZ-19
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/09/01	Name Redacted
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390300	N/A	2016/09/07	
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/02	
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	
Ion Balance	CALC	8383480	N/A	2016/09/02	
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	
Elements by ICPMS Low Level (total)	ICP/CRCM	8385137	N/A	2016/09/01	
Ammonia-N (Preserved)	KONE/COL	8392042	N/A	2016/09/09	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	
pH Water	AT/ALK	8384956	N/A	2016/09/01	
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	
Total Suspended Solids-Low Level	BAL/BAL	8383802	2016/08/31	2016/09/01	

Maxxam ID: PK1911 Dup
Sample ID: KZ-19
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	

Maxxam ID: PK1912
Sample ID: KZ-21
Matrix: Water

Collected: 2016/08/26
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1912
Sample ID: KZ-21
Matrix: Water

Collected: 2016/08/26
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	Name Redacted
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390300	N/A	2016/09/07	
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/06	
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	
Ion Balance	CALC	8383480	N/A	2016/09/02	
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8385343	2016/09/01	2016/09/04	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/06	
Ammonia-N (Preserved)	KONE/COL	8387304	N/A	2016/09/03	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	
pH Water	AT/ALK	8384956	N/A	2016/09/01	
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	
Total Suspended Solids-Low Level	BAL/BAL	8383802	2016/08/31	2016/09/01	

Maxxam ID: PK1913
Sample ID: KZ-22
Matrix: Water

Collected: 2016/08/26
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/09/01	Name Redacted
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/06	
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1913
Sample ID: KZ-22
Matrix: Water

Collected: 2016/08/26
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	
Ion Balance	CALC	8383480	N/A	2016/09/02	
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8385343	2016/09/01	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/06	
Ammonia-N (Preserved)	KONE/COL	8387298	N/A	2016/09/03	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	
pH Water	AT/ALK	8384956	N/A	2016/09/01	
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	
Total Suspended Solids-Low Level	BAL/BAL	8383802	2016/08/31	2016/09/01	

Maxxam ID: PK1914
Sample ID: KZ-28
Matrix: Water

Collected: 2016/08/26
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Name Redacted
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390300	N/A	2016/09/07	
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/06	
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	
Ion Balance	CALC	8383480	N/A	2016/09/02	
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8385343	2016/09/01	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/06	
Ammonia-N (Preserved)	KONE/COL	8387298	N/A	2016/09/03	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1914
Sample ID: KZ-28
Matrix: Water

Collected: 2016/08/26
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	Name Redacted
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	
pH Water	AT/ALK	8384956	N/A	2016/09/01	
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	
Total Suspended Solids-Low Level	BAL/BAL	8383802	2016/08/31	2016/09/01	

Maxxam ID: PK1915
Sample ID: KZ-6
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Name Redacted
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/02	
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	
Ion Balance	CALC	8383480	N/A	2016/09/02	
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	
Elements by ICPMS Low Level (total)	ICP/CRCM	8385137	N/A	2016/09/01	
Ammonia-N (Preserved)	KONE/COL	8387303	N/A	2016/09/03	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	
pH Water	AT/ALK	8384956	N/A	2016/09/01	
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1915 Dup
Sample ID: KZ-6
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Name Redacted
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	

Maxxam ID: PK1916
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/08/30
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Name Redacted
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8390148	N/A	2016/09/07	
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/02	
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	
Ion Balance	CALC	8383480	N/A	2016/09/02	
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	
Elements by ICPMS Low Level (total)	ICP/CRCM	8385137	N/A	2016/09/01	
Ammonia-N (Unpreserved)	KONE/COL	8382961	N/A	2016/08/31	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	
pH Water	AT/ALK	8384956	N/A	2016/09/01	
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	

Maxxam ID: PK1916 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/08/30
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1917
Sample ID: KZ-2
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Name Redacted
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390300	N/A	2016/09/07	
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/06	
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	
Ion Balance	CALC	8383480	N/A	2016/09/02	
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8385343	2016/09/01	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/06	
Ammonia-N (Preserved)	KONE/COL	8387303	N/A	2016/09/03	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	
pH Water	AT/ALK	8384956	N/A	2016/09/01	
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386947	2016/09/02	2016/09/02	
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	

Maxxam ID: PK1917 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	Name Redacted

Maxxam ID: PK1918
Sample ID: KZ-26
Matrix: Water

Collected: 2016/08/26
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Name Redacted
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1918
Sample ID: KZ-26
Matrix: Water

Collected: 2016/08/26
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/06	
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	
Ion Balance	CALC	8383480	N/A	2016/09/02	
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8385343	2016/09/01	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/06	
Ammonia-N (Preserved)	KONE/COL	8387303	N/A	2016/09/03	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	
pH Water	AT/ALK	8384956	N/A	2016/09/01	
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	

Maxxam ID: PK1919
Sample ID: KZ-7
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Name Redacted
Alkalinity - Water	AT/ALK	8385000	2016/09/01	2016/09/02	
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	
Conductance - water	AT/ALK	8385004	N/A	2016/09/02	
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/06	
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1919
Sample ID: KZ-7
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance	CALC	8383480	N/A	2016/09/02	Name Redacted
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8385343	2016/09/01	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/06	
Ammonia-N (Preserved)	KONE/COL	8387298	N/A	2016/09/03	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	
pH Water	AT/ALK	8385003	N/A	2016/09/02	
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386947	2016/09/02	2016/09/02	
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	

Maxxam ID: PK1920
Sample ID: KZ-9
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/09/01	Name Redacted
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/06	
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	
Ion Balance	CALC	8383480	N/A	2016/09/02	
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8385343	2016/09/01	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/06	
Ammonia-N (Preserved)	KONE/COL	8387304	N/A	2016/09/03	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1920
Sample ID: KZ-9
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	Name Redacted
pH Water	AT/ALK	8384956	N/A	2016/09/01	
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	
Total Phosphorus - unpreserved	KONE/COL	8391524	N/A	2016/09/08	
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	

Maxxam ID: PK1921
Sample ID: KZ-13
Matrix: Water

Collected: 2016/08/28
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/09/01	Name Redacted
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/02	
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	
Ion Balance	CALC	8383480	N/A	2016/09/02	
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	
Elements by ICPMS Low Level (total)	ICP/CRCM	8385137	N/A	2016/09/01	
Ammonia-N (Preserved)	KONE/COL	8387299	N/A	2016/09/03	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	
pH Water	AT/ALK	8384956	N/A	2016/09/01	
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1921 Dup
Sample ID: KZ-13
Matrix: Water

Collected: 2016/08/28
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	Name Redacted
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	

Maxxam ID: PK1922
Sample ID: KZ-15
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Name Redacted
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/02	
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	
Ion Balance	CALC	8383480	N/A	2016/09/02	
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	
Elements by ICPMS Low Level (total)	ICP/CRCM	8385137	N/A	2016/09/01	
Ammonia-N (Preserved)	KONE/COL	8387304	N/A	2016/09/03	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	
pH Water	AT/ALK	8384956	N/A	2016/09/01	
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	

Maxxam ID: PK1923
Sample ID: KZ-16
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1923
Sample ID: KZ-16
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	Name Redacted
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/02	
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	
Ion Balance	CALC	8383480	N/A	2016/09/02	
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	
Elements by ICPMS Low Level (total)	ICP/CRCM	8385137	N/A	2016/09/01	
Ammonia-N (Preserved)	KONE/COL	8387299	N/A	2016/09/03	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	
pH Water	AT/ALK	8384956	N/A	2016/09/01	
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	

Maxxam ID: PK1924
Sample ID: KZ-17
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/08/31	Name Redacted
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/04	
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1924
Sample ID: KZ-17
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	
Ion Balance	CALC	8383480	N/A	2016/09/02	
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8386114	2016/09/02	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/04	
Ammonia-N (Preserved)	KONE/COL	8387304	N/A	2016/09/03	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	
pH Water	AT/ALK	8384956	N/A	2016/09/01	
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	

Maxxam ID: PK1925
Sample ID: KZ-18
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8383764	N/A	2016/09/01	Name Redacted
Alkalinity - Water	AT/ALK	8384947	2016/09/01	2016/09/01	
Chloride by Automated Colourimetry	KONE/COL	8384796	N/A	2016/08/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
Colour (True) by Kone Lab	KONE	8384556	N/A	2016/09/01	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390294	N/A	2016/09/07	
Conductance - water	AT/ALK	8384957	N/A	2016/09/01	
Fluoride	ISE/ISE	8384568	N/A	2016/09/01	
Hardness Total (calculated as CaCO3)	CALC	8383182	N/A	2016/09/02	
Hardness (calculated as CaCO3)	CALC	8383209	N/A	2016/09/02	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8386342	N/A	2016/09/02	
Mercury (Total-LowLevel) by CVAF	CV/AF	8386318	2016/09/02	2016/09/02	
Ion Balance	CALC	8383480	N/A	2016/09/02	
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385058	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	
Elements by ICPMS Low Level (total)	ICP/CRCM	8385137	N/A	2016/09/01	
Ammonia-N (Preserved)	KONE/COL	8387304	N/A	2016/09/03	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385360	N/A	2016/09/01	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK1925
Sample ID: KZ-18
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8385384	N/A	2016/09/01	Name Redacted
Nitrogen - Nitrate (as N)	CALC	8383493	N/A	2016/09/02	
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	
pH Water	AT/ALK	8384956	N/A	2016/09/01	
Sulphate by Automated Colourimetry	KONE/COL	8384797	N/A	2016/08/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386949	2016/09/02	2016/09/02	
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	
Total Suspended Solids-Low Level	BAL/BAL	8383845	2016/09/01	2016/09/02	

Maxxam ID: PK2591
Sample ID: KZ-9 WEST SEEP
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8386197	N/A	2016/09/02	Name Redacted
Alkalinity - Water	AT/ALK	8384980	2016/09/01	2016/09/01	
Chloride by Automated Colourimetry	KONE/COL	8389102	N/A	2016/09/06	
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
COD by Colorimeter	M/COL	8384442	2016/09/01	2016/09/02	
Colour (True) by Kone Lab	KONE	8384569	N/A	2016/09/01	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	
Conductance - water	AT/ALK	8384985	N/A	2016/09/01	
Fluoride	ISE/ISE	8384579	N/A	2016/09/01	
Hardness Total (calculated as CaCO3)	CALC	8383916	N/A	2016/09/02	
Hardness (calculated as CaCO3)	CALC	8383917	N/A	2016/09/02	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8385941	N/A	2016/09/02	
Mercury (Total-LowLevel) by CVAF	CV/AF	8386276	2016/09/02	2016/09/02	
Bromide as Bromine (Br) by ICPMS	ICP/CRCM	8390650	N/A	2016/09/08	
Ion Balance	CALC	8383480	N/A	2016/09/07	
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385098	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	
Elements by ICPMS Low Level (total)	ICP/CRCM	8386259	N/A	2016/09/02	
Nitrogen (Total)	TRAA/COL	8389177	2016/09/06	2016/09/06	
Ammonia-N (Preserved)	KONE/COL	8387300	N/A	2016/09/03	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385393	N/A	2016/09/01	
Nitrite (N) (low level)	TRAA/COL	8385394	N/A	2016/09/01	
Nitrogen - Nitrate (as N)	CALC	8383918	N/A	2016/09/02	
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	
pH Water	AT/ALK	8384984	N/A	2016/09/01	
Orthophosphate by Konelab (low level)	KONE/COL	8384843	N/A	2016/09/01	
Sulphate by Automated Colourimetry	KONE/COL	8389104	N/A	2016/09/06	
Total Dissolved Solids - Low Level	BAL/BAL	8384591	N/A	2016/09/02	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK2591
Sample ID: KZ-9 WEST SEEP
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
TKN (Calc. TN, N/N) total	CALC	8383315	N/A	2016/09/06	Name Redacted
Carbon (Total Organic)	TRAA/COL	8390286	N/A	2016/09/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8391522	2016/09/08	2016/09/08	
Total Phosphorus - unpreserved	KONE/COL	8391524	N/A	2016/09/08	
Total Suspended Solids-Low Level	BAL/BAL	8385244	2016/09/01	2016/09/02	
Turbidity	TURB	8384575	N/A	2016/09/01	

Maxxam ID: PK2592
Sample ID: KZ-9 EAST SEEP
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8386197	N/A	2016/09/02	Name Redacted
Alkalinity - Water	AT/ALK	8384980	2016/09/01	2016/09/01	
Chloride by Automated Colourimetry	KONE/COL	8389102	N/A	2016/09/06	
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
COD by Colorimeter	M/COL	8384442	2016/09/01	2016/09/02	
Colour (True) by Kone Lab	KONE	8384569	N/A	2016/09/01	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	
Conductance - water	AT/ALK	8384985	N/A	2016/09/01	
Fluoride	ISE/ISE	8384579	N/A	2016/09/01	
Hardness Total (calculated as CaCO3)	CALC	8389856	N/A	2016/09/08	
Hardness (calculated as CaCO3)	CALC	8390478	N/A	2016/09/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8385941	N/A	2016/09/02	
Mercury (Total-LowLevel) by CVAF	CV/AF	8386276	2016/09/02	2016/09/02	
Bromide as Bromine (Br) by ICPMS	ICP/CRCM	8390650	N/A	2016/09/08	
Ion Balance	CALC	8390533	N/A	2016/09/08	
Sum of cations, anions	CALC	8390534	N/A	2016/09/08	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8389462	N/A	2016/09/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8390612	N/A	2016/09/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8389482	N/A	2016/09/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8390508	N/A	2016/09/08	
Nitrogen (Total)	TRAA/COL	8389177	2016/09/06	2016/09/06	
Ammonia-N Dissolved ((FF/FP)	KONE/COL	8387315	N/A	2016/09/03	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385393	N/A	2016/09/01	
Nitrite (N) (low level)	TRAA/COL	8385394	N/A	2016/09/01	
Nitrogen - Nitrate (as N)	CALC	8383918	N/A	2016/09/02	
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	
pH Water	AT/ALK	8384984	N/A	2016/09/01	
Orthophosphate by Konelab (low level)	KONE/COL	8384843	N/A	2016/09/01	
Sulphate by Automated Colourimetry	KONE/COL	8389104	N/A	2016/09/06	
Total Dissolved Solids - Low Level	BAL/BAL	8384591	N/A	2016/09/02	
TKN (Calc. TN, N/N) total	CALC	8383315	N/A	2016/09/06	
Carbon (Total Organic)	TRAA/COL	8390286	N/A	2016/09/07	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK2592
Sample ID: KZ-9 EAST SEEP
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386948	2016/09/02	2016/09/02	Name Redacted
Total Phosphorus - unpreserved	KONE/COL	8386952	N/A	2016/09/02	
Total Suspended Solids-Low Level	BAL/BAL	8385244	2016/09/01	2016/09/02	
Turbidity	TURB	8384575	N/A	2016/09/01	

Maxxam ID: PK2592 Dup
Sample ID: KZ-9 EAST SEEP
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
COD by Colorimeter	M/COL	8384442	2016/09/01	2016/09/02	Name Redacted
Ammonia-N Dissolved ((FF/FP)	KONE/COL	8387315	N/A	2016/09/03	

Maxxam ID: PK2593
Sample ID: SEEP 3
Matrix: Water

Collected: 2016/08/28
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8386197	N/A	2016/09/02	Name Redacted
Alkalinity - Water	AT/ALK	8384980	2016/09/01	2016/09/01	
Chloride by Automated Colourimetry	KONE/COL	8389102	N/A	2016/09/06	
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
COD by Colorimeter	M/COL	8384442	2016/09/01	2016/09/02	
Colour (True) by Kone Lab	KONE	8384569	N/A	2016/09/01	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	
Conductance - water	AT/ALK	8384985	N/A	2016/09/01	
Fluoride	ISE/ISE	8384579	N/A	2016/09/01	
Hardness Total (calculated as CaCO3)	CALC	8383916	N/A	2016/09/02	
Hardness (calculated as CaCO3)	CALC	8392311	N/A	2016/09/09	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8385941	N/A	2016/09/02	
Mercury (Total-LowLevel) by CVAF	CV/AF	8386276	2016/09/02	2016/09/02	
Bromide as Bromine (Br) by ICPMS	ICP/CRCM	8390650	N/A	2016/09/08	
Ion Balance	CALC	8392850	N/A	2016/09/09	
Sum of cations, anions	CALC	8392851	N/A	2016/09/09	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/09	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8390612	N/A	2016/09/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	
Elements by ICPMS Low Level (total)	ICP/CRCM	8386259	N/A	2016/09/02	
Nitrogen (Total)	TRAA/COL	8389177	2016/09/06	2016/09/06	
Ammonia-N (Preserved)	KONE/COL	8387300	N/A	2016/09/03	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385393	N/A	2016/09/01	
Nitrite (N) (low level)	TRAA/COL	8385394	N/A	2016/09/01	
Nitrogen - Nitrate (as N)	CALC	8383918	N/A	2016/09/02	
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK2593
Sample ID: SEEP 3
Matrix: Water

Collected: 2016/08/28
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH Water	AT/ALK	8384984	N/A	2016/09/01	Name Redacted
Orthophosphate by Konelab (low level)	KONE/COL	8384843	N/A	2016/09/01	
Sulphate by Automated Colourimetry	KONE/COL	8389104	N/A	2016/09/06	
Total Dissolved Solids - Low Level	BAL/BAL	8384591	N/A	2016/09/02	
TKN (Calc. TN, N/N) total	CALC	8383315	N/A	2016/09/06	
Carbon (Total Organic)	TRAA/COL	8390286	N/A	2016/09/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386948	2016/09/02	2016/09/02	
Total Phosphorus - unpreserved	KONE/COL	8386951	N/A	2016/09/02	
Total Suspended Solids-Low Level	BAL/BAL	8385244	2016/09/01	2016/09/02	
Turbidity	TURB	8384575	N/A	2016/09/01	

Maxxam ID: PK2593 Dup
Sample ID: SEEP 3
Matrix: Water

Collected: 2016/08/28
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8384579	N/A	2016/09/01	Name Redacted

Maxxam ID: PK2594
Sample ID: SEEP 4
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8386197	N/A	2016/09/02	Name Redacted
Alkalinity - Water	AT/ALK	8384980	2016/09/01	2016/09/01	
Chloride by Automated Colourimetry	KONE/COL	8389102	N/A	2016/09/06	
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
COD by Colorimeter	M/COL	8384442	2016/09/01	2016/09/02	
Colour (True) by Kone Lab	KONE	8384569	N/A	2016/09/01	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	
Conductance - water	AT/ALK	8384985	N/A	2016/09/01	
Fluoride	ISE/ISE	8384579	N/A	2016/09/01	
Hardness Total (calculated as CaCO3)	CALC	8383916	N/A	2016/09/02	
Hardness (calculated as CaCO3)	CALC	8383917	N/A	2016/09/02	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8385941	N/A	2016/09/02	
Mercury (Total-LowLevel) by CVAF	CV/AF	8386276	2016/09/02	2016/09/02	
Bromide as Bromine (Br) by ICPMS	ICP/CRCM	8390650	N/A	2016/09/08	
Ion Balance	CALC	8383480	N/A	2016/09/07	
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385098	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	
Elements by ICPMS Low Level (total)	ICP/CRCM	8386259	N/A	2016/09/02	
Nitrogen (Total)	TRAA/COL	8389177	2016/09/06	2016/09/06	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK2594
Sample ID: SEEP 4
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8387300	N/A	2016/09/03	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385393	N/A	2016/09/01	
Nitrite (N) (low level)	TRAA/COL	8385394	N/A	2016/09/01	
Nitrogen - Nitrate (as N)	CALC	8383918	N/A	2016/09/02	
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	
pH Water	AT/ALK	8384984	N/A	2016/09/01	
Orthophosphate by Konelab (low level)	KONE/COL	8384843	N/A	2016/09/01	
Sulphate by Automated Colourimetry	KONE/COL	8389104	N/A	2016/09/06	
Total Dissolved Solids - Low Level	BAL/BAL	8384591	N/A	2016/09/02	
TKN (Calc. TN, N/N) total	CALC	8383315	N/A	2016/09/06	
Carbon (Total Organic)	TRAA/COL	8390286	N/A	2016/09/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386948	2016/09/02	2016/09/02	
Total Phosphorus - unpreserved	KONE/COL	8386951	N/A	2016/09/02	
Total Suspended Solids-Low Level	BAL/BAL	8385244	2016/09/01	2016/09/02	
Turbidity	TURB	8384575	N/A	2016/09/01	

Maxxam ID: PK2594 Dup
Sample ID: SEEP 4
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Dissolved Solids - Low Level	BAL/BAL	8384591	N/A	2016/09/02	Name Redacted

Maxxam ID: PK2595
Sample ID: SEEP 5
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8386197	N/A	2016/09/02	Name Redacted
Alkalinity - Water	AT/ALK	8384980	2016/09/01	2016/09/01	
Chloride by Automated Colourimetry	KONE/COL	8389102	N/A	2016/09/06	
Cyanide SAD (strong acid dissociable)	TECH/COL	8384775	N/A	2016/09/01	
Cyanide WAD (weak acid dissociable)	TECH/COL	8384787	N/A	2016/09/01	
COD by Colorimeter	M/COL	8384442	2016/09/01	2016/09/02	
Colour (True) by Kone Lab	KONE	8384569	N/A	2016/09/01	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8390296	N/A	2016/09/07	
Conductance - water	AT/ALK	8384985	N/A	2016/09/01	
Fluoride	ISE/ISE	8384572	N/A	2016/09/01	
Hardness Total (calculated as CaCO3)	CALC	8383916	N/A	2016/09/02	
Hardness (calculated as CaCO3)	CALC	8383917	N/A	2016/09/02	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8385941	N/A	2016/09/02	
Mercury (Total-LowLevel) by CVAF	CV/AF	8386276	2016/09/02	2016/09/02	
Bromide as Bromine (Br) by ICPMS	ICP/CRCM	8390650	N/A	2016/09/08	
Ion Balance	CALC	8383480	N/A	2016/09/07	
Sum of cations, anions	CALC	8383492	N/A	2016/09/02	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PK2595
Sample ID: SEEP 5
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8383437	N/A	2016/09/02	Name Redacted
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8385098	N/A	2016/09/02	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8383438	N/A	2016/09/02	
Elements by ICPMS Low Level (total)	ICP/CRCM	8386259	N/A	2016/09/02	
Nitrogen (Total)	TRAA/COL	8389177	2016/09/06	2016/09/06	
Ammonia-N (Preserved)	KONE/COL	8387300	N/A	2016/09/03	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8385385	N/A	2016/09/01	
Nitrite (N) (low level)	TRAA/COL	8385386	N/A	2016/09/01	
Nitrogen - Nitrate (as N)	CALC	8383918	N/A	2016/09/02	
Filter and HNO3 Preserve for Metals	ICP	8384538	N/A	2016/09/01	
pH Water	AT/ALK	8384984	N/A	2016/09/01	
Orthophosphate by Konelab (low level)	KONE/COL	8384843	N/A	2016/09/01	
Sulphate by Automated Colourimetry	KONE/COL	8389104	N/A	2016/09/06	
Total Dissolved Solids - Low Level	BAL/BAL	8384591	N/A	2016/09/02	
TKN (Calc. TN, N/N) total	CALC	8383315	N/A	2016/09/06	
Carbon (Total Organic)	TRAA/COL	8390286	N/A	2016/09/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8386948	2016/09/02	2016/09/02	
Total Phosphorus - unpreserved	KONE/COL	8386951	N/A	2016/09/02	
Total Suspended Solids-Low Level	BAL/BAL	8385244	2016/09/01	2016/09/02	
Turbidity	TURB	8384575	N/A	2016/09/01	

Maxxam ID: PK2595 Dup
Sample ID: SEEP 5
Matrix: Water

Collected: 2016/08/27
Shipped:
Received: 2016/08/30

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Orthophosphate by Konelab (low level)	KONE/COL	8384843	N/A	2016/09/01	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.7°C
Package 2	4.0°C
Package 3	3.3°C
Package 4	4.0°C
Package 5	2.3°C
Package 6	4.3°C
Package 7	2.0°C
Package 8	2.3°C
Package 9	2.0°C
Package 10	2.7°C

Sample PK1912-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK1913-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK1914-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK1916-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Sample PK1917-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK1918-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK1919-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK1920-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK1924-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK2591-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK2592-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK2593-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK2594-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PK2595-01 : Cyanide bottle was field filtered by sampler. Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

GENERAL COMMENTS

Sample PK1911, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample PK2591, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample PK1911, Elements by ICPMS Low Level (total): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8382961	Total Ammonia (N)	2016/08/31	NC	80 - 120	101	80 - 120	<0.0050	mg/L	0.56	20
8383764	Acidity (pH 4.5)	2016/08/31					<0.50	mg/L	NC	20
8383764	Acidity (pH 8.3)	2016/08/31			100	80 - 120	<0.50	mg/L	NC	20
8383802	Total Suspended Solids	2016/09/01			102	80 - 120	<1.0	mg/L		
8383845	Total Suspended Solids	2016/09/02			101	80 - 120	<1.0	mg/L		
8384442	Chemical Oxygen Demand	2016/09/02	105	80 - 120	99	80 - 120	<10	mg/L	NC	20
8384556	True Colour	2016/09/01			110	80 - 120	<5.0	Col. Unit	NC	20
8384568	Fluoride (F)	2016/09/01	100	80 - 120	100	80 - 120	0.014, RDL=0.010	mg/L	0	20
8384569	True Colour	2016/09/01			103	80 - 120	<5.0	Col. Unit	NC	20
8384572	Fluoride (F)	2016/09/01	101	80 - 120	100	80 - 120	0.013, RDL=0.010	mg/L	NC	20
8384575	Turbidity	2016/09/01			103	80 - 120	<0.10	NTU	NC	20
8384579	Fluoride (F)	2016/09/01	101	80 - 120	100	80 - 120	0.012, RDL=0.010	mg/L	NC	20
8384591	Total Dissolved Solids	2016/09/02	103	80 - 120	104	80 - 120	<1.0	mg/L	2.0	20
8384775	Strong Acid Dissoc. Cyanide (CN)	2016/09/01	101	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8384787	Weak Acid Dissoc. Cyanide (CN)	2016/09/01	97	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8384796	Dissolved Chloride (Cl)	2016/08/31	86	80 - 120	96	80 - 120	<0.50	mg/L	NC	20
8384797	Dissolved Sulphate (SO4)	2016/08/31	NC	80 - 120	89	80 - 120	<0.50	mg/L	0.41	20
8384843	Orthophosphate (P)	2016/09/01	111	80 - 120	93	80 - 120	<0.0010	mg/L	NC	20
8384947	Alkalinity (PP as CaCO3)	2016/09/01					<0.50	mg/L	NC	20
8384947	Alkalinity (Total as CaCO3)	2016/09/01	NC	80 - 120	91	80 - 120	<0.50	mg/L	0.22	20
8384947	Bicarbonate (HCO3)	2016/09/01					<0.50	mg/L	0.36	20
8384947	Carbonate (CO3)	2016/09/01					<0.50	mg/L	NC	20
8384947	Hydroxide (OH)	2016/09/01					<0.50	mg/L	NC	20
8384956	pH	2016/09/01			102	97 - 103			0	N/A
8384957	Conductivity	2016/09/01			99	80 - 120	<1.0	uS/cm	0.14	20
8384980	Alkalinity (PP as CaCO3)	2016/09/01					<0.50	mg/L	NC	20
8384980	Alkalinity (Total as CaCO3)	2016/09/01	102	80 - 120	94	80 - 120	<0.50	mg/L	NC	20
8384980	Bicarbonate (HCO3)	2016/09/01					<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8384980	Carbonate (CO3)	2016/09/01					<0.50	mg/L	NC	20
8384980	Hydroxide (OH)	2016/09/01					<0.50	mg/L	NC	20
8384984	pH	2016/09/01			102	97 - 103			0.75	N/A
8384985	Conductivity	2016/09/01			101	80 - 120	1.1, RDL=1.0	uS/cm	NC	20
8385000	Alkalinity (PP as CaCO3)	2016/09/02					<0.50	mg/L	NC	20
8385000	Alkalinity (Total as CaCO3)	2016/09/02	NC	80 - 120	101	80 - 120	<0.50	mg/L	0.89	20
8385000	Bicarbonate (HCO3)	2016/09/02					<0.50	mg/L	0.25	20
8385000	Carbonate (CO3)	2016/09/02					<0.50	mg/L	NC	20
8385000	Hydroxide (OH)	2016/09/02					<0.50	mg/L	NC	20
8385003	pH	2016/09/02			102	97 - 103			0	N/A
8385004	Conductivity	2016/09/02			101	80 - 120	1.2, RDL=1.0	uS/cm	0.24	20
8385058	Dissolved Aluminum (Al)	2016/09/02	107	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
8385058	Dissolved Antimony (Sb)	2016/09/02	101	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8385058	Dissolved Arsenic (As)	2016/09/02	106	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
8385058	Dissolved Barium (Ba)	2016/09/02	104	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8385058	Dissolved Beryllium (Be)	2016/09/02	100	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8385058	Dissolved Bismuth (Bi)	2016/09/02	99	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8385058	Dissolved Boron (B)	2016/09/02	98	80 - 120	98	80 - 120	<0.010	mg/L	NC	20
8385058	Dissolved Cadmium (Cd)	2016/09/02	106	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8385058	Dissolved Chromium (Cr)	2016/09/02	109	80 - 120	111	80 - 120	<0.00010	mg/L	NC	20
8385058	Dissolved Cobalt (Co)	2016/09/02	108	80 - 120	109	80 - 120	<0.0000050	mg/L	NC	20
8385058	Dissolved Copper (Cu)	2016/09/02	110	80 - 120	110	80 - 120	<0.000050	mg/L	NC	20
8385058	Dissolved Iron (Fe)	2016/09/02	108	80 - 120	111	80 - 120	<0.0010	mg/L	NC	20
8385058	Dissolved Lead (Pb)	2016/09/02	100	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8385058	Dissolved Lithium (Li)	2016/09/02	90	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8385058	Dissolved Manganese (Mn)	2016/09/02	108	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20
8385058	Dissolved Molybdenum (Mo)	2016/09/02	101	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8385058	Dissolved Nickel (Ni)	2016/09/02	110	80 - 120	110	80 - 120	<0.000020	mg/L	NC	20
8385058	Dissolved Phosphorus (P)	2016/09/02					<0.0020	mg/L	NC	20
8385058	Dissolved Selenium (Se)	2016/09/02	109	80 - 120	103	80 - 120	<0.000040	mg/L	NC	20
8385058	Dissolved Silicon (Si)	2016/09/02					<0.050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8385058	Dissolved Silver (Ag)	2016/09/02	98	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8385058	Dissolved Strontium (Sr)	2016/09/02	105	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8385058	Dissolved Thallium (Tl)	2016/09/02	96	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8385058	Dissolved Tin (Sn)	2016/09/02	102	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
8385058	Dissolved Titanium (Ti)	2016/09/02	107	80 - 120	111	80 - 120	<0.00050	mg/L	NC	20
8385058	Dissolved Uranium (U)	2016/09/02	101	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8385058	Dissolved Vanadium (V)	2016/09/02	107	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
8385058	Dissolved Zinc (Zn)	2016/09/02	119	80 - 120	121 (1)	80 - 120	<0.00010	mg/L	NC	20
8385058	Dissolved Zirconium (Zr)	2016/09/02					<0.00010	mg/L	NC	20
8385098	Dissolved Aluminum (Al)	2016/09/02	109	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8385098	Dissolved Antimony (Sb)	2016/09/02	102	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8385098	Dissolved Arsenic (As)	2016/09/02	109	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8385098	Dissolved Barium (Ba)	2016/09/02	NC	80 - 120	101	80 - 120	<0.000020	mg/L	3.2	20
8385098	Dissolved Beryllium (Be)	2016/09/02	103	80 - 120	92	80 - 120	<0.000010	mg/L	NC	20
8385098	Dissolved Bismuth (Bi)	2016/09/02	100	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8385098	Dissolved Boron (B)	2016/09/02	99	80 - 120	94	80 - 120	<0.010	mg/L	NC	20
8385098	Dissolved Cadmium (Cd)	2016/09/02	98	80 - 120	94	80 - 120	<0.0000050	mg/L	0	20
8385098	Dissolved Chromium (Cr)	2016/09/02	105	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8385098	Dissolved Cobalt (Co)	2016/09/02	102	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8385098	Dissolved Copper (Cu)	2016/09/02	97	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
8385098	Dissolved Iron (Fe)	2016/09/02	106	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
8385098	Dissolved Lead (Pb)	2016/09/02	101	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8385098	Dissolved Lithium (Li)	2016/09/02	89	80 - 120	88	80 - 120	<0.00050	mg/L	NC	20
8385098	Dissolved Manganese (Mn)	2016/09/02	104	80 - 120	101	80 - 120	<0.000050	mg/L	1.2	20
8385098	Dissolved Molybdenum (Mo)	2016/09/02	NC	80 - 120	98	80 - 120	<0.000050	mg/L	4.5	20
8385098	Dissolved Nickel (Ni)	2016/09/02	100	80 - 120	100	80 - 120	<0.000020	mg/L	2.3	20
8385098	Dissolved Phosphorus (P)	2016/09/02					<0.0020	mg/L	NC	20
8385098	Dissolved Selenium (Se)	2016/09/02	107	80 - 120	100	80 - 120	<0.000040	mg/L	0.12	20
8385098	Dissolved Silicon (Si)	2016/09/02					<0.050	mg/L	2.5	20
8385098	Dissolved Silver (Ag)	2016/09/02	106	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8385098	Dissolved Strontium (Sr)	2016/09/02	NC	80 - 120	99	80 - 120	<0.000050	mg/L	1.2	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8385098	Dissolved Thallium (Tl)	2016/09/02	97	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8385098	Dissolved Tin (Sn)	2016/09/02	104	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8385098	Dissolved Titanium (Ti)	2016/09/02	110	80 - 120	93	80 - 120	<0.00050	mg/L	NC	20
8385098	Dissolved Uranium (U)	2016/09/02	108	80 - 120	98	80 - 120	<0.0000020	mg/L	0.12	20
8385098	Dissolved Vanadium (V)	2016/09/02	104	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8385098	Dissolved Zinc (Zn)	2016/09/02	107	80 - 120	100	80 - 120	<0.00010	mg/L	5.6	20
8385098	Dissolved Zirconium (Zr)	2016/09/02					<0.00010	mg/L	NC	20
8385137	Total Aluminum (Al)	2016/09/01	106	80 - 120	110	80 - 120	<0.00050	mg/L	NC	20
8385137	Total Antimony (Sb)	2016/09/01	98	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8385137	Total Arsenic (As)	2016/09/01	102	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8385137	Total Barium (Ba)	2016/09/01	102	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8385137	Total Beryllium (Be)	2016/09/01	99	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20
8385137	Total Bismuth (Bi)	2016/09/01	99	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8385137	Total Boron (B)	2016/09/01	97	80 - 120	100	80 - 120	<0.010	mg/L	NC	20
8385137	Total Cadmium (Cd)	2016/09/01	99	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8385137	Total Chromium (Cr)	2016/09/01	104	80 - 120	111	80 - 120	<0.00010	mg/L	NC	20
8385137	Total Cobalt (Co)	2016/09/01	103	80 - 120	109	80 - 120	<0.0000050	mg/L	NC	20
8385137	Total Copper (Cu)	2016/09/01	105	80 - 120	111	80 - 120	<0.000050	mg/L	NC	20
8385137	Total Iron (Fe)	2016/09/01	103	80 - 120	110	80 - 120	<0.0010	mg/L	NC	20
8385137	Total Lead (Pb)	2016/09/01	99	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8385137	Total Lithium (Li)	2016/09/01	90	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8385137	Total Manganese (Mn)	2016/09/01	104	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20
8385137	Total Molybdenum (Mo)	2016/09/01	99	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8385137	Total Nickel (Ni)	2016/09/01	106	80 - 120	110	80 - 120	<0.000020	mg/L	NC	20
8385137	Total Phosphorus (P)	2016/09/01					<0.0020	mg/L	NC	20
8385137	Total Selenium (Se)	2016/09/01	105	80 - 120	106	80 - 120	<0.000040	mg/L	NC	20
8385137	Total Silicon (Si)	2016/09/01					<0.050	mg/L	NC	20
8385137	Total Silver (Ag)	2016/09/01	99	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8385137	Total Strontium (Sr)	2016/09/01	101	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
8385137	Total Thallium (Tl)	2016/09/01	98	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8385137	Total Tin (Sn)	2016/09/01	102	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8385137	Total Titanium (Ti)	2016/09/01	97	80 - 120	114	80 - 120	<0.00050	mg/L	NC	20
8385137	Total Uranium (U)	2016/09/01	100	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8385137	Total Vanadium (V)	2016/09/01	103	80 - 120	107	80 - 120	<0.00020	mg/L	NC	20
8385137	Total Zinc (Zn)	2016/09/01	110	80 - 120	118	80 - 120	<0.00010	mg/L	NC	20
8385137	Total Zirconium (Zr)	2016/09/01					<0.00010	mg/L	NC	20
8385244	Total Suspended Solids	2016/09/02			99	80 - 120	<1.0	mg/L		
8385343	Total Aluminum (Al)	2016/09/02	NC	80 - 120	109	80 - 120	<0.0030	mg/L	NC	20
8385343	Total Antimony (Sb)	2016/09/02	115	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8385343	Total Arsenic (As)	2016/09/02	105	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8385343	Total Barium (Ba)	2016/09/02	NC	80 - 120	101	80 - 120	<0.000050	mg/L	0.23	20
8385343	Total Beryllium (Be)	2016/09/02	89	80 - 120	93	80 - 120	<0.000010	mg/L	NC	20
8385343	Total Bismuth (Bi)	2016/09/02	89	80 - 120	93	80 - 120	<0.000010	mg/L	NC	20
8385343	Total Boron (B)	2016/09/02	NC	80 - 120	94	80 - 120	<0.010	mg/L	NC	20
8385343	Total Cadmium (Cd)	2016/09/02	97	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8385343	Total Chromium (Cr)	2016/09/02	106	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20
8385343	Total Cobalt (Co)	2016/09/02	98	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8385343	Total Copper (Cu)	2016/09/02	90	80 - 120	107	80 - 120	<0.00010	mg/L	NC	20
8385343	Total Iron (Fe)	2016/09/02	108	80 - 120	102	80 - 120	<0.0050	mg/L	NC	20
8385343	Total Lead (Pb)	2016/09/02	93	80 - 120	96	80 - 120	<0.000020	mg/L	NC	20
8385343	Total Lithium (Li)	2016/09/02	NC	80 - 120	93	80 - 120	<0.00050	mg/L	8.3	20
8385343	Total Manganese (Mn)	2016/09/02	NC	80 - 120	104	80 - 120	<0.00010	mg/L	5.3	20
8385343	Total Molybdenum (Mo)	2016/09/02	NC	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8385343	Total Nickel (Ni)	2016/09/02	NC	80 - 120	102	80 - 120	<0.00010	mg/L	2.6	20
8385343	Total Phosphorus (P)	2016/09/02					<0.0050	mg/L		
8385343	Total Selenium (Se)	2016/09/02	101	80 - 120	101	80 - 120	<0.000040	mg/L	NC	20
8385343	Total Silicon (Si)	2016/09/02					<0.050	mg/L	NC	20
8385343	Total Silver (Ag)	2016/09/02	104	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8385343	Total Strontium (Sr)	2016/09/02	NC	80 - 120	100	80 - 120	<0.000050	mg/L	3.0	20
8385343	Total Thallium (Tl)	2016/09/02	80	80 - 120	86	80 - 120	<0.0000020	mg/L	NC	20
8385343	Total Tin (Sn)	2016/09/02	114	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
8385343	Total Titanium (Ti)	2016/09/02	128 (2)	80 - 120	102	80 - 120	<0.0020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8385343	Total Uranium (U)	2016/09/02	93	80 - 120	92	80 - 120	<0.0000050	mg/L	5.3	20
8385343	Total Vanadium (V)	2016/09/02	105	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8385343	Total Zinc (Zn)	2016/09/02	87	80 - 120	115	80 - 120	<0.0010	mg/L	NC	20
8385343	Total Zirconium (Zr)	2016/09/02					<0.00010	mg/L	NC	20
8385360	Nitrate plus Nitrite (N)	2016/09/01	107	80 - 120	104	80 - 120	<0.0020	mg/L	NC	25
8385384	Nitrite (N)	2016/09/01	100	80 - 120	98	80 - 120	<0.0020	mg/L	NC	25
8385385	Nitrate plus Nitrite (N)	2016/09/01	105	80 - 120	104	80 - 120	<0.0020	mg/L	NC	25
8385386	Nitrite (N)	2016/09/01	97	80 - 120	99	80 - 120	<0.0020	mg/L	NC	25
8385393	Nitrate plus Nitrite (N)	2016/09/01	NC	80 - 120	104	80 - 120	<0.0020	mg/L	NC	25
8385394	Nitrite (N)	2016/09/01	NC	80 - 120	99	80 - 120	<0.0020	mg/L	NC	25
8385941	Dissolved Mercury (Hg)	2016/09/02	95	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8386114	Total Aluminum (Al)	2016/09/02	109	80 - 120	106	80 - 120	<0.0030	mg/L	8.8	20
8386114	Total Antimony (Sb)	2016/09/02	100	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8386114	Total Arsenic (As)	2016/09/02	106	80 - 120	101	80 - 120	<0.000020	mg/L	15	20
8386114	Total Barium (Ba)	2016/09/02	NC	80 - 120	100	80 - 120	<0.000050	mg/L	0.38	20
8386114	Total Beryllium (Be)	2016/09/02	99	80 - 120	95	80 - 120	<0.000010	mg/L	NC	20
8386114	Total Bismuth (Bi)	2016/09/02	93	80 - 120	93	80 - 120	<0.000010	mg/L	NC	20
8386114	Total Boron (B)	2016/09/02	99	80 - 120	94	80 - 120	<0.010	mg/L	NC	20
8386114	Total Cadmium (Cd)	2016/09/02	100	80 - 120	103	80 - 120	<0.0000050	mg/L	17	20
8386114	Total Chromium (Cr)	2016/09/02	105	80 - 120	105	80 - 120	<0.00010	mg/L	NC	20
8386114	Total Cobalt (Co)	2016/09/02	102	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20
8386114	Total Copper (Cu)	2016/09/02	100	80 - 120	109	80 - 120	<0.00010	mg/L	NC	20
8386114	Total Iron (Fe)	2016/09/02	NC	80 - 120	101	80 - 120	<0.0050	mg/L	5.7	20
8386114	Total Lead (Pb)	2016/09/02	97	80 - 120	95	80 - 120	<0.000020	mg/L	4.1	20
8386114	Total Lithium (Li)	2016/09/02	100	80 - 120	96	80 - 120	0.00052, RDL=0.00050	mg/L	NC	20
8386114	Total Manganese (Mn)	2016/09/02	NC	80 - 120	104	80 - 120	<0.00010	mg/L	7.6	20
8386114	Total Molybdenum (Mo)	2016/09/02	102	80 - 120	97	80 - 120	<0.000050	mg/L	1.9	20
8386114	Total Nickel (Ni)	2016/09/02	99	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
8386114	Total Phosphorus (P)	2016/09/02					<0.0050	mg/L	NC	20
8386114	Total Selenium (Se)	2016/09/02	102	80 - 120	102	80 - 120	<0.000040	mg/L	5.5	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8386114	Total Silicon (Si)	2016/09/02					<0.050	mg/L	3.0	20
8386114	Total Silver (Ag)	2016/09/02	105	80 - 120	101	80 - 120	<0.000010	mg/L	NC	20
8386114	Total Strontium (Sr)	2016/09/02	NC	80 - 120	96	80 - 120	<0.000050	mg/L	1.1	20
8386114	Total Thallium (Tl)	2016/09/02	93	80 - 120	88	80 - 120	<0.0000020	mg/L	NC	20
8386114	Total Tin (Sn)	2016/09/02	98	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
8386114	Total Titanium (Ti)	2016/09/02	118	80 - 120	104	80 - 120	<0.0020	mg/L	NC	20
8386114	Total Uranium (U)	2016/09/02	104	80 - 120	92	80 - 120	<0.0000050	mg/L	0.47	20
8386114	Total Vanadium (V)	2016/09/02	106	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8386114	Total Zinc (Zn)	2016/09/02	106	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20
8386114	Total Zirconium (Zr)	2016/09/02					<0.00010	mg/L	NC	20
8386197	Acidity (pH 4.5)	2016/09/02			0	N/A	<0.50	mg/L	NC	20
8386197	Acidity (pH 8.3)	2016/09/02			100	80 - 120	<0.50	mg/L	NC	20
8386259	Total Aluminum (Al)	2016/09/02	100	80 - 120	104	80 - 120	<0.00050	mg/L	5.6	20
8386259	Total Antimony (Sb)	2016/09/02	97	80 - 120	94	80 - 120	<0.000020	mg/L	NC	20
8386259	Total Arsenic (As)	2016/09/02	101	80 - 120	95	80 - 120	<0.000020	mg/L	17	20
8386259	Total Barium (Ba)	2016/09/02	NC	80 - 120	98	80 - 120	<0.000020	mg/L	0.63	20
8386259	Total Beryllium (Be)	2016/09/02	99	80 - 120	91	80 - 120	<0.000010	mg/L	NC	20
8386259	Total Bismuth (Bi)	2016/09/02	94	80 - 120	89	80 - 120	<0.0000050	mg/L	NC	20
8386259	Total Boron (B)	2016/09/02	98	80 - 120	92	80 - 120	<0.010	mg/L	NC	20
8386259	Total Cadmium (Cd)	2016/09/02	102	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8386259	Total Chromium (Cr)	2016/09/02	103	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8386259	Total Cobalt (Co)	2016/09/02	104	80 - 120	101	80 - 120	<0.0000050	mg/L	3.0	20
8386259	Total Copper (Cu)	2016/09/02	103	80 - 120	100	80 - 120	<0.000050	mg/L	2.7	20
8386259	Total Iron (Fe)	2016/09/02	NC	80 - 120	102	80 - 120	<0.0010	mg/L	0.32	20
8386259	Total Lead (Pb)	2016/09/02	96	80 - 120	92	80 - 120	<0.0000050	mg/L	3.6	20
8386259	Total Lithium (Li)	2016/09/02	102	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8386259	Total Manganese (Mn)	2016/09/02	104	80 - 120	101	80 - 120	<0.000050	mg/L	1.7	20
8386259	Total Molybdenum (Mo)	2016/09/02	NC	80 - 120	98	80 - 120	<0.000050	mg/L	1.9	20
8386259	Total Nickel (Ni)	2016/09/02	103	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8386259	Total Phosphorus (P)	2016/09/02					<0.0020	mg/L		
8386259	Total Selenium (Se)	2016/09/02	99	80 - 120	96	80 - 120	<0.000040	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8386259	Total Silicon (Si)	2016/09/02					<0.050	mg/L	3.6	20
8386259	Total Silver (Ag)	2016/09/02	97	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8386259	Total Strontium (Sr)	2016/09/02	NC	80 - 120	90	80 - 120	<0.000050	mg/L	0.76	20
8386259	Total Thallium (Tl)	2016/09/02	91	80 - 120	89	80 - 120	<0.0000020	mg/L	NC	20
8386259	Total Tin (Sn)	2016/09/02	100	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8386259	Total Titanium (Ti)	2016/09/02	104	80 - 120	108	80 - 120	<0.00050	mg/L	NC	20
8386259	Total Uranium (U)	2016/09/02	99	80 - 120	90	80 - 120	<0.0000020	mg/L	NC	20
8386259	Total Vanadium (V)	2016/09/02	104	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8386259	Total Zinc (Zn)	2016/09/02	108	80 - 120	98	80 - 120	<0.00010	mg/L	4.2	20
8386259	Total Zirconium (Zr)	2016/09/02					<0.00010	mg/L	NC	20
8386276	Total Mercury (Hg)	2016/09/02	101	80 - 120	92	80 - 120	<0.0000020	mg/L	NC	20
8386318	Total Mercury (Hg)	2016/09/02	96	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8386342	Dissolved Mercury (Hg)	2016/09/02	95	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8386947	Dissolved Phosphorus (P)	2016/09/02	NC	80 - 120	92	80 - 120	<0.0020	mg/L	13	20
8386948	Dissolved Phosphorus (P)	2016/09/02	92	80 - 120	108	80 - 120	<0.0020	mg/L	NC	20
8386949	Dissolved Phosphorus (P)	2016/09/02	86	80 - 120	100	80 - 120	<0.0020	mg/L	NC	20
8386951	Total Phosphorus (P)	2016/09/02	89	80 - 120	108	80 - 120	<0.0020	mg/L		
8386952	Total Phosphorus (P)	2016/09/02	94	80 - 120	110	80 - 120	<0.0020	mg/L	NC	20
8387298	Total Ammonia (N)	2016/09/03	102	80 - 120	99	80 - 120	<0.0050	mg/L	NC	20
8387299	Total Ammonia (N)	2016/09/03	102	80 - 120	99	80 - 120	<0.0050	mg/L	NC	20
8387300	Total Ammonia (N)	2016/09/03	NC	80 - 120	96	80 - 120	<0.0050	mg/L	4.6	20
8387303	Total Ammonia (N)	2016/09/03	NC	80 - 120	98	80 - 120	<0.0050	mg/L	3.9	20
8387304	Total Ammonia (N)	2016/09/03	NC	80 - 120	104	80 - 120	<0.0050	mg/L	7.3	20
8387315	Dissolved Ammonia (N)	2016/09/03	NC	80 - 120	98	80 - 120	<0.0050	mg/L	2.9	25
8389102	Dissolved Chloride (Cl)	2016/09/06	114	80 - 120	94	80 - 120	<0.50	mg/L	NC	20
8389104	Dissolved Sulphate (SO4)	2016/09/06			92	80 - 120	0.51, RDL=0.50	mg/L		
8389177	Total Nitrogen (N)	2016/09/06	NC	80 - 120	95	80 - 120	<0.020	mg/L	1.1	20
8390148	Dissolved Organic Carbon (C)	2016/09/07	107	80 - 120	83	80 - 120	<0.50	mg/L	NC	20
8390286	Total Organic Carbon (C)	2016/09/07			113	80 - 120	<0.50	mg/L		
8390294	Dissolved Organic Carbon (C)	2016/09/07	114	80 - 120	111	80 - 120	<0.50	mg/L	NC	20
8390296	Dissolved Organic Carbon (C)	2016/09/07	116	80 - 120	109	80 - 120	<0.50	mg/L	3.0	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8390300	Dissolved Organic Carbon (C)	2016/09/07	106	80 - 120	108	80 - 120	<0.50	mg/L	NC	20
8390508	Total Aluminum (Al)	2016/09/07	96	80 - 120	100	80 - 120	<0.00050	mg/L	1.7	20
8390508	Total Antimony (Sb)	2016/09/07	94	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8390508	Total Arsenic (As)	2016/09/07	98	80 - 120	98	80 - 120	<0.000020	mg/L	5.2	20
8390508	Total Barium (Ba)	2016/09/07	NC	80 - 120	97	80 - 120	<0.000020	mg/L	3.1	20
8390508	Total Beryllium (Be)	2016/09/07	96	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8390508	Total Bismuth (Bi)	2016/09/07	95	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8390508	Total Boron (B)	2016/09/07	97	80 - 120	94	80 - 120	<0.010	mg/L	NC	20
8390508	Total Cadmium (Cd)	2016/09/07	95	80 - 120	97	80 - 120	<0.0000050	mg/L	3.3	20
8390508	Total Chromium (Cr)	2016/09/07	96	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
8390508	Total Cobalt (Co)	2016/09/07	93	80 - 120	97	80 - 120	<0.0000050	mg/L	0.25	20
8390508	Total Copper (Cu)	2016/09/07	92	80 - 120	97	80 - 120	<0.000050	mg/L	8.1	20
8390508	Total Iron (Fe)	2016/09/07	NC	80 - 120	97	80 - 120	<0.0010	mg/L	2.3	20
8390508	Total Lead (Pb)	2016/09/07	96	80 - 120	98	80 - 120	<0.0000050	mg/L	2.1	20
8390508	Total Lithium (Li)	2016/09/07	NC	80 - 120	97	80 - 120	<0.00050	mg/L	0.065	20
8390508	Total Manganese (Mn)	2016/09/07	NC	80 - 120	95	80 - 120	<0.000050	mg/L	0.35	20
8390508	Total Molybdenum (Mo)	2016/09/07	99	80 - 120	97	80 - 120	<0.000050	mg/L	2.2	20
8390508	Total Nickel (Ni)	2016/09/07	92	80 - 120	98	80 - 120	0.000035, RDL=0.000020	mg/L	1.3	20
8390508	Total Phosphorus (P)	2016/09/07					0.0028, RDL=0.0020	mg/L		
8390508	Total Selenium (Se)	2016/09/07	96	80 - 120	97	80 - 120	<0.000040	mg/L	NC	20
8390508	Total Silicon (Si)	2016/09/07					<0.050	mg/L	0.63	20
8390508	Total Silver (Ag)	2016/09/07	99	80 - 120	82	80 - 120	<0.0000050	mg/L	NC	20
8390508	Total Strontium (Sr)	2016/09/07	NC	80 - 120	97	80 - 120	<0.000050	mg/L	0.040	20
8390508	Total Thallium (Tl)	2016/09/07	85	80 - 120	97	80 - 120	<0.0000020	mg/L	13	20
8390508	Total Tin (Sn)	2016/09/07	99	80 - 120	107	80 - 120	<0.00020	mg/L	NC	20
8390508	Total Titanium (Ti)	2016/09/07	93	80 - 120	90	80 - 120	<0.00050	mg/L	NC	20
8390508	Total Uranium (U)	2016/09/07	101	80 - 120	99	80 - 120	<0.0000020	mg/L	1.2	20
8390508	Total Vanadium (V)	2016/09/07	96	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
8390508	Total Zinc (Zn)	2016/09/07	NC	80 - 120	97	80 - 120	<0.00010	mg/L	0.39	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8390508	Total Zirconium (Zr)	2016/09/07					<0.00010	mg/L	NC	20
8390612	Dissolved Aluminum (Al)	2016/09/08			102	80 - 120	<0.00050	mg/L		
8390612	Dissolved Antimony (Sb)	2016/09/08			95	80 - 120	<0.000020	mg/L		
8390612	Dissolved Arsenic (As)	2016/09/08			96	80 - 120	<0.000020	mg/L		
8390612	Dissolved Barium (Ba)	2016/09/08			98	80 - 120	<0.000020	mg/L		
8390612	Dissolved Beryllium (Be)	2016/09/08			93	80 - 120	<0.000010	mg/L		
8390612	Dissolved Bismuth (Bi)	2016/09/08			96	80 - 120	<0.0000050	mg/L		
8390612	Dissolved Boron (B)	2016/09/08			90	80 - 120	<0.010	mg/L		
8390612	Dissolved Cadmium (Cd)	2016/09/08			97	80 - 120	<0.0000050	mg/L		
8390612	Dissolved Chromium (Cr)	2016/09/08			97	80 - 120	<0.00010	mg/L		
8390612	Dissolved Cobalt (Co)	2016/09/08			96	80 - 120	<0.0000050	mg/L		
8390612	Dissolved Copper (Cu)	2016/09/08			96	80 - 120	<0.000050	mg/L		
8390612	Dissolved Iron (Fe)	2016/09/08			97	80 - 120	<0.0010	mg/L		
8390612	Dissolved Lead (Pb)	2016/09/08			98	80 - 120	<0.0000050	mg/L		
8390612	Dissolved Lithium (Li)	2016/09/08			89	80 - 120	<0.00050	mg/L		
8390612	Dissolved Manganese (Mn)	2016/09/08			96	80 - 120	<0.000050	mg/L		
8390612	Dissolved Molybdenum (Mo)	2016/09/08			98	80 - 120	<0.000050	mg/L		
8390612	Dissolved Nickel (Ni)	2016/09/08			96	80 - 120	<0.000020	mg/L		
8390612	Dissolved Phosphorus (P)	2016/09/08					<0.0020	mg/L		
8390612	Dissolved Selenium (Se)	2016/09/08			97	80 - 120	<0.000040	mg/L		
8390612	Dissolved Silicon (Si)	2016/09/08					<0.050	mg/L		
8390612	Dissolved Silver (Ag)	2016/09/08			93	80 - 120	<0.0000050	mg/L		
8390612	Dissolved Strontium (Sr)	2016/09/08			100	80 - 120	<0.000050	mg/L		
8390612	Dissolved Thallium (Tl)	2016/09/08			97	80 - 120	0.0000020, RDL=0.0000020	mg/L		
8390612	Dissolved Tin (Sn)	2016/09/08			103	80 - 120	<0.00020	mg/L		
8390612	Dissolved Titanium (Ti)	2016/09/08			101	80 - 120	<0.00050	mg/L		
8390612	Dissolved Uranium (U)	2016/09/08			100	80 - 120	<0.0000020	mg/L		
8390612	Dissolved Vanadium (V)	2016/09/08			96	80 - 120	<0.00020	mg/L		
8390612	Dissolved Zinc (Zn)	2016/09/08			99	80 - 120	<0.00010	mg/L		
8390612	Dissolved Zirconium (Zr)	2016/09/08					<0.00010	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8390650	Bromide (Br)	2016/09/08	102	78 - 120	97	80 - 120	<0.010	mg/L	NC	20
8391299	Total Lead (Pb)	2016/09/09	103	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8391522	Dissolved Phosphorus (P)	2016/09/08	100	80 - 120	97	80 - 120	<0.0020	mg/L	NC	20
8391524	Total Phosphorus (P)	2016/09/08	106	80 - 120	101	80 - 120	0.0023, RDL=0.0020	mg/L	NC	20
8392042	Total Ammonia (N)	2016/09/09	NC	80 - 120	98	80 - 120	<0.0050	mg/L	1.9	20
8392434	Dissolved Barium (Ba)	2016/09/09	NC	80 - 120	98	80 - 120	<0.000020	mg/L	2.5	20
8392434	Dissolved Strontium (Sr)	2016/09/09	NC	80 - 120	95	80 - 120	<0.000050	mg/L	0.63	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Blank Spike outside acceptance criteria (10% of analytes failure allowed).

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B674606
Report Date: 2016/09/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-16-01
Sampler Initials: AM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Name Redacted Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Analytics International Corporation o/a Maxxam Analytics
4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel:(604) 734 7276 Toll-free:800-563-6266 Fax:(604) 731 2386 www.maxxam.ca

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#11954 BMC MINERAL (NO. 1) LTD.	Company Name	#31132 ALEXCO ENVIRONMENTAL GROUP INC.	Quotation #	B60751	Maxxam Job #	Bottle Order #:
Contact Name	ACCOUNTS PAYABLE	Contact Name	KAI WOLOSHYN	P.O. #		B674606	502942
Address	530-1130 West Pender Street, Vancouver BC V6E 4A4	Address	Unit 3 Calcite Business Centre 151 Industrial Road WHITEHORSE BC Y1A 2V3	Project #	BMC-16-01	Chain Of Custody Record	Project Manager
Phone	(778) 233-7058 x Fax:	Phone	(867) 668-6463 Fax:	Project Name		C#502942-01-01	Megan Smith
Email	accounts@bmcminerals.com	Email	kwoloshyn@alexcoresource.com	Site #			
				Sampled By	Andrew Markhail		

Regulatory Criteria:
- [ ] CSR
- [ ] CCME
- [ ] BC Water Quality
- [ ] Other

Special Instructions:

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [X]

(will be applied if Rush TAT is not specified):

Standard TAT = 5-7 Working days for most tests..

Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)

1 DAY [ ] 2 Day [ ] 3 Day [ ] Date Required: [ ]

Rush Confirmation Number: *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y/N)	SURFACE WATER QUALITY	# of Bottles	Comments
1	SID#160227	KZ-19	27/Aug/16	16:50	SW	N	X	11	RE: Signature Redacted BY:
2	SID#160228	KZ-21	26/Aug/16	15:00	SW	N	X	11	✓ 2016-08-30 @10:35
3	SID#160229	KZ-22	26/Aug/16	14:00	SW	N	X	11	TEMP: 6 / 3 / 5 @10:35
4	SID#160230	KZ-28	26/Aug/16	14:15	SW	N	X	11	4/3/5 2/4/2
5	SID#160231	KZ-6	27/Aug/16	15:33	SW	N	X	11	5/4/0 2/3/1
6	SID#160232	TRIP BLANK			SW	N	X	11	4/3/5 3/3/1
7	SID#160219	KZ-2	27-Aug-16	16:30	SW	N	X	11	3/3/1 1/4/1 5/3/5
8	SID#160220	KZ-26	26/Aug/16	12:15	SW	N	X	11	
9	SID#160221	KZ-7	27-Aug-16	14:32	SW	N	X	11	
10	SID#160222	KZ-9	27-Aug-16	11:55	SW	N	X	11	

B674606_COC

* * RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
Signature Redacted	16/09/30	10:30	Signature Redacted	2016/08/31	09:30		[ ]	11/12/11/11	[ ] Yes [ ] No

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

22/11/11/12/11/22/12/1

Maxxam Analytics International Corporation o/a Maxxam Analytics
4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel:(604) 734 7276 Toll-free:800-563-6266 Fax:(604) 731 2386 www.maxxam.ca

Chain Of Custody Record

INVOICE TO:		Report Information		Project Information		Laboratory Use Only	
Company Name	#11954 BMC MINERAL (NO. 1) LTD.	Company Name	#31132 ALEXCO ENVIRONMENTAL GROUP INC.	Quotation #	B60751	Maxxam Job #	Bottle Order #:
Contact Name	ACCOUNTS PAYABLE	Contact Name	KAI WOLOSHYN	P.O. #		B674606	502942
Address	530-1130 West Pender Street, Vancouver BC V6E 4A4	Address	Unit 3 Calcite Business Centre 151 Industrial Road WHITEHORSE BC Y1A 2V3	Project #	BMC-16-01	Chain Of Custody Record	Project Manager
Phone	(778) 233-7058 x Fax:	Phone	(867) 668-6463 Fax:	Project Name		C#502942-02-01	Megan Smith
Email	accounts@bmcminerals.com	Email	kwoloshyn@alexcoresource.com	Site # / Sampled By	Andrew MacPhail		

Regulatory Criteria:
- [ ] CSR
- [ ] CCME
- [ ] BC Water Quality
- [ ] Other

Special Instructions

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	SURFACE WATER QUALITY	# of Bottles	Comments
1	SID#160223	KZ-13	28-Aug-16	7:35	SW	N	X	11	RECEIVED BY: Signature Redacted
2	SID#160224	KZ-15	27-Aug-16	7:30	SW	N	X	11	
3	SID#160225	KZ-16	27-Aug-16	8:20	SW	N	X	11	2016-08-30 @ 10:35
4	SID#160226	KZ-17	27-Aug-16	9:04	SW	N	X	11	TEMP: 6 / 3 / 5
5		KZ-18	27-Aug-16	12:07	SW	N	X	11	4/3/5 2/4/2 1/4/1
6									5/4/0
7									4/3/5 3/3/1 JY 2016/08/30
8									3/3/1
9									5/3/5
10									2/3/1 3/3/1

B674606_COC

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified): X
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
1 DAY ☐ 2 Day ☐ 3 Day ☐ Date Required: ☐
Rush Confirmation Number: (call lab for #)

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Signature Redacted	16/09/30		Signature Redacted	2016/08/31	09:30	

Lab Use Only: Time Sensitive ☐ | Temperature (°C) on Receipt: 1,1 / 1,2 / 1,1 / 1,1 | Custody Seal Intact on Cooler? ☐ Yes ☐ No

221/111/112/211/222/121

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

Maxxam
A Bureau Veritas Group Company

Maxxam Analytics International Corporation o/a Maxxam Analytics
4606 Canada Way, Burnaby, British Columbia Canada V5G 1K5 Tel:(604) 734 7276 Toll-free:800-563-6266 Fax:(604) 731 2386 www.maxxam.ca

Page 1 of 1

B674717_COC

INVOICE TO:		Report Information		Project Information	
Company Name	#11954 BMC MINERAL (NO. 1) LTD.	Company Name	#31132 ALEXCO ENVIRONMENTAL GROUP INC.	Quotation #	B60751
Contact Name	ACCOUNTS PAYABLE	Contact Name	KAI WOLOSHYN	P.O. #	
Address	530-1130 West Pender Street, Vancouver BC V6E 4A4	Address	Unit 3 Calcite Business Centre 151 Industrial Road WHITEHORSE BC Y1A 2V3	Project #	BMC-16-01
Phone	(778) 233-7058 x Fax:	Phone	(867) 668-6463 Fax:	Project Name	
Email	accounts@bmcminerals.com	Email	kwoloshyn@alexcoresource.com	Site #	
				Sampled By	Andrew MacPhail

Lab Use Only

Bottle Order #: 503657

Chain Of Custody Record: C#503657-01-01

Project Manager: Megan Smith

Regulatory Criteria:
- [ ] CSR
- [ ] CCME
- [ ] BC Water Quality
- [ ] Other

Special Instructions

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:

Please provide advance notice for rush projects

Regular (Standard) TAT: [X]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
1 DAY [ ] 2 Day [ ] 3 Day [ ] Date Required: [ ]
Rush Confirmation Number: (call lab for #)

SAMPLES MUST BE KEPT COOL (< 10°C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Metals Field Filtered ? (Y / N)	Acidity, Alkalinity, Conductivity, pH, Color, Turbidity, TDS LL	Chloride, Fluoride, Sulphate, Nitrate, Nitrite, Orthophos, Bromide	Cyanide SAD & WAD	COD, TN, NH4, TOC, TKN	Carbon (DOC) - field filtered/preserved	Phosphorus (LL Total & Dissolved) - UF/UP	Total Suspended Solids-Low Level	Low Level Total & Dissolved Metals with CV Hg			# of Bottles	Comments
1		KZ-9 West Seep	27-Aug-16	11:20	SW	N	X	X	X	X	X	X	X	X				Signature Redacted
2		KZ-9 East Seep	27-Aug-16	12:30	SW	N	X	X	X	X	X	X	X	X				2016-08-30 @10:35
3		Seep 3	28-Aug-16	18:05	SW	N	X	X	X	X	X	X	X	X				
4		Seep 4	27-Aug-16	15:55	SW	N	X	X	X	X	X	X	X	X				TEMP: 6 / 3 / 5
5		Seep			SW		X	X	X	X	X	X	X	X				4/3/5 4/3/5 2/3/1 2/4/2 3/3/1 3/3/1 5/4/0 5/5/3 1/4/1
6		Seep 5	27-Aug-16	14:13	SW	N	X	X	X	X	X	X	X	X				Cyanide filtered, Metals filtered but not preserved
7																		
8																		
9																		
10																		

Signature Redacted	Date: (YY/MM/DD)	Time	Signature Redacted	Date: (YY/MM/DD)	Time	# jars used and not submitted	Lab Use Only: Time Sensitive	Temperature (°C) on Receipt	Custody Seal Intact on Cooler?
	16/09/30	10:30		2016/08/31	09:30		[ ]	1,1,1/1,2,1/1,1,1/1,1,1	[ ] Yes [ ] No

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

White: Maxxam Yellow: Client

Maxxam Analytics International Corporation o/a Maxxam Analytics

2,2,1/1,1,1/1,1,2/2,1,1/2,2,2/1,2,1

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08427197, 08427191, 08427198

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/09/23
Report #: R2267090
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B677977
Received: 2016/09/08, 13:10

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	14	N/A	2016/09/10	BBY6SOP-00037	SM 22 2310 B m
Acidity pH 4.5 & pH 8.3 (as CaCO3)	1	N/A	2016/09/14	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	4	2016/09/09	2016/09/10	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	10	2016/09/10	2016/09/10	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	1	2016/09/12	2016/09/12	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	14	N/A	2016/09/12	BBY6SOP-00011	SM 22 4500-Cl- E m
Chloride by Automated Colourimetry	1	N/A	2016/09/13	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	10	N/A	2016/09/13	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	10	N/A	2016/09/13	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	10	N/A	2016/09/12	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	14	N/A	2016/09/10	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	1	N/A	2016/09/12	BBY6SOP-00026	SM 22 2510 B m
Fluoride	14	N/A	2016/09/12	BBY6SOP-00048	SM 22 4500-F C m
Fluoride	1	N/A	2016/09/13	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	9	N/A	2016/09/14	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	1	N/A	2016/09/15	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	14	N/A	2016/09/15	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	1	N/A	2016/09/16	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	15	N/A	2016/09/14	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	10	2016/09/14	2016/09/14	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	13	N/A	2016/09/15	BBY WI-00033	Auto Calc
Ion Balance	2	N/A	2016/09/16	BBY WI-00033	Auto Calc
Sum of cations, anions	9	N/A	2016/09/14	Calc	
Sum of cations, anions	4	N/A	2016/09/15	Calc	
Sum of cations, anions	2	N/A	2016/09/16	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	14	N/A	2016/09/15	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2016/09/16	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	14	N/A	2016/09/14	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	1	N/A	2016/09/16	BBY7SOP-00002	EPA 6020B R2 m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08427197, 08427191, 08427198

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/09/23
Report #: R2267090
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B677977
Received: 2016/09/08, 13:10

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Elements by ICPMS Digested LL (total)	1	2016/09/14	2016/09/15	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	9	N/A	2016/09/14	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2016/09/15	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	9	N/A	2016/09/14	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	10	N/A	2016/09/14	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	14	N/A	2016/09/10	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrate+Nitrite (N) (low level)	1	N/A	2016/09/13	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	14	N/A	2016/09/10	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	1	N/A	2016/09/13	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	15	N/A	2016/09/14	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	15	N/A	2016/09/12	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	14	N/A	2016/09/10	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (2)	1	N/A	2016/09/12	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	13	N/A	2016/09/12	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	1	N/A	2016/09/13	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	1	N/A	2016/09/16	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	9	2016/09/10	2016/09/10	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2016/09/16	2016/09/16	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	10	N/A	2016/09/10	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	10	2016/09/13	2016/09/14	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08427197, 08427191, 08427198

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/09/23
Report #: R2267090
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B677977
Received: 2016/09/08, 13:10

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========
Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PL9534		PL9535		PL9536	PL9537		
Sampling Date		2016/09/07 16:05		2016/09/07 15:52		2016/09/07 15:08	2016/09/07 15:33		
COC Number		08427191		08427191		08427191	08427191		
	UNITS	KZ-9_E-SEEP	QC Batch	KZ-9_W-SEEP	QC Batch	SEEP-3	SEEP-5	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	16	8398814	5.1	8398814	3.1	1.5	N/A	8392851
Cation Sum	meq/L	19	8398814	5.2	8398814	3.1	1.6	N/A	8392851
Filter and HNO3 Preservation	N/A	LAB	8394726	LAB	8394726	LAB	LAB	N/A	8394726
Ion Balance	N/A	1.2 (1)	8398813	1.0	8398813	1.0	1.0	0.010	8392850
Nitrate (N)	mg/L	0.0161	8392522	0.486	8392522	0.509	<0.0020	0.0020	8392522
Misc. Inorganics									
Fluoride (F)	mg/L	0.920	8395425	0.056	8395425	0.036	0.074	0.010	8395425
Acidity (pH 4.5)	mg/L	<0.50	8393635	<0.50	8393635	<0.50	<0.50	0.50	8393635
Alkalinity (Total as CaCO3)	mg/L	771	8393294	210	8393294	131	65.0	0.50	8393294
Acidity (pH 8.3)	mg/L	169	8393635	<0.50	8393635	<0.50	2.74	0.50	8393635
Alkalinity (PP as CaCO3)	mg/L	<0.50	8393294	<0.50	8393294	<0.50	<0.50	0.50	8393294
Bicarbonate (HCO3)	mg/L	941	8393294	256	8393294	160	79.3	0.50	8393294
Carbonate (CO3)	mg/L	<0.50	8393294	<0.50	8393294	<0.50	<0.50	0.50	8393294
Hydroxide (OH)	mg/L	<0.50	8393294	<0.50	8393294	<0.50	<0.50	0.50	8393294
Anions									
Dissolved Sulphate (SO4)	mg/L	24.6	8401043	40.9	8395390	18.2	7.51	0.50	8395390
Dissolved Chloride (Cl)	mg/L	2.0	8395388	0.75	8395388	0.73	2.6	0.50	8395388
Nutrients									
Nitrate plus Nitrite (N)	mg/L	0.0161	8396330	0.486	8396330	0.509	<0.0020	0.0020	8396330
Nitrite (N)	mg/L	<0.0020	8396331	<0.0020	8396331	<0.0020	<0.0020	0.0020	8396331
Physical Properties									
Conductivity	uS/cm	1560	8393330	464	8393330	290	154	1.0	8393330
pH	pH	6.61	8393327	8.25	8393327	8.11	7.32		8393327

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Anion - Cation balance exceeds normal acceptance limits, major ions reanalyzed, possible matrix interference

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PL9577		PL9609		PL9610	PL9611		
Sampling Date		2016/09/07 13:08		2016/09/06 16:30		2016/09/07 08:12	2016/09/07 09:26		
COC Number		08427197		08427197		08427197	08427197		
	UNITS	KZ-9	QC Batch	KZ-13	QC Batch	KZ-15	KZ-16	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	3.2	8392851	1.4	8392851	2.9	2.5	N/A	8392851
Cation Sum	meq/L	3.2	8392851	1.3	8392851	2.9	2.5	N/A	8392851
Filter and HNO3 Preservation	N/A	LAB	8394726	LAB	8394726	LAB	LAB	N/A	8394726
Ion Balance	N/A	1.0	8392850	0.97	8392850	1.0	0.99	0.010	8392850
Nitrate (N)	mg/L	0.0902	8392522	0.0412	8392522	0.0722	0.0811	0.0020	8392522
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00065	8396387	0.00071	8396387	0.00067	0.00058	0.00050	8396387
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00070	8396389	0.00073	8396389	0.00069	0.00076	0.00050	8396389
Fluoride (F)	mg/L	0.062	8395414	0.046	8395451	0.060	0.047	0.010	8395414
Dissolved Organic Carbon (C)	mg/L	3.08	8395368	4.11	8395368	2.39	2.76	0.50	8395368
Acidity (pH 4.5)	mg/L	<0.50	8393635	<0.50	8393635	<0.50	<0.50	0.50	8393635
Alkalinity (Total as CaCO3)	mg/L	120	8393707	55.9	8393707	116	100	0.50	8393707
Acidity (pH 8.3)	mg/L	<0.50	8393635	<0.50	8393635	<0.50	<0.50	0.50	8393635
Alkalinity (PP as CaCO3)	mg/L	<0.50	8393707	<0.50	8393707	<0.50	<0.50	0.50	8393707
Bicarbonate (HCO3)	mg/L	147	8393707	68.2	8393707	141	123	0.50	8393707
Carbonate (CO3)	mg/L	<0.50	8393707	<0.50	8393707	<0.50	<0.50	0.50	8393707
Hydroxide (OH)	mg/L	<0.50	8393707	<0.50	8393707	<0.50	<0.50	0.50	8393707
Anions									
Dissolved Sulphate (SO4)	mg/L	35.7	8395386	12.8	8395309	26.6	21.9	0.50	8395386
Dissolved Chloride (Cl)	mg/L	0.77	8395384	<0.50	8395304	0.70	<0.50	0.50	8395384
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0048	8393989	0.0068 (1)	8393989	0.0051	0.0039	0.0020	8393989
Total Ammonia (N)	mg/L	0.036	8396820	0.012	8396820	0.015	0.016	0.0050	8396820
Nitrate plus Nitrite (N)	mg/L	0.0902	8396330	0.0412 (1)	8396330	0.0722	0.0811	0.0020	8396330
Nitrite (N)	mg/L	<0.0020	8396331	<0.0020 (1)	8396331	<0.0020	<0.0020	0.0020	8396331
Total Phosphorus (P)	mg/L	0.0045	8394016	0.0053 (1)	8394016	0.0080	0.0050 (1)	0.0020	8394016
Physical Properties									
Conductivity	uS/cm	298	8393704	136	8393704	268	231	1.0	8393704
pH	pH	7.97	8393699	7.96	8393699	8.13	8.07		8393699

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PL9577		PL9609		PL9610	PL9611		
Sampling Date		2016/09/07 13:08		2016/09/06 16:30		2016/09/07 08:12	2016/09/07 09:26		
COC Number		08427197		08427197		08427197	08427197		
	UNITS	KZ-9	QC Batch	KZ-13	QC Batch	KZ-15	KZ-16	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	5.9	8395901	1.4	8395901	10.1	<1.0	1.0	8395901
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PL9612		PL9613		PL9619		PL9620		
Sampling Date		2016/09/07 10:58		2016/09/06 12:00		2016/09/06 15:00		2016/09/06 13:36		
COC Number		08427197		08427197		08427198		08427198		
	UNITS	KZ-17	QC Batch	KZ-19	QC Batch	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Calculated Parameters										
Anion Sum	meq/L	3.2	8392851	3.9	8392851	4.7	8392851	3.7	N/A	8392851
Cation Sum	meq/L	3.1	8392851	3.9	8392851	4.8	8392851	3.7	N/A	8392851
Filter and HNO3 Preservation	N/A	LAB	8394726	LAB	8394726	LAB	8394726	LAB	N/A	8394726
Ion Balance	N/A	0.99	8392850	0.99	8392850	1.0	8392850	1.0	0.010	8392850
Nitrate (N)	mg/L	0.0913	8392522	0.0390	8392522	0.0108	8392522	0.0361	0.0020	8392522
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00067	8396387	0.00079	8396387	0.00084	8396387	0.00083	0.00050	8396387
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00070	8396389	0.00060	8396389	0.00103	8396389	0.00101	0.00050	8396389
Fluoride (F)	mg/L	0.099	8395425	0.096	8395414	0.130	8395414	0.090	0.010	8395414
Dissolved Organic Carbon (C)	mg/L	1.58	8395377	5.20	8395368	7.13	8395368	5.02	0.50	8395377
Acidity (pH 4.5)	mg/L	<0.50	8393635	<0.50	8393635	<0.50	8393635	<0.50	0.50	8393635
Alkalinity (Total as CaCO3)	mg/L	128	8393707	163	8393707	188	8393707	151	0.50	8393707
Acidity (pH 8.3)	mg/L	0.53	8393635	<0.50	8393635	<0.50	8393635	<0.50	0.50	8393635
Alkalinity (PP as CaCO3)	mg/L	<0.50	8393707	<0.50	8393707	<0.50	8393707	<0.50	0.50	8393707
Bicarbonate (HCO3)	mg/L	157	8393707	198	8393707	229	8393707	184	0.50	8393707
Carbonate (CO3)	mg/L	<0.50	8393707	<0.50	8393707	<0.50	8393707	<0.50	0.50	8393707
Hydroxide (OH)	mg/L	<0.50	8393707	<0.50	8393707	<0.50	8393707	<0.50	0.50	8393707
Anions										
Dissolved Sulphate (SO4)	mg/L	26.8	8395390	31.9	8395386	41.2	8395390	33.1	0.50	8395386
Dissolved Chloride (Cl)	mg/L	0.95	8395388	0.87	8395384	1.3	8395388	1.0	0.50	8395384
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0054	8393989	0.0174 (1)	8393989	0.0186 (1)	8393989	0.0077 (1)	0.0020	8400667
Total Ammonia (N)	mg/L	0.018	8396820	0.014	8396820	0.026	8396820	0.024	0.0050	8396820
Nitrate plus Nitrite (N)	mg/L	0.0913	8396330	0.0390 (1)	8396330	0.0108 (1)	8396330	0.0361 (1)	0.0020	8396330
Nitrite (N)	mg/L	<0.0020	8396331	<0.0020 (1)	8396331	<0.0020 (1)	8396331	<0.0020 (1)	0.0020	8396331
Total Phosphorus (P)	mg/L	0.0047	8394016	0.0180 (1)	8394016	0.0171	8394016	0.0091 (1)	0.0020	8394016
Physical Properties										
Conductivity	uS/cm	291	8393704	353	8393704	418	8393704	340	1.0	8393704
pH	pH	7.96	8393699	8.24	8393699	8.18	8393699	8.18		8393699

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PL9612		PL9613		PL9619		PL9620		
Sampling Date		2016/09/07 10:58		2016/09/06 12:00		2016/09/06 15:00		2016/09/06 13:36		
COC Number		08427197		08427197		08427198		08427198		
	UNITS	KZ-17	QC Batch	KZ-19	QC Batch	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Physical Properties										
Total Suspended Solids	mg/L	<1.0 (1)	8395901	9.5	8395901	2.5	8395901	1.8	1.0	8395901

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PL9621		PL9622		PM2358		
Sampling Date		2016/09/06 10:45		2016/09/07 14:10		2016/09/08 13:00		
COC Number		08427198		08427198		08427197		
	UNITS	KZ-26	QC Batch	KZ-18	QC Batch	SEEP-4	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	4.0	8392851	3.8	8392851	3.1	N/A	8395084
Cation Sum	meq/L	4.0	8392851	3.8	8392851	3.1	N/A	8395084
Filter and HNO3 Preservation	N/A	LAB	8394726	LAB	8394726	LAB	N/A	8394726
Ion Balance	N/A	1.0	8392850	1.0	8392850	0.99	0.010	8395083
Nitrate (N)	mg/L	0.0375	8392522	0.0601	8392522	0.495	0.0020	8395085
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00077	8396387	0.00070	8396387		0.00050	
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00083	8396389	0.00071	8396389		0.00050	
Fluoride (F)	mg/L	0.091	8395414	0.059	8395425	0.047	0.010	8396631
Dissolved Organic Carbon (C)	mg/L	5.53	8395368	2.10	8395368		0.50	
Acidity (pH 4.5)	mg/L	<0.50	8393635	<0.50	8393635	<0.50	0.50	8397076
Alkalinity (Total as CaCO3)	mg/L	162	8393707	168	8393707	112	0.50	8395219
Acidity (pH 8.3)	mg/L	<0.50	8393635	<0.50	8393635	0.83	0.50	8397076
Alkalinity (PP as CaCO3)	mg/L	<0.50	8393707	<0.50	8393707	<0.50	0.50	8395219
Bicarbonate (HCO3)	mg/L	198	8393707	205	8393707	137	0.50	8395219
Carbonate (CO3)	mg/L	<0.50	8393707	<0.50	8393707	<0.50	0.50	8395219
Hydroxide (OH)	mg/L	<0.50	8393707	<0.50	8393707	<0.50	0.50	8395219
Anions								
Dissolved Sulphate (SO4)	mg/L	32.4	8395386	22.1	8395390	39.2	0.50	8397094
Dissolved Chloride (Cl)	mg/L	1.1	8395384	1.0	8395388	0.64	0.50	8397091
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0187 (1)	8393989	0.0194	8393989		0.0020	
Total Ammonia (N)	mg/L	0.018	8396820	0.013	8396820		0.0050	
Nitrate plus Nitrite (N)	mg/L	0.0375 (1)	8396330	0.0601	8396330	0.495	0.0020	8397401
Nitrite (N)	mg/L	<0.0020 (1)	8396331	<0.0020	8396331	<0.0020	0.0020	8397405
Total Phosphorus (P)	mg/L	0.0176 (1)	8394016	0.0223	8394016		0.0020	
Physical Properties								
Conductivity	uS/cm	355	8393704	350	8393704	291	1.0	8395222
pH	pH	8.25	8393699	8.06	8393699	7.91		8395221

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PL9621		PL9622		PM2358		
Sampling Date		2016/09/06 10:45		2016/09/07 14:10		2016/09/08 13:00		
COC Number		08427198		08427198		08427197		
	UNITS	KZ-26	QC Batch	KZ-18	QC Batch	SEEP-4	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	8.7	8395901	<1.0	8395901		1.0	
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PL9534		PL9535		PL9536		
Sampling Date		2016/09/07 16:05		2016/09/07 15:52		2016/09/07 15:08		
COC Number		08427191		08427191		08427191		
	UNITS	KZ-9_E-SEEP	QC Batch	KZ-9_W-SEEP	QC Batch	SEEP-3	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	895	8392954	257	8399253	152	0.50	8392954
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8397352	<0.0000020	8397352	<0.0000020	0.0000020	8397352
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0793	8396743	0.00129	8400769	0.00328	0.00050	8396743
Dissolved Antimony (Sb)	mg/L	<0.000020	8396743	0.000027	8400769	<0.000020	0.000020	8396743
Dissolved Arsenic (As)	mg/L	0.000649	8396743	0.000098	8400769	0.000074	0.000020	8396743
Dissolved Barium (Ba)	mg/L	0.145	8396743	0.233	8400769	0.0997	0.000020	8396743
Dissolved Beryllium (Be)	mg/L	0.000293	8396743	<0.000010	8400769	<0.000010	0.000010	8396743
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8396743	<0.0000050	8400769	<0.0000050	0.0000050	8396743
Dissolved Boron (B)	mg/L	<0.010	8396743	<0.010	8400769	<0.010	0.010	8396743
Dissolved Cadmium (Cd)	mg/L	0.0000690	8396743	0.0000120	8400769	0.0000120	0.0000050	8396743
Dissolved Chromium (Cr)	mg/L	<0.00010	8396743	0.00027	8400769	<0.00010	0.00010	8396743
Dissolved Cobalt (Co)	mg/L	0.00226	8396743	<0.0000050	8400769	0.0000080	0.0000050	8396743
Dissolved Copper (Cu)	mg/L	<0.000050	8396743	0.000112	8400769	0.000234	0.000050	8396743
Dissolved Iron (Fe)	mg/L	4.44	8396743	<0.0010	8400769	<0.0010	0.0010	8396743
Dissolved Lead (Pb)	mg/L	<0.0000050	8396743	0.0000070	8400769	<0.0000050	0.0000050	8396743
Dissolved Lithium (Li)	mg/L	0.0831	8396743	0.00193	8400769	<0.00050	0.00050	8396743
Dissolved Manganese (Mn)	mg/L	2.02	8396743	0.000191	8400769	0.000108	0.000050	8396743
Dissolved Molybdenum (Mo)	mg/L	0.000444	8396743	0.00103	8400769	0.000556	0.000050	8396743
Dissolved Nickel (Ni)	mg/L	0.00713	8396743	0.000087	8400769	0.000112	0.000020	8396743
Dissolved Phosphorus (P)	mg/L	<0.0020	8396743	<0.0020	8400769	0.0022	0.0020	8396743
Dissolved Selenium (Se)	mg/L	<0.000040	8396743	0.00261	8400769	0.000627	0.000040	8396743
Dissolved Silicon (Si)	mg/L	20.1	8396743	3.47	8400769	2.80	0.050	8396743
Dissolved Silver (Ag)	mg/L	<0.0000050	8396743	<0.0000050	8400769	<0.0000050	0.0000050	8396743
Dissolved Strontium (Sr)	mg/L	1.21	8396743	0.253	8400769	0.195	0.000050	8396743
Dissolved Thallium (Tl)	mg/L	0.0000040	8396743	<0.0000020	8400769	<0.0000020	0.0000020	8396743
Dissolved Tin (Sn)	mg/L	<0.00020	8396743	0.00033	8400769	<0.00020	0.00020	8396743
Dissolved Titanium (Ti)	mg/L	<0.00050	8396743	<0.00050	8400769	<0.00050	0.00050	8396743
Dissolved Uranium (U)	mg/L	0.00185	8396743	0.00208	8400769	0.000702	0.0000020	8396743
Dissolved Vanadium (V)	mg/L	<0.00020	8396743	<0.00020	8400769	<0.00020	0.00020	8396743

RDL = Reportable Detection Limit

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PL9534		PL9535		PL9536		
Sampling Date		2016/09/07 16:05		2016/09/07 15:52		2016/09/07 15:08		
COC Number		08427191		08427191		08427191		
	UNITS	KZ-9_E-SEEP	QC Batch	KZ-9_W-SEEP	QC Batch	SEEP-3	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0287	8396743	0.00128	8400769	0.00043	0.00010	8396743
Dissolved Zirconium (Zr)	mg/L	0.00027	8396743	<0.00010	8400769	<0.00010	0.00010	8396743
Dissolved Calcium (Ca)	mg/L	305	8392503	87.5	8398893	58.0	0.050	8392503
Dissolved Magnesium (Mg)	mg/L	32.3	8392503	9.36	8398893	1.83	0.050	8392503
Dissolved Potassium (K)	mg/L	5.02	8392503	1.04	8398893	1.07	0.050	8392503
Dissolved Sodium (Na)	mg/L	8.41	8392503	1.05	8398893	0.644	0.050	8392503
Dissolved Sulphur (S)	mg/L	8.1	8392503	13.7	8398893	5.2	3.0	8392503
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PL9537	PL9577	PL9609	PL9610	PL9611		
Sampling Date		2016/09/07 15:33	2016/09/07 13:08	2016/09/06 16:30	2016/09/07 08:12	2016/09/07 09:26		
COC Number		08427191	08427197	08427197	08427197	08427197		
	UNITS	SEEP-5	KZ-9	KZ-13	KZ-15	KZ-16	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	47.8	157	63.4	141	120	0.50	8392954
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8397352
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0228	0.00321	0.00853	0.00199	0.00198	0.00050	8396743
Dissolved Antimony (Sb)	mg/L	0.000069	0.000054	0.000027	0.000032	<0.000020	0.000020	8396743
Dissolved Arsenic (As)	mg/L	0.000274	0.000170	0.000160	0.000337	0.000202	0.000020	8396743
Dissolved Barium (Ba)	mg/L	0.0489	0.0704	0.0904	0.0581	0.0508	0.000020	8396743
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8396743
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8396743
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8396743
Dissolved Cadmium (Cd)	mg/L	0.000518	0.0000790	0.0000190	0.0000160	0.0000150	0.0000050	8396743
Dissolved Chromium (Cr)	mg/L	0.00019	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8396743
Dissolved Cobalt (Co)	mg/L	0.000546	0.0000240	0.0000150	0.0000160	0.0000130	0.0000050	8396743
Dissolved Copper (Cu)	mg/L	0.00358	0.000740	0.000537	0.000474	0.000427	0.000050	8396743
Dissolved Iron (Fe)	mg/L	0.513	0.0620	0.0153	0.0097	0.0044	0.0010	8396743
Dissolved Lead (Pb)	mg/L	0.0000340	0.0000430	0.0000050	0.0000050	<0.0000050	0.0000050	8396743
Dissolved Lithium (Li)	mg/L	0.00168	0.00153	0.00114	0.00142	0.00108	0.00050	8396743
Dissolved Manganese (Mn)	mg/L	0.0379	0.0149	0.00269	0.00834	0.00190	0.000050	8396743
Dissolved Molybdenum (Mo)	mg/L	0.000799	0.000500	0.000457	0.000603	0.000354	0.000050	8396743
Dissolved Nickel (Ni)	mg/L	0.00494	0.000346	0.000438	0.000386	0.000254	0.000020	8396743
Dissolved Phosphorus (P)	mg/L	0.0101	<0.0020	0.0051	0.0030	0.0063	0.0020	8396743
Dissolved Selenium (Se)	mg/L	0.000207	0.000970	0.000131	0.000597	0.000401	0.000040	8396743
Dissolved Silicon (Si)	mg/L	5.82	3.07	2.73	2.93	2.72	0.050	8396743
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8396743
Dissolved Strontium (Sr)	mg/L	0.0589	0.160	0.0680	0.142	0.120	0.000050	8396743
Dissolved Thallium (Tl)	mg/L	0.0000030	0.0000020	0.0000020	<0.0000020	<0.0000020	0.0000020	8396743
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8396743
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8396743
Dissolved Uranium (U)	mg/L	0.0000890	0.00109	0.000478	0.00125	0.000827	0.0000020	8396743
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8396743

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PL9537	PL9577	PL9609	PL9610	PL9611		
Sampling Date		2016/09/07 15:33	2016/09/07 13:08	2016/09/06 16:30	2016/09/07 08:12	2016/09/07 09:26		
COC Number		08427191	08427197	08427197	08427197	08427197		
	UNITS	SEEP-5	KZ-9	KZ-13	KZ-15	KZ-16	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.100	0.0166	0.00309	0.00222	0.00081	0.00010	8396743
Dissolved Zirconium (Zr)	mg/L	0.00027	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8396743
Dissolved Calcium (Ca)	mg/L	14.4	53.1	21.4	45.1	39.5	0.050	8392503
Dissolved Magnesium (Mg)	mg/L	2.87	5.92	2.44	6.89	5.15	0.050	8392503
Dissolved Potassium (K)	mg/L	0.316	1.30	1.32	1.15	1.00	0.050	8392503
Dissolved Sodium (Na)	mg/L	13.0	0.873	0.900	0.869	0.790	0.050	8392503
Dissolved Sulphur (S)	mg/L	<3.0	11.2	3.7	8.6	7.1	3.0	8392503

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PL9612	PL9613	PL9619		PL9620		
Sampling Date		2016/09/07 10:58	2016/09/06 12:00	2016/09/06 15:00		2016/09/06 13:36		
COC Number		08427197	08427197	08427198		08427198		
	UNITS	KZ-17	KZ-19	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	154	191	233	8392954	183	0.50	8392954
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8397352	<0.0000020	0.0000020	8397352
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00088	0.00349	0.00422	8396743	0.00266	0.00050	8396743
Dissolved Antimony (Sb)	mg/L	0.000045	0.000096	0.000137	8396743	0.000071	0.000020	8396743
Dissolved Arsenic (As)	mg/L	0.000241	0.000795	0.00153	8396743	0.000882	0.000020	8396743
Dissolved Barium (Ba)	mg/L	0.0559	0.0615	0.0560	8396743	0.0584	0.000020	8396743
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8396743	<0.000010	0.000010	8396743
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8396743	<0.0000050	0.0000050	8396743
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8396743	<0.010	0.010	8396743
Dissolved Cadmium (Cd)	mg/L	0.0000180	0.0000100	<0.0000050	8396743	0.0000140	0.0000050	8396743
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8396743	<0.00010	0.00010	8396743
Dissolved Cobalt (Co)	mg/L	0.0000060	0.0000250	0.0000200	8396743	0.0000270	0.0000050	8396743
Dissolved Copper (Cu)	mg/L	0.000606	0.000726	0.000581	8396743	0.000535	0.000050	8396743
Dissolved Iron (Fe)	mg/L	<0.0010	0.0313	0.107	8396743	0.0468	0.0010	8396743
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000110	<0.0000050	8396743	0.0000050	0.0000050	8396743
Dissolved Lithium (Li)	mg/L	0.00256	0.00323	0.00355	8396743	0.00238 (1)	0.00050	8400769
Dissolved Manganese (Mn)	mg/L	0.000293	0.00226	0.00208	8396743	0.00627	0.000050	8396743
Dissolved Molybdenum (Mo)	mg/L	0.00138	0.000895	0.00136	8396743	0.000886	0.000050	8396743
Dissolved Nickel (Ni)	mg/L	0.000379	0.00112	0.00250	8396743	0.00118	0.000020	8396743
Dissolved Phosphorus (P)	mg/L	0.0046	0.0064	0.0082	8396743	0.0049	0.0020	8396743
Dissolved Selenium (Se)	mg/L	0.000493	0.000578	0.000632	8396743	0.000614	0.000040	8396743
Dissolved Silicon (Si)	mg/L	3.19	4.00	4.66	8396743	3.74	0.050	8396743
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8396743	<0.0000050	0.0000050	8396743
Dissolved Strontium (Sr)	mg/L	0.148	0.170	0.179	8396743	0.162	0.000050	8396743
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000030	<0.0000020	8396743	<0.0000020	0.0000020	8396743
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8396743	<0.00020	0.00020	8396743
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8396743	<0.00050	0.00050	8396743
Dissolved Uranium (U)	mg/L	0.00196	0.00179	0.00261	8396743	0.00184	0.0000020	8396743

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PL9612	PL9613	PL9619		PL9620		
Sampling Date		2016/09/07 10:58	2016/09/06 12:00	2016/09/06 15:00		2016/09/06 13:36		
COC Number		08427197	08427197	08427198		08427198		
	UNITS	KZ-17	KZ-19	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8396743	<0.00020	0.00020	8396743
Dissolved Zinc (Zn)	mg/L	0.00093	0.00053	0.00161	8396743	0.00112	0.00010	8396743
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00011	8396743	<0.00010	0.00010	8396743
Dissolved Calcium (Ca)	mg/L	47.1	52.1	58.8	8392503	51.2	0.050	8392503
Dissolved Magnesium (Mg)	mg/L	8.77	14.8	21.0	8392503	13.4	0.050	8392503
Dissolved Potassium (K)	mg/L	1.17	1.14	1.26	8392503	1.19	0.050	8392503
Dissolved Sodium (Na)	mg/L	0.934	1.17	1.22	8392503	1.05	0.050	8392503
Dissolved Sulphur (S)	mg/L	8.1	10.1	12.7	8392503	10.5	3.0	8392503

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PL9621	PL9622		PM2358		
Sampling Date		2016/09/06 10:45	2016/09/07 14:10		2016/09/08 13:00		
COC Number		08427198	08427198		08427197		
	UNITS	KZ-26	KZ-18	QC Batch	SEEP-4	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	194	190	8392954	151	0.50	8394879
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8397352	<0.0000020	0.0000020	8397352
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00341	0.00694	8396743	0.00159	0.00050	8396427
Dissolved Antimony (Sb)	mg/L	0.000092	0.000023	8396743	<0.000020	0.000020	8396427
Dissolved Arsenic (As)	mg/L	0.000789	0.000352	8396743	0.000062	0.000020	8396427
Dissolved Barium (Ba)	mg/L	0.0616	0.0448	8396743	0.108	0.000020	8396427
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	8396743	<0.000010	0.000010	8396427
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8396743	<0.0000050	0.0000050	8396427
Dissolved Boron (B)	mg/L	<0.010	<0.010	8396743	<0.010	0.010	8396427
Dissolved Cadmium (Cd)	mg/L	0.0000090	0.0000210	8396743	0.0000130	0.0000050	8396427
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	8396743	<0.00010	0.00010	8396427
Dissolved Cobalt (Co)	mg/L	0.0000250	0.0000060	8396743	0.0000080	0.0000050	8396427
Dissolved Copper (Cu)	mg/L	0.000721	0.000178	8396743	0.000319	0.000050	8396427
Dissolved Iron (Fe)	mg/L	0.0331	0.0047	8396743	<0.0010	0.0010	8396427
Dissolved Lead (Pb)	mg/L	0.0000090	<0.0000050	8396743	<0.0000050	0.0000050	8396427
Dissolved Lithium (Li)	mg/L	0.00323	0.00138	8396743	0.00067	0.00050	8396427
Dissolved Manganese (Mn)	mg/L	0.00372	0.00205	8396743	0.000155	0.000050	8396427
Dissolved Molybdenum (Mo)	mg/L	0.000887	0.000969	8396743	0.000526	0.000050	8396427
Dissolved Nickel (Ni)	mg/L	0.00125	0.000349	8396743	0.000146	0.000020	8396427
Dissolved Phosphorus (P)	mg/L	0.0046	0.0120	8396743	0.0034	0.0020	8396427
Dissolved Selenium (Se)	mg/L	0.000543	0.000962	8396743	0.000826	0.000040	8396427
Dissolved Silicon (Si)	mg/L	4.02	3.23	8396743	2.82	0.050	8396427
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	8396743	<0.0000050	0.0000050	8396427
Dissolved Strontium (Sr)	mg/L	0.171	0.169	8396743	0.202	0.000050	8396427
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8396743	<0.0000020	0.0000020	8396427
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	8396743	<0.00020	0.00020	8396427
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	8396743	<0.00050	0.00050	8396427
Dissolved Uranium (U)	mg/L	0.00186	0.00193	8396743	0.000879	0.0000020	8396427
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	8396743	<0.00020	0.00020	8396427

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PL9621	PL9622		PM2358		
Sampling Date		2016/09/06 10:45	2016/09/07 14:10		2016/09/08 13:00		
COC Number		08427198	08427198		08427197		
	UNITS	KZ-26	KZ-18	QC Batch	SEEP-4	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00057	0.00092	8396743	0.00014	0.00010	8396427
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	8396743	<0.00010	0.00010	8396427
Dissolved Calcium (Ca)	mg/L	53.2	50.1	8392503	56.7	0.050	8395071
Dissolved Magnesium (Mg)	mg/L	14.8	15.8	8392503	2.32	0.050	8395071
Dissolved Potassium (K)	mg/L	1.15	0.550	8392503	1.76	0.050	8395071
Dissolved Sodium (Na)	mg/L	1.16	0.776	8392503	0.616	0.050	8395071
Dissolved Sulphur (S)	mg/L	10.0	6.2	8392503	11.3	3.0	8395071
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PL9577	PL9609	PL9610	PL9611	PL9612		
Sampling Date		2016/09/07 13:08	2016/09/06 16:30	2016/09/07 08:12	2016/09/07 09:26	2016/09/07 10:58		
COC Number		08427197	08427197	08427197	08427197	08427197		
	UNITS	KZ-9	KZ-13	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	150	60.6	140	114	151	0.50	8392870
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8397309
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0357	0.0251	0.0265	0.00362	0.00233	0.00050	8396010
Total Antimony (Sb)	mg/L	0.000051	0.000026	0.000031	<0.000020	0.000043	0.000020	8396010
Total Arsenic (As)	mg/L	0.000268	0.000199	0.000473	0.000212	0.000239	0.000020	8396010
Total Barium (Ba)	mg/L	0.0694	0.0839	0.0556	0.0491	0.0521	0.000020	8396010
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8396010
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8396010
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8396010
Total Cadmium (Cd)	mg/L	0.000104	0.0000300	0.0000380	0.0000150	0.0000160	0.0000050	8396010
Total Chromium (Cr)	mg/L	0.00011	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8396010
Total Cobalt (Co)	mg/L	0.0000820	0.0000370	0.0000820	0.0000200	0.0000110	0.0000050	8396010
Total Copper (Cu)	mg/L	0.00108	0.000583	0.000657	0.000423	0.000611	0.000050	8396010
Total Iron (Fe)	mg/L	0.265	0.0675	0.149	0.0090	0.0053	0.0010	8396010
Total Lead (Pb)	mg/L	0.000229	0.0000380	0.000110	0.0000070	0.0000070	0.0000050	8396010
Total Lithium (Li)	mg/L	0.00138	0.00113	0.00166	0.00097	0.00211	0.00050	8396010
Total Manganese (Mn)	mg/L	0.0290	0.0144	0.0360	0.00287	0.00147	0.000050	8396010
Total Molybdenum (Mo)	mg/L	0.000496	0.000448	0.000607	0.000368	0.00133	0.000050	8396010
Total Nickel (Ni)	mg/L	0.000489	0.000462	0.000573	0.000250	0.000411	0.000020	8396010
Total Phosphorus (P)	mg/L	0.0084	0.0048	0.0024	<0.0020	0.0025	0.0020	8396010
Total Selenium (Se)	mg/L	0.00104	0.000142	0.000643	0.000454	0.000546	0.000040	8396010
Total Silicon (Si)	mg/L	2.88	2.43	2.71	2.34	2.98	0.050	8396010
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8396010
Total Strontium (Sr)	mg/L	0.160	0.0593	0.121	0.106	0.133	0.000050	8396010
Total Thallium (Tl)	mg/L	0.0000020	0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8396010
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8396010
Total Titanium (Ti)	mg/L	0.00219	0.00092	0.00148	<0.00050	<0.00050	0.00050	8396010
Total Uranium (U)	mg/L	0.00109	0.000494	0.00124	0.000854	0.00187	0.0000020	8396010
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8396010

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PL9577	PL9609	PL9610	PL9611	PL9612		
Sampling Date		2016/09/07 13:08	2016/09/06 16:30	2016/09/07 08:12	2016/09/07 09:26	2016/09/07 10:58		
COC Number		08427197	08427197	08427197	08427197	08427197		
	UNITS	KZ-9	KZ-13	KZ-15	KZ-16	KZ-17	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0260	0.00490	0.00496	0.00070	0.00127	0.00010	8396010
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8396010
Total Calcium (Ca)	mg/L	49.6	20.2	44.6	37.0	45.2	0.050	8392232
Total Magnesium (Mg)	mg/L	6.46	2.51	6.90	5.18	9.11	0.050	8392232
Total Potassium (K)	mg/L	1.34	1.17	1.04	0.928	1.08	0.050	8392232
Total Sodium (Na)	mg/L	0.946	0.879	0.834	0.773	0.944	0.050	8392232
Total Sulphur (S)	mg/L	12.5	3.7	8.5	6.9	8.6	3.0	8392232

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PL9619	PL9620	PL9621	PL9622		
Sampling Date		2016/09/06 15:00	2016/09/06 13:36	2016/09/06 10:45	2016/09/07 14:10		
COC Number		08427198	08427198	08427198	08427198		
	UNITS	KZ-21	KZ-22	KZ-26	KZ-18	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	224	177	186	184	0.50	8392870
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8397372
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0208	0.0166	0.0817	0.0108	0.00050	8396010
Total Antimony (Sb)	mg/L	0.000143	0.000070	0.000103	0.000021	0.000020	8396010
Total Arsenic (As)	mg/L	0.00242	0.00124	0.00127	0.000340	0.000020	8396010
Total Barium (Ba)	mg/L	0.0566	0.0569	0.0655	0.0411	0.000020	8396010
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8396010
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8396010
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8396010
Total Cadmium (Cd)	mg/L	0.0000150	0.0000250	0.0000280	0.0000240	0.0000050	8396010
Total Chromium (Cr)	mg/L	0.00012	<0.00010	0.00023	<0.00010	0.00010	8396010
Total Cobalt (Co)	mg/L	0.000137	0.0000910	0.000178	0.0000130	0.0000050	8396010
Total Copper (Cu)	mg/L	0.000660	0.000684	0.00109	0.000182	0.000050	8396010
Total Iron (Fe)	mg/L	0.448	0.227	0.339	0.0108	0.0010	8396010
Total Lead (Pb)	mg/L	0.0000410	0.0000570	0.000199	0.0000060	0.0000050	8396010
Total Lithium (Li)	mg/L	0.00393	0.00206	0.00331	0.00144	0.00050	8396010
Total Manganese (Mn)	mg/L	0.0729	0.0436	0.0367	0.00342	0.000050	8396010
Total Molybdenum (Mo)	mg/L	0.00139	0.000903	0.000912	0.000991	0.000050	8396010
Total Nickel (Ni)	mg/L	0.00280	0.00137	0.00179	0.000373	0.000020	8396010
Total Phosphorus (P)	mg/L	0.0105	0.0085	0.0108	0.0116	0.0020	8396010
Total Selenium (Se)	mg/L	0.000650	0.000625	0.000569	0.000996	0.000040	8396010
Total Silicon (Si)	mg/L	4.22	3.41	3.74	2.90	0.050	8396010
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8396010
Total Strontium (Sr)	mg/L	0.156	0.142	0.154	0.145	0.000050	8396010
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	<0.0000020	0.0000020	8396010
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8396010
Total Titanium (Ti)	mg/L	0.00076	0.00071	0.00212	<0.00050	0.00050	8396010
Total Uranium (U)	mg/L	0.00253	0.00183	0.00182	0.00192	0.0000020	8396010
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00034	<0.00020	0.00020	8396010

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PL9619	PL9620	PL9621	PL9622		
Sampling Date		2016/09/06 15:00	2016/09/06 13:36	2016/09/06 10:45	2016/09/07 14:10		
COC Number		08427198	08427198	08427198	08427198		
	UNITS	KZ-21	KZ-22	KZ-26	KZ-18	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00694	0.00244	0.00252	0.00133	0.00010	8396010
Total Zirconium (Zr)	mg/L	0.00011	<0.00010	<0.00010	<0.00010	0.00010	8396010
Total Calcium (Ca)	mg/L	55.0	48.6	50.5	47.2	0.050	8392232
Total Magnesium (Mg)	mg/L	21.1	13.6	14.6	16.0	0.050	8392232
Total Potassium (K)	mg/L	1.13	1.06	1.04	0.497	0.050	8392232
Total Sodium (Na)	mg/L	1.20	1.03	1.14	0.781	0.050	8392232
Total Sulphur (S)	mg/L	13.2	10.7	10.2	7.2	3.0	8392232
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PL9613		
Sampling Date		2016/09/06 12:00		
COC Number		08427197		
	UNITS	KZ-19	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	194	0.50	8392870
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8397309
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.0815	0.0030	8397515
Total Antimony (Sb)	mg/L	0.000112	0.000020	8397515
Total Arsenic (As)	mg/L	0.00126	0.000020	8397515
Total Barium (Ba)	mg/L	0.0658	0.000050	8397515
Total Beryllium (Be)	mg/L	0.000011	0.000010	8397515
Total Bismuth (Bi)	mg/L	<0.000010	0.000010	8397515
Total Boron (B)	mg/L	<0.010	0.010	8397515
Total Cadmium (Cd)	mg/L	0.0000290	0.0000050	8397515
Total Chromium (Cr)	mg/L	0.00024	0.00010	8397515
Total Cobalt (Co)	mg/L	0.000144	0.000010	8397515
Total Copper (Cu)	mg/L	0.00149	0.00010	8397515
Total Iron (Fe)	mg/L	0.311	0.0050	8397515
Total Lead (Pb)	mg/L	0.000176	0.000020	8397515
Total Lithium (Li)	mg/L	0.00308	0.00050	8397515
Total Manganese (Mn)	mg/L	0.0301	0.00010	8397515
Total Molybdenum (Mo)	mg/L	0.000917	0.000050	8397515
Total Nickel (Ni)	mg/L	0.00165	0.00010	8397515
Total Phosphorus (P)	mg/L	0.0156	0.0050	8397515
Total Selenium (Se)	mg/L	0.000574	0.000040	8397515
Total Silicon (Si)	mg/L	4.05	0.050	8397515
Total Silver (Ag)	mg/L	<0.000010	0.000010	8397515
Total Strontium (Sr)	mg/L	0.168	0.000050	8397515
Total Thallium (Tl)	mg/L	0.0000020	0.0000020	8397515
Total Tin (Sn)	mg/L	<0.00020	0.00020	8397515
Total Titanium (Ti)	mg/L	0.0024	0.0020	8397515
Total Uranium (U)	mg/L	0.00168	0.0000050	8397515
Total Vanadium (V)	mg/L	0.00035	0.00020	8397515
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PL9613		
Sampling Date		2016/09/06 12:00		
COC Number		08427197		
	UNITS	KZ-19	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0023	0.0010	8397515
Total Zirconium (Zr)	mg/L	0.00011	0.00010	8397515
Total Calcium (Ca)	mg/L	53.3	0.25	8392232
Total Magnesium (Mg)	mg/L	14.8	0.25	8392232
Total Potassium (K)	mg/L	1.13	0.25	8392232
Total Sodium (Na)	mg/L	1.17	0.25	8392232
Total Sulphur (S)	mg/L	10.7	3.0	8392232
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9534
Sample ID: KZ-9_E-SEEP
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Name Redacted
Alkalinity - Water	AT/ALK	8393294	2016/09/09	2016/09/10	
Chloride by Automated Colourimetry	KONE/COL	8395388	N/A	2016/09/12	
Conductance - water	AT/ALK	8393330	N/A	2016/09/10	
Fluoride	ISE/ISE	8395425	N/A	2016/09/12	
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	
Ion Balance	CALC	8398813	N/A	2016/09/16	
Sum of cations, anions	CALC	8398814	N/A	2016/09/16	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	
pH Water	AT/ALK	8393327	N/A	2016/09/10	
Sulphate by Automated Colourimetry	KONE/COL	8401043	N/A	2016/09/16	

Maxxam ID: PL9534 Dup
Sample ID: KZ-9_E-SEEP
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	Adnan Dzebic

Maxxam ID: PL9535
Sample ID: KZ-9_W-SEEP
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Name Redacted
Alkalinity - Water	AT/ALK	8393294	2016/09/09	2016/09/10	
Chloride by Automated Colourimetry	KONE/COL	8395388	N/A	2016/09/12	
Conductance - water	AT/ALK	8393330	N/A	2016/09/10	
Fluoride	ISE/ISE	8395425	N/A	2016/09/12	
Hardness (calculated as CaCO3)	CALC	8399253	N/A	2016/09/16	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	
Ion Balance	CALC	8398813	N/A	2016/09/16	
Sum of cations, anions	CALC	8398814	N/A	2016/09/16	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8398893	N/A	2016/09/16	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8400769	N/A	2016/09/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9535 **Collected:** 2016/09/07
Sample ID: KZ-9_W-SEEP **Shipped:**
Matrix: Water **Received:** 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	Name Redacted
pH Water	AT/ALK	8393327	N/A	2016/09/10	
Sulphate by Automated Colourimetry	KONE/COL	8395390	N/A	2016/09/12	

Maxxam ID: PL9535 Dup **Collected:** 2016/09/07
Sample ID: KZ-9_W-SEEP **Shipped:**
Matrix: Water **Received:** 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8395425	N/A	2016/09/12	Name Redacted

Maxxam ID: PL9536 **Collected:** 2016/09/07
Sample ID: SEEP-3 **Shipped:**
Matrix: Water **Received:** 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Name Redacted
Alkalinity - Water	AT/ALK	8393294	2016/09/09	2016/09/10	
Chloride by Automated Colourimetry	KONE/COL	8395388	N/A	2016/09/12	
Conductance - water	AT/ALK	8393330	N/A	2016/09/10	
Fluoride	ISE/ISE	8395425	N/A	2016/09/12	
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	
Ion Balance	CALC	8392850	N/A	2016/09/15	
Sum of cations, anions	CALC	8392851	N/A	2016/09/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	
pH Water	AT/ALK	8393327	N/A	2016/09/10	
Sulphate by Automated Colourimetry	KONE/COL	8395390	N/A	2016/09/12	

Maxxam ID: PL9537 **Collected:** 2016/09/07
Sample ID: SEEP-5 **Shipped:**
Matrix: Water **Received:** 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Name Redacted
Alkalinity - Water	AT/ALK	8393294	2016/09/09	2016/09/10	
Chloride by Automated Colourimetry	KONE/COL	8395388	N/A	2016/09/12	
Conductance - water	AT/ALK	8393330	N/A	2016/09/10	
Fluoride	ISE/ISE	8395425	N/A	2016/09/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9537
Sample ID: SEEP-5
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	
Ion Balance	CALC	8392850	N/A	2016/09/15	
Sum of cations, anions	CALC	8392851	N/A	2016/09/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	
pH Water	AT/ALK	8393327	N/A	2016/09/10	
Sulphate by Automated Colourimetry	KONE/COL	8395390	N/A	2016/09/12	

Maxxam ID: PL9577
Sample ID: KZ-9
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Name Redacted
Alkalinity - Water	AT/ALK	8393707	2016/09/10	2016/09/10	
Chloride by Automated Colourimetry	KONE/COL	8395384	N/A	2016/09/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395368	N/A	2016/09/12	
Conductance - water	AT/ALK	8393704	N/A	2016/09/10	
Fluoride	ISE/ISE	8395414	N/A	2016/09/12	
Hardness Total (calculated as CaCO3)	CALC	8392870	N/A	2016/09/14	
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	
Ion Balance	CALC	8392850	N/A	2016/09/15	
Sum of cations, anions	CALC	8392851	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8392232	N/A	2016/09/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	
Ammonia-N (Preserved)	KONE/COL	8396820	N/A	2016/09/14	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	
pH Water	AT/ALK	8393699	N/A	2016/09/10	
Sulphate by Automated Colourimetry	KONE/COL	8395386	N/A	2016/09/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8393989	2016/09/10	2016/09/10	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9577
Sample ID: KZ-9
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	Name Redacted
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	

Maxxam ID: PL9577 Dup
Sample ID: KZ-9
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	

Maxxam ID: PL9609
Sample ID: KZ-13
Matrix: Water

Collected: 2016/09/06
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Name Redacted
Alkalinity - Water	AT/ALK	8393707	2016/09/10	2016/09/10	
Chloride by Automated Colourimetry	KONE/COL	8395304	N/A	2016/09/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395368	N/A	2016/09/12	
Conductance - water	AT/ALK	8393704	N/A	2016/09/10	
Fluoride	ISE/ISE	8395451	N/A	2016/09/12	
Hardness Total (calculated as CaCO3)	CALC	8392870	N/A	2016/09/14	
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	
Ion Balance	CALC	8392850	N/A	2016/09/15	
Sum of cations, anions	CALC	8392851	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8392232	N/A	2016/09/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	
Ammonia-N (Preserved)	KONE/COL	8396820	N/A	2016/09/14	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	
pH Water	AT/ALK	8393699	N/A	2016/09/10	
Sulphate by Automated Colourimetry	KONE/COL	8395309	N/A	2016/09/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9609
Sample ID: KZ-13
Matrix: Water

Collected: 2016/09/06
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8393989	2016/09/10	2016/09/10	Name Redacted
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	

Maxxam ID: PL9610
Sample ID: KZ-15
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Name Redacted
Alkalinity - Water	AT/ALK	8393707	2016/09/10	2016/09/10	
Chloride by Automated Colourimetry	KONE/COL	8395384	N/A	2016/09/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395368	N/A	2016/09/12	
Conductance - water	AT/ALK	8393704	N/A	2016/09/10	
Fluoride	ISE/ISE	8395414	N/A	2016/09/12	
Hardness Total (calculated as CaCO3)	CALC	8392870	N/A	2016/09/14	
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	
Ion Balance	CALC	8392850	N/A	2016/09/15	
Sum of cations, anions	CALC	8392851	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8392232	N/A	2016/09/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	
Ammonia-N (Preserved)	KONE/COL	8396820	N/A	2016/09/14	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	
pH Water	AT/ALK	8393699	N/A	2016/09/10	
Sulphate by Automated Colourimetry	KONE/COL	8395386	N/A	2016/09/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8393989	2016/09/10	2016/09/10	
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	

Maxxam ID: PL9611
Sample ID: KZ-16
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9611
Sample ID: KZ-16
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8393707	2016/09/10	2016/09/10	Name Redacted
Chloride by Automated Colourimetry	KONE/COL	8395384	N/A	2016/09/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395368	N/A	2016/09/12	
Conductance - water	AT/ALK	8393704	N/A	2016/09/10	
Fluoride	ISE/ISE	8395414	N/A	2016/09/12	
Hardness Total (calculated as CaCO3)	CALC	8392870	N/A	2016/09/14	
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	
Ion Balance	CALC	8392850	N/A	2016/09/15	
Sum of cations, anions	CALC	8392851	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8392232	N/A	2016/09/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	
Ammonia-N (Preserved)	KONE/COL	8396820	N/A	2016/09/14	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	
pH Water	AT/ALK	8393699	N/A	2016/09/10	
Sulphate by Automated Colourimetry	KONE/COL	8395386	N/A	2016/09/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8393989	2016/09/10	2016/09/10	
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	

Maxxam ID: PL9612
Sample ID: KZ-17
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Name Redacted
Alkalinity - Water	AT/ALK	8393707	2016/09/10	2016/09/10	
Chloride by Automated Colourimetry	KONE/COL	8395388	N/A	2016/09/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395377	N/A	2016/09/12	
Conductance - water	AT/ALK	8393704	N/A	2016/09/10	
Fluoride	ISE/ISE	8395425	N/A	2016/09/12	
Hardness Total (calculated as CaCO3)	CALC	8392870	N/A	2016/09/14	
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9612
Sample ID: KZ-17
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	Name Redacted
Ion Balance	CALC	8392850	N/A	2016/09/15	
Sum of cations, anions	CALC	8392851	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8392232	N/A	2016/09/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	
Ammonia-N (Preserved)	KONE/COL	8396820	N/A	2016/09/14	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	
pH Water	AT/ALK	8393699	N/A	2016/09/10	
Sulphate by Automated Colourimetry	KONE/COL	8395390	N/A	2016/09/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8393989	2016/09/10	2016/09/10	
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	

Maxxam ID: PL9613
Sample ID: KZ-19
Matrix: Water

Collected: 2016/09/06
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Name Redacted
Alkalinity - Water	AT/ALK	8393707	2016/09/10	2016/09/10	
Chloride by Automated Colourimetry	KONE/COL	8395384	N/A	2016/09/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395368	N/A	2016/09/12	
Conductance - water	AT/ALK	8393704	N/A	2016/09/10	
Fluoride	ISE/ISE	8395414	N/A	2016/09/12	
Hardness Total (calculated as CaCO3)	CALC	8392870	N/A	2016/09/15	
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	
Ion Balance	CALC	8392850	N/A	2016/09/15	
Sum of cations, anions	CALC	8392851	N/A	2016/09/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8397515	2016/09/14	2016/09/15	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8392232	N/A	2016/09/15	
Ammonia-N (Preserved)	KONE/COL	8396820	N/A	2016/09/14	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9613
Sample ID: KZ-19
Matrix: Water

Collected: 2016/09/06
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	Name Redacted
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	
pH Water	AT/ALK	8393699	N/A	2016/09/10	
Sulphate by Automated Colourimetry	KONE/COL	8395386	N/A	2016/09/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8393989	2016/09/10	2016/09/10	
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	

Maxxam ID: PL9619
Sample ID: KZ-21
Matrix: Water

Collected: 2016/09/06
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Name Redacted
Alkalinity - Water	AT/ALK	8393707	2016/09/10	2016/09/10	
Chloride by Automated Colourimetry	KONE/COL	8395388	N/A	2016/09/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395368	N/A	2016/09/12	
Conductance - water	AT/ALK	8393704	N/A	2016/09/10	
Fluoride	ISE/ISE	8395414	N/A	2016/09/12	
Hardness Total (calculated as CaCO3)	CALC	8392870	N/A	2016/09/14	
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	
Mercury (Total-LowLevel) by CVAF	CV/AF	8397372	2016/09/14	2016/09/14	
Ion Balance	CALC	8392850	N/A	2016/09/15	
Sum of cations, anions	CALC	8392851	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8392232	N/A	2016/09/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	
Ammonia-N (Preserved)	KONE/COL	8396820	N/A	2016/09/14	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	
pH Water	AT/ALK	8393699	N/A	2016/09/10	
Sulphate by Automated Colourimetry	KONE/COL	8395390	N/A	2016/09/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8393989	2016/09/10	2016/09/10	
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9620
Sample ID: KZ-22
Matrix: Water

Collected: 2016/09/06
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Name Redacted
Alkalinity - Water	AT/ALK	8393707	2016/09/10	2016/09/10	
Chloride by Automated Colourimetry	KONE/COL	8395384	N/A	2016/09/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395377	N/A	2016/09/12	
Conductance - water	AT/ALK	8393704	N/A	2016/09/10	
Fluoride	ISE/ISE	8395414	N/A	2016/09/12	
Hardness Total (calculated as CaCO3)	CALC	8392870	N/A	2016/09/14	
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	
Mercury (Total-LowLevel) by CVAF	CV/AF	8397372	2016/09/14	2016/09/14	
Ion Balance	CALC	8392850	N/A	2016/09/15	
Sum of cations, anions	CALC	8392851	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8392232	N/A	2016/09/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	
Ammonia-N (Preserved)	KONE/COL	8396820	N/A	2016/09/14	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	
pH Water	AT/ALK	8393699	N/A	2016/09/10	
Sulphate by Automated Colourimetry	KONE/COL	8395386	N/A	2016/09/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8400667	2016/09/16	2016/09/16	
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	

Maxxam ID: PL9620 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2016/09/06
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8400769	N/A	2016/09/16	Name Redacted

Maxxam ID: PL9621
Sample ID: KZ-26
Matrix: Water

Collected: 2016/09/06
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Name Redacted
Alkalinity - Water	AT/ALK	8393707	2016/09/10	2016/09/10	
Chloride by Automated Colourimetry	KONE/COL	8395384	N/A	2016/09/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9621
Sample ID: KZ-26
Matrix: Water

Collected: 2016/09/06
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395368	N/A	2016/09/12	
Conductance - water	AT/ALK	8393704	N/A	2016/09/10	
Fluoride	ISE/ISE	8395414	N/A	2016/09/12	
Hardness Total (calculated as CaCO3)	CALC	8392870	N/A	2016/09/14	
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	
Mercury (Total-LowLevel) by CVAF	CV/AF	8397372	2016/09/14	2016/09/14	
Ion Balance	CALC	8392850	N/A	2016/09/15	
Sum of cations, anions	CALC	8392851	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8392232	N/A	2016/09/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	
Ammonia-N (Preserved)	KONE/COL	8396820	N/A	2016/09/14	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	
pH Water	AT/ALK	8393699	N/A	2016/09/10	
Sulphate by Automated Colourimetry	KONE/COL	8395386	N/A	2016/09/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8393989	2016/09/10	2016/09/10	
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	

Maxxam ID: PL9621 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2016/09/06
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395368	N/A	2016/09/12	Name Redacted

Maxxam ID: PL9622
Sample ID: KZ-18
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8393635	N/A	2016/09/10	Name Redacted
Alkalinity - Water	AT/ALK	8393707	2016/09/10	2016/09/10	
Chloride by Automated Colourimetry	KONE/COL	8395388	N/A	2016/09/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8395368	N/A	2016/09/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PL9622
Sample ID: KZ-18
Matrix: Water

Collected: 2016/09/07
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductance - water	AT/ALK	8393704	N/A	2016/09/10	Name Redacted
Fluoride	ISE/ISE	8395425	N/A	2016/09/12	
Hardness Total (calculated as CaCO3)	CALC	8392870	N/A	2016/09/14	
Hardness (calculated as CaCO3)	CALC	8392954	N/A	2016/09/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	
Mercury (Total-LowLevel) by CVAF	CV/AF	8397372	2016/09/14	2016/09/14	
Ion Balance	CALC	8392850	N/A	2016/09/15	
Sum of cations, anions	CALC	8392851	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8392503	N/A	2016/09/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396743	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8392232	N/A	2016/09/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	
Ammonia-N (Preserved)	KONE/COL	8396820	N/A	2016/09/14	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8396330	N/A	2016/09/10	
Nitrite (N) (low level)	TRAA/COL	8396331	N/A	2016/09/10	
Nitrogen - Nitrate (as N)	CALC	8392522	N/A	2016/09/14	
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	
pH Water	AT/ALK	8393699	N/A	2016/09/10	
Sulphate by Automated Colourimetry	KONE/COL	8395390	N/A	2016/09/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8393989	2016/09/10	2016/09/10	
Total Phosphorus - unpreserved	KONE/COL	8394016	N/A	2016/09/10	
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	

Maxxam ID: PM2358
Sample ID: SEEP-4
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8397076	N/A	2016/09/14	Name Redacted
Alkalinity - Water	AT/ALK	8395219	2016/09/12	2016/09/12	
Chloride by Automated Colourimetry	KONE/COL	8397091	N/A	2016/09/13	
Conductance - water	AT/ALK	8395222	N/A	2016/09/12	
Fluoride	ISE/ISE	8396631	N/A	2016/09/13	
Hardness (calculated as CaCO3)	CALC	8394879	N/A	2016/09/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397352	N/A	2016/09/14	
Ion Balance	CALC	8395083	N/A	2016/09/15	
Sum of cations, anions	CALC	8395084	N/A	2016/09/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8395071	N/A	2016/09/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396427	N/A	2016/09/14	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8397401	N/A	2016/09/13	
Nitrite (N) (low level)	TRAA/COL	8397405	N/A	2016/09/13	
Nitrogen - Nitrate (as N)	CALC	8395085	N/A	2016/09/14	
Filter and HNO3 Preserve for Metals	ICP	8394726	N/A	2016/09/12	
pH Water	AT/ALK	8395221	N/A	2016/09/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PM2358 **Collected:** 2016/09/08
Sample ID: SEEP-4 **Shipped:**
Matrix: Water **Received:** 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate by Automated Colourimetry	KONE/COL	8397094	N/A	2016/09/13	Name Redacted

Maxxam ID: PM2358 Dup **Collected:** 2016/09/08
Sample ID: SEEP-4 **Shipped:**
Matrix: Water **Received:** 2016/09/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8397076	N/A	2016/09/14	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8397401	N/A	2016/09/13	
Nitrite (N) (low level)	TRAA/COL	8397405	N/A	2016/09/13	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.0°C
Package 2	6.3°C

Revised report V2 (2016/09/23): Updated to include sampling date for Maxxam sample PM2358 (MM4).

Sample PL9613-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PL9620, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8393294	Alkalinity (PP as CaCO3)	2016/09/09					<0.50	mg/L	NC	20
8393294	Alkalinity (Total as CaCO3)	2016/09/09	NC	80 - 120	96	80 - 120	<0.50	mg/L	0.074	20
8393294	Bicarbonate (HCO3)	2016/09/09					<0.50	mg/L	1.7	20
8393294	Carbonate (CO3)	2016/09/09					<0.50	mg/L	NC	20
8393294	Hydroxide (OH)	2016/09/09					<0.50	mg/L	NC	20
8393327	pH	2016/09/09			102	97 - 103			0.48	N/A
8393330	Conductivity	2016/09/09			101	80 - 120	<1.0	uS/cm	0	20
8393635	Acidity (pH 4.5)	2016/09/10					<0.50	mg/L	NC	20
8393635	Acidity (pH 8.3)	2016/09/10			96	80 - 120	<0.50	mg/L	2.5	20
8393699	pH	2016/09/10			102	97 - 103				
8393704	Conductivity	2016/09/10			98	80 - 120	<1.0	uS/cm		
8393707	Alkalinity (PP as CaCO3)	2016/09/10					<0.50	mg/L	NC	20
8393707	Alkalinity (Total as CaCO3)	2016/09/10	NC	80 - 120	95	80 - 120	<0.50	mg/L	0.92	20
8393707	Bicarbonate (HCO3)	2016/09/10					<0.50	mg/L	0.92	20
8393707	Carbonate (CO3)	2016/09/10					<0.50	mg/L	NC	20
8393707	Hydroxide (OH)	2016/09/10					<0.50	mg/L	NC	20
8393989	Dissolved Phosphorus (P)	2016/09/10	92	80 - 120	97	80 - 120	<0.0020	mg/L	NC	20
8394016	Total Phosphorus (P)	2016/09/10	91	80 - 120	97	80 - 120	<0.0020	mg/L	NC	20
8395219	Alkalinity (PP as CaCO3)	2016/09/12					<0.50	mg/L		
8395219	Alkalinity (Total as CaCO3)	2016/09/12			100	80 - 120	<0.50	mg/L		
8395219	Bicarbonate (HCO3)	2016/09/12					<0.50	mg/L		
8395219	Carbonate (CO3)	2016/09/12					<0.50	mg/L		
8395219	Hydroxide (OH)	2016/09/12					<0.50	mg/L		
8395221	pH	2016/09/12			101	97 - 103				
8395222	Conductivity	2016/09/12			100	80 - 120	<1.0	uS/cm		
8395304	Dissolved Chloride (Cl)	2016/09/12	NC	80 - 120	98	80 - 120	<0.50	mg/L	0.34	20
8395309	Dissolved Sulphate (SO4)	2016/09/12			95	80 - 120	0.57, RDL=0.50	mg/L		
8395368	Dissolved Organic Carbon (C)	2016/09/12	103	80 - 120	109	80 - 120	<0.50	mg/L	5.5	20
8395377	Dissolved Organic Carbon (C)	2016/09/12	104	80 - 120	115	80 - 120	<0.50	mg/L	NC	20
8395384	Dissolved Chloride (Cl)	2016/09/12	111	80 - 120	95	80 - 120	<0.50	mg/L	NC	20
8395386	Dissolved Sulphate (SO4)	2016/09/12			93	80 - 120	<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8395388	Dissolved Chloride (Cl)	2016/09/12	112	80 - 120	95	80 - 120	0.62, RDL=0.50	mg/L	4.2	20
8395390	Dissolved Sulphate (SO4)	2016/09/12			94	80 - 120	<0.50	mg/L	NC	20
8395414	Fluoride (F)	2016/09/12	100	80 - 120	100	80 - 120	0.013, RDL=0.010	mg/L	1.6	20
8395425	Fluoride (F)	2016/09/12			98	80 - 120	0.014, RDL=0.010	mg/L	1.8	20
8395451	Fluoride (F)	2016/09/12			102	80 - 120	0.012, RDL=0.010	mg/L		
8395901	Total Suspended Solids	2016/09/14			103	80 - 120	<1.0	mg/L		
8396010	Total Aluminum (Al)	2016/09/14	107	80 - 120	119	80 - 120	<0.00050	mg/L	NC	20
8396010	Total Antimony (Sb)	2016/09/14	95	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8396010	Total Arsenic (As)	2016/09/14	94	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8396010	Total Barium (Ba)	2016/09/14	NC	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
8396010	Total Beryllium (Be)	2016/09/14	97	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8396010	Total Bismuth (Bi)	2016/09/14	94	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8396010	Total Boron (B)	2016/09/14	94	80 - 120	101	80 - 120	<0.010	mg/L	NC	20
8396010	Total Cadmium (Cd)	2016/09/14	90	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8396010	Total Chromium (Cr)	2016/09/14	99	80 - 120	106	80 - 120	<0.00010	mg/L	NC	20
8396010	Total Cobalt (Co)	2016/09/14	98	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8396010	Total Copper (Cu)	2016/09/14	97	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20
8396010	Total Iron (Fe)	2016/09/14	NC	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
8396010	Total Lead (Pb)	2016/09/14	98	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8396010	Total Lithium (Li)	2016/09/14	93	80 - 120	94	80 - 120	<0.00050	mg/L	NC	20
8396010	Total Manganese (Mn)	2016/09/14	96	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8396010	Total Molybdenum (Mo)	2016/09/14	NC	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8396010	Total Nickel (Ni)	2016/09/14	98	80 - 120	108	80 - 120	<0.000020	mg/L	NC	20
8396010	Total Phosphorus (P)	2016/09/14					<0.0020	mg/L	NC	20
8396010	Total Selenium (Se)	2016/09/14	96	80 - 120	106	80 - 120	<0.000040	mg/L	NC	20
8396010	Total Silicon (Si)	2016/09/14					<0.050	mg/L	NC	20
8396010	Total Silver (Ag)	2016/09/14	98	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8396010	Total Strontium (Sr)	2016/09/14	NC	80 - 120	95	80 - 120	<0.000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8396010	Total Thallium (Tl)	2016/09/14	97	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8396010	Total Tin (Sn)	2016/09/14	96	80 - 120	109	80 - 120	<0.00020	mg/L	NC	20
8396010	Total Titanium (Ti)	2016/09/14	93	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8396010	Total Uranium (U)	2016/09/14	99	80 - 120	110	80 - 120	<0.0000020	mg/L	NC	20
8396010	Total Vanadium (V)	2016/09/14	97	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8396010	Total Zinc (Zn)	2016/09/14	99	80 - 120	110	80 - 120	<0.00010	mg/L	NC	20
8396010	Total Zirconium (Zr)	2016/09/14					<0.00010	mg/L	NC	20
8396330	Nitrate plus Nitrite (N)	2016/09/10	104	80 - 120	102	80 - 120	<0.0020	mg/L	1.1	25
8396331	Nitrite (N)	2016/09/10	98	80 - 120	92	80 - 120	<0.0020	mg/L	NC	25
8396387	Strong Acid Dissoc. Cyanide (CN)	2016/09/13	102	80 - 120	100	80 - 120	0.00051, RDL=0.00050	mg/L	NC	20
8396389	Weak Acid Dissoc. Cyanide (CN)	2016/09/13	103	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8396427	Dissolved Aluminum (Al)	2016/09/14	105	80 - 120	101	80 - 120	<0.00050	mg/L	0.88	20
8396427	Dissolved Antimony (Sb)	2016/09/14	97	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8396427	Dissolved Arsenic (As)	2016/09/14	102	80 - 120	98	80 - 120	<0.000020	mg/L	9.5	20
8396427	Dissolved Barium (Ba)	2016/09/14	NC	80 - 120	104	80 - 120	<0.000020	mg/L	0.55	20
8396427	Dissolved Beryllium (Be)	2016/09/14	101	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8396427	Dissolved Bismuth (Bi)	2016/09/14	97	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8396427	Dissolved Boron (B)	2016/09/14	105	80 - 120	100	80 - 120	<0.010	mg/L	NC	20
8396427	Dissolved Cadmium (Cd)	2016/09/14	96	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8396427	Dissolved Chromium (Cr)	2016/09/14	100	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
8396427	Dissolved Cobalt (Co)	2016/09/14	96	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8396427	Dissolved Copper (Cu)	2016/09/14	95	80 - 120	97	80 - 120	<0.000050	mg/L	0.68	20
8396427	Dissolved Iron (Fe)	2016/09/14	102	80 - 120	102	80 - 120	<0.0010	mg/L	4.1	20
8396427	Dissolved Lead (Pb)	2016/09/14	99	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8396427	Dissolved Lithium (Li)	2016/09/14	92	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8396427	Dissolved Manganese (Mn)	2016/09/14	100	80 - 120	96	80 - 120	<0.000050	mg/L	NC	20
8396427	Dissolved Molybdenum (Mo)	2016/09/14	NC	80 - 120	100	80 - 120	<0.000050	mg/L	1.4	20
8396427	Dissolved Nickel (Ni)	2016/09/14	96	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8396427	Dissolved Phosphorus (P)	2016/09/14					<0.0020	mg/L	NC	20
8396427	Dissolved Selenium (Se)	2016/09/14	98	80 - 120	101	80 - 120	<0.000040	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8396427	Dissolved Silicon (Si)	2016/09/14					<0.050	mg/L	2.9	20
8396427	Dissolved Silver (Ag)	2016/09/14	105	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8396427	Dissolved Strontium (Sr)	2016/09/14	NC	80 - 120	98	80 - 120	<0.000050	mg/L	3.2	20
8396427	Dissolved Thallium (Tl)	2016/09/14	96	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8396427	Dissolved Tin (Sn)	2016/09/14	100	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
8396427	Dissolved Titanium (Ti)	2016/09/14	101	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8396427	Dissolved Uranium (U)	2016/09/14	97	80 - 120	97	80 - 120	<0.0000020	mg/L	2.7	20
8396427	Dissolved Vanadium (V)	2016/09/14	99	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
8396427	Dissolved Zinc (Zn)	2016/09/14	101	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8396427	Dissolved Zirconium (Zr)	2016/09/14					<0.00010	mg/L	NC	20
8396631	Fluoride (F)	2016/09/13	101	80 - 120	104	80 - 120	0.016, RDL=0.010	mg/L	0	20
8396743	Dissolved Aluminum (Al)	2016/09/14	NC	80 - 120	110	80 - 120	<0.00050	mg/L	0.92	20
8396743	Dissolved Antimony (Sb)	2016/09/14	100	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8396743	Dissolved Arsenic (As)	2016/09/14	98	80 - 120	98	80 - 120	<0.000020	mg/L	1.1	20
8396743	Dissolved Barium (Ba)	2016/09/14	NC	80 - 120	100	80 - 120	<0.000020	mg/L	0.58	20
8396743	Dissolved Beryllium (Be)	2016/09/14	91	80 - 120	99	80 - 120	<0.000010	mg/L	6.0	20
8396743	Dissolved Bismuth (Bi)	2016/09/14	98	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8396743	Dissolved Boron (B)	2016/09/14	93	80 - 120	100	80 - 120	<0.010	mg/L	NC	20
8396743	Dissolved Cadmium (Cd)	2016/09/14	93	80 - 120	101	80 - 120	<0.0000050	mg/L	4.3	20
8396743	Dissolved Chromium (Cr)	2016/09/14	93	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8396743	Dissolved Cobalt (Co)	2016/09/14	88	80 - 120	99	80 - 120	<0.0000050	mg/L	1.7	20
8396743	Dissolved Copper (Cu)	2016/09/14	84	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8396743	Dissolved Iron (Fe)	2016/09/14	NC	80 - 120	104	80 - 120	<0.0010	mg/L	0.98	20
8396743	Dissolved Lead (Pb)	2016/09/14	98	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8396743	Dissolved Lithium (Li)	2016/09/14	NC	80 - 120	102	80 - 120	<0.00050	mg/L	0.72	20
8396743	Dissolved Manganese (Mn)	2016/09/14	NC	80 - 120	101	80 - 120	<0.000050	mg/L	1.8	20
8396743	Dissolved Molybdenum (Mo)	2016/09/14	103	80 - 120	99	80 - 120	<0.000050	mg/L	1.8	20
8396743	Dissolved Nickel (Ni)	2016/09/14	NC	80 - 120	101	80 - 120	<0.000020	mg/L	0.37	20
8396743	Dissolved Phosphorus (P)	2016/09/14					<0.0020	mg/L	NC	20
8396743	Dissolved Selenium (Se)	2016/09/14	98	80 - 120	102	80 - 120	<0.000040	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8396743	Dissolved Silicon (Si)	2016/09/14					<0.050	mg/L	0.79	20
8396743	Dissolved Silver (Ag)	2016/09/14	96	80 - 120	94	80 - 120	<0.0000050	mg/L	NC	20
8396743	Dissolved Strontium (Sr)	2016/09/14	NC	80 - 120	91	80 - 120	<0.000050	mg/L	2.7	20
8396743	Dissolved Thallium (Tl)	2016/09/14	101	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8396743	Dissolved Tin (Sn)	2016/09/14	99	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8396743	Dissolved Titanium (Ti)	2016/09/14	91	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
8396743	Dissolved Uranium (U)	2016/09/14	106	80 - 120	100	80 - 120	<0.0000020	mg/L	0.54	20
8396743	Dissolved Vanadium (V)	2016/09/14	93	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
8396743	Dissolved Zinc (Zn)	2016/09/14	NC	80 - 120	99	80 - 120	<0.00010	mg/L	0.75	20
8396743	Dissolved Zirconium (Zr)	2016/09/14					<0.00010	mg/L	NC	20
8396820	Total Ammonia (N)	2016/09/14	117	80 - 120	97	80 - 120	<0.0050	mg/L	NC	20
8397076	Acidity (pH 4.5)	2016/09/14					<0.50	mg/L	NC	20
8397076	Acidity (pH 8.3)	2016/09/14			96	80 - 120	<0.50	mg/L	NC	20
8397091	Dissolved Chloride (Cl)	2016/09/13	NC	80 - 120	103	80 - 120	0.51, RDL=0.50	mg/L	0.52	20
8397094	Dissolved Sulphate (SO4)	2016/09/13	NC	80 - 120	98	80 - 120	<0.50	mg/L	3.5	20
8397309	Total Mercury (Hg)	2016/09/14	101	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8397352	Dissolved Mercury (Hg)	2016/09/14	110	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8397372	Total Mercury (Hg)	2016/09/14	99	80 - 120	94	80 - 120	<0.0000020	mg/L	NC	20
8397401	Nitrate plus Nitrite (N)	2016/09/13	NC	80 - 120	109	80 - 120	<0.0020	mg/L	0.87	25
8397405	Nitrite (N)	2016/09/13	99	80 - 120	102	80 - 120	<0.0020	mg/L	NC	25
8397515	Total Aluminum (Al)	2016/09/15	109	80 - 120	109	80 - 120	<0.0030	mg/L		
8397515	Total Antimony (Sb)	2016/09/15	104	80 - 120	103	80 - 120	<0.000020	mg/L		
8397515	Total Arsenic (As)	2016/09/15	113	80 - 120	101	80 - 120	<0.000020	mg/L		
8397515	Total Barium (Ba)	2016/09/15	NC	80 - 120	101	80 - 120	<0.000050	mg/L		
8397515	Total Beryllium (Be)	2016/09/15	101	80 - 120	100	80 - 120	<0.000010	mg/L		
8397515	Total Bismuth (Bi)	2016/09/15	101	80 - 120	101	80 - 120	<0.000010	mg/L		
8397515	Total Boron (B)	2016/09/15	101	80 - 120	96	80 - 120	<0.010	mg/L		
8397515	Total Cadmium (Cd)	2016/09/15	105	80 - 120	107	80 - 120	<0.0000050	mg/L		
8397515	Total Chromium (Cr)	2016/09/15	114	80 - 120	100	80 - 120	<0.00010	mg/L		
8397515	Total Cobalt (Co)	2016/09/15	112	80 - 120	101	80 - 120	<0.000010	mg/L		
8397515	Total Copper (Cu)	2016/09/15	110	80 - 120	104	80 - 120	<0.00010	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8397515	Total Iron (Fe)	2016/09/15	NC	80 - 120	107	80 - 120	<0.0050	mg/L		
8397515	Total Lead (Pb)	2016/09/15	103	80 - 120	103	80 - 120	<0.000020	mg/L		
8397515	Total Lithium (Li)	2016/09/15	95	80 - 120	100	80 - 120	<0.00050	mg/L		
8397515	Total Manganese (Mn)	2016/09/15	NC	80 - 120	100	80 - 120	<0.00010	mg/L		
8397515	Total Molybdenum (Mo)	2016/09/15	107	80 - 120	102	80 - 120	<0.000050	mg/L		
8397515	Total Nickel (Ni)	2016/09/15	108	80 - 120	102	80 - 120	<0.00010	mg/L		
8397515	Total Phosphorus (P)	2016/09/15					<0.0050	mg/L		
8397515	Total Selenium (Se)	2016/09/15	104	80 - 120	108	80 - 120	<0.000040	mg/L		
8397515	Total Silicon (Si)	2016/09/15					<0.050	mg/L		
8397515	Total Silver (Ag)	2016/09/15	109	80 - 120	104	80 - 120	<0.000010	mg/L		
8397515	Total Strontium (Sr)	2016/09/15	NC	80 - 120	93	80 - 120	<0.000050	mg/L		
8397515	Total Thallium (Tl)	2016/09/15	98	80 - 120	92	80 - 120	<0.0000020	mg/L		
8397515	Total Tin (Sn)	2016/09/15	99	80 - 120	103	80 - 120	<0.00020	mg/L		
8397515	Total Titanium (Ti)	2016/09/15	114	80 - 120	100	80 - 120	<0.0020	mg/L		
8397515	Total Uranium (U)	2016/09/15	101	80 - 120	97	80 - 120	<0.0000050	mg/L		
8397515	Total Vanadium (V)	2016/09/15	112	80 - 120	99	80 - 120	<0.00020	mg/L		
8397515	Total Zinc (Zn)	2016/09/15	99	80 - 120	107	80 - 120	<0.0010	mg/L		
8397515	Total Zirconium (Zr)	2016/09/15					<0.00010	mg/L		
8400667	Dissolved Phosphorus (P)	2016/09/16			88	80 - 120	<0.0020	mg/L		
8400769	Dissolved Aluminum (Al)	2016/09/16	102	80 - 120	104	80 - 120	<0.00050	mg/L		
8400769	Dissolved Antimony (Sb)	2016/09/16	98	80 - 120	100	80 - 120	<0.000020	mg/L		
8400769	Dissolved Arsenic (As)	2016/09/16	98	80 - 120	99	80 - 120	<0.000020	mg/L		
8400769	Dissolved Barium (Ba)	2016/09/16	NC	80 - 120	100	80 - 120	<0.000020	mg/L		
8400769	Dissolved Beryllium (Be)	2016/09/16	103	80 - 120	104	80 - 120	<0.000010	mg/L		
8400769	Dissolved Bismuth (Bi)	2016/09/16	94	80 - 120	96	80 - 120	<0.0000050	mg/L		
8400769	Dissolved Boron (B)	2016/09/16	102	80 - 120	103	80 - 120	<0.010	mg/L		
8400769	Dissolved Cadmium (Cd)	2016/09/16	95	80 - 120	99	80 - 120	<0.0000050	mg/L		
8400769	Dissolved Chromium (Cr)	2016/09/16	96	80 - 120	98	80 - 120	<0.00010	mg/L		
8400769	Dissolved Cobalt (Co)	2016/09/16	94	80 - 120	99	80 - 120	<0.0000050	mg/L		
8400769	Dissolved Copper (Cu)	2016/09/16	92	80 - 120	99	80 - 120	<0.000050	mg/L		
8400769	Dissolved Iron (Fe)	2016/09/16	107	80 - 120	99	80 - 120	<0.0010	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8400769	Dissolved Lead (Pb)	2016/09/16	97	80 - 120	100	80 - 120	<0.0000050	mg/L		
8400769	Dissolved Lithium (Li)	2016/09/16	100	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8400769	Dissolved Manganese (Mn)	2016/09/16	NC	80 - 120	97	80 - 120	<0.000050	mg/L		
8400769	Dissolved Molybdenum (Mo)	2016/09/16	NC	80 - 120	98	80 - 120	<0.000050	mg/L		
8400769	Dissolved Nickel (Ni)	2016/09/16	95	80 - 120	98	80 - 120	<0.000020	mg/L		
8400769	Dissolved Phosphorus (P)	2016/09/16					<0.0020	mg/L		
8400769	Dissolved Selenium (Se)	2016/09/16	100	80 - 120	99	80 - 120	<0.000040	mg/L		
8400769	Dissolved Silicon (Si)	2016/09/16					<0.050	mg/L		
8400769	Dissolved Silver (Ag)	2016/09/16	106	80 - 120	96	80 - 120	<0.0000050	mg/L		
8400769	Dissolved Strontium (Sr)	2016/09/16	NC	80 - 120	98	80 - 120	<0.000050	mg/L		
8400769	Dissolved Thallium (Tl)	2016/09/16	95	80 - 120	98	80 - 120	<0.0000020	mg/L		
8400769	Dissolved Tin (Sn)	2016/09/16	102	80 - 120	101	80 - 120	<0.00020	mg/L		
8400769	Dissolved Titanium (Ti)	2016/09/16	91	80 - 120	88	80 - 120	<0.00050	mg/L		
8400769	Dissolved Uranium (U)	2016/09/16	102	80 - 120	100	80 - 120	<0.0000020	mg/L		
8400769	Dissolved Vanadium (V)	2016/09/16	95	80 - 120	98	80 - 120	<0.00020	mg/L		
8400769	Dissolved Zinc (Zn)	2016/09/16	97	80 - 120	97	80 - 120	<0.00010	mg/L		
8400769	Dissolved Zirconium (Zr)	2016/09/16					<0.00010	mg/L		
8401043	Dissolved Sulphate (SO4)	2016/09/16	NC	80 - 120	97	80 - 120	0.60, RDL=0.50	mg/L	4.8	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B677977
Report Date: 2016/09/23

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

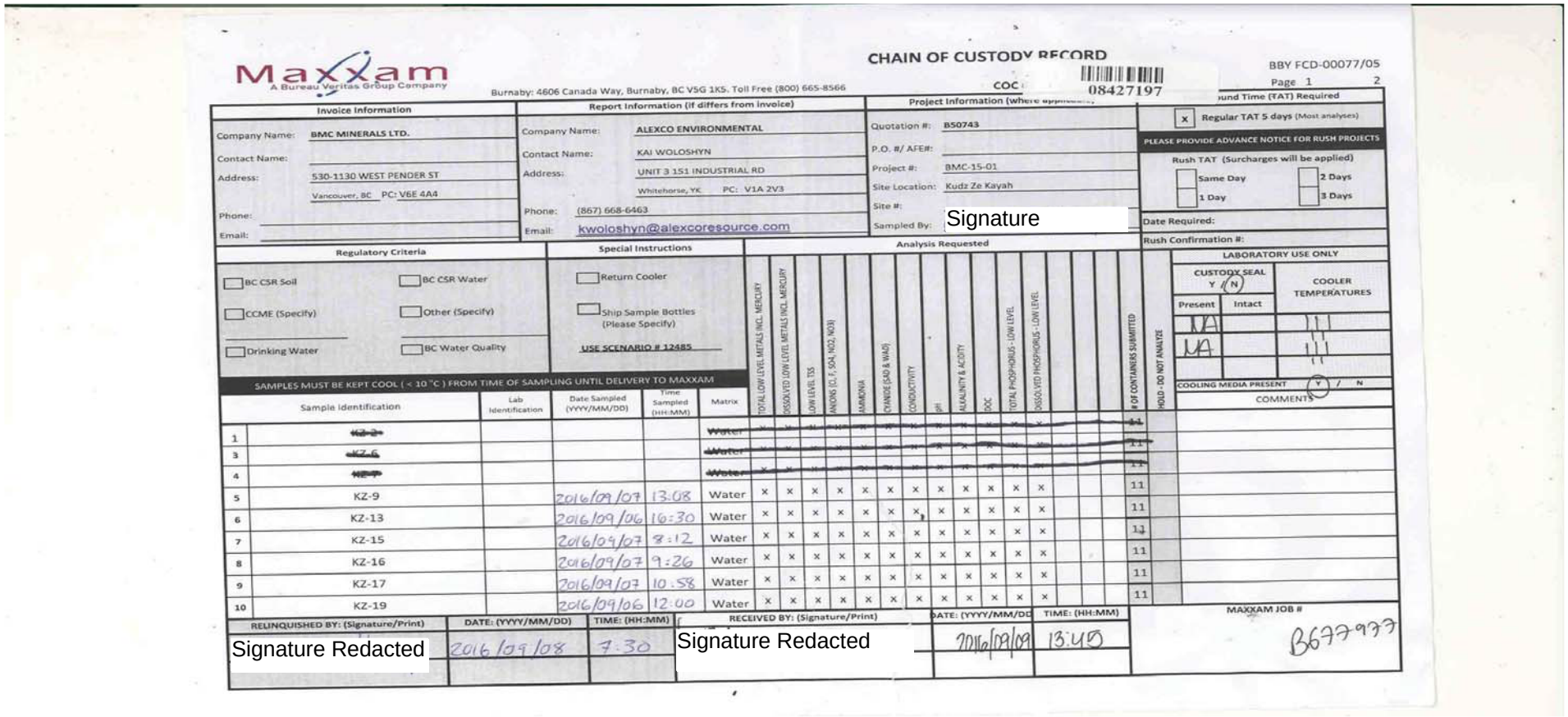
VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Name Redacted Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386



Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC 08427197

BBY FCD-00077/05

Page 1 2

Invoice Information

Company Name: BMC MINERALS LTD.
Contact Name:
Address: 530-1130 WEST PENDER ST
Vancouver, BC PC: V6E 4A4
Phone:
Email:

Report Information (if differs from invoice)

Company Name: ALEXCO ENVIRONMENTAL
Contact Name: KAI WOLOSHYN
Address: UNIT 3 151 INDUSTRIAL RD
Whitehorse, YK PC: V1A 2V3
Phone: (867) 668-6463
Email: kwoloshyn@alexcoresource.com

Project Information (where applicable)

Quotation #: B50743
P.O. #/ AFE#:
Project #: BMC-15-01
Site Location: Kudz Ze Kayah
Site #:
Sampled By: Signature

Turnaround Time (TAT) Required

[x] Regular TAT 5 days (Most analyses)

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Rush TAT (Surcharges will be applied)
[ ] Same Day [ ] 2 Days
[ ] 1 Day [ ] 3 Days

Date Required:
Rush Confirmation #:

Regulatory Criteria

[ ] BC CSR Soil [ ] BC CSR Water
[ ] CCME (Specify) [ ] Other (Specify)
[ ] Drinking Water [ ] BC Water Quality

Special Instructions

[ ] Return Cooler
[ ] Ship Sample Bottles (Please Specify)
USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	~~KZ-2~~				~~Water~~														
3	~~KZ-6~~				~~Water~~														
4	~~KZ-7~~				~~Water~~														
5	KZ-9		2016/09/07	13:08	Water	x	x	x	x	x	x	x	x	x	x	x		11	
6	KZ-13		2016/09/06	16:30	Water	x	x	x	x	x	x	x	x	x	x	x		11	
7	KZ-15		2016/09/07	8:12	Water	x	x	x	x	x	x	x	x	x	x	x		11	
8	KZ-16		2016/09/07	9:26	Water	x	x	x	x	x	x	x	x	x	x	x		11	
9	KZ-17		2016/09/07	10:58	Water	x	x	x	x	x	x	x	x	x	x	x		11	
10	KZ-19		2016/09/06	12:00	Water	x	x	x	x	x	x	x	x	x	x	x		11	

Analysis Requested

LABORATORY USE ONLY

CUSTODY SEAL Y / (N)

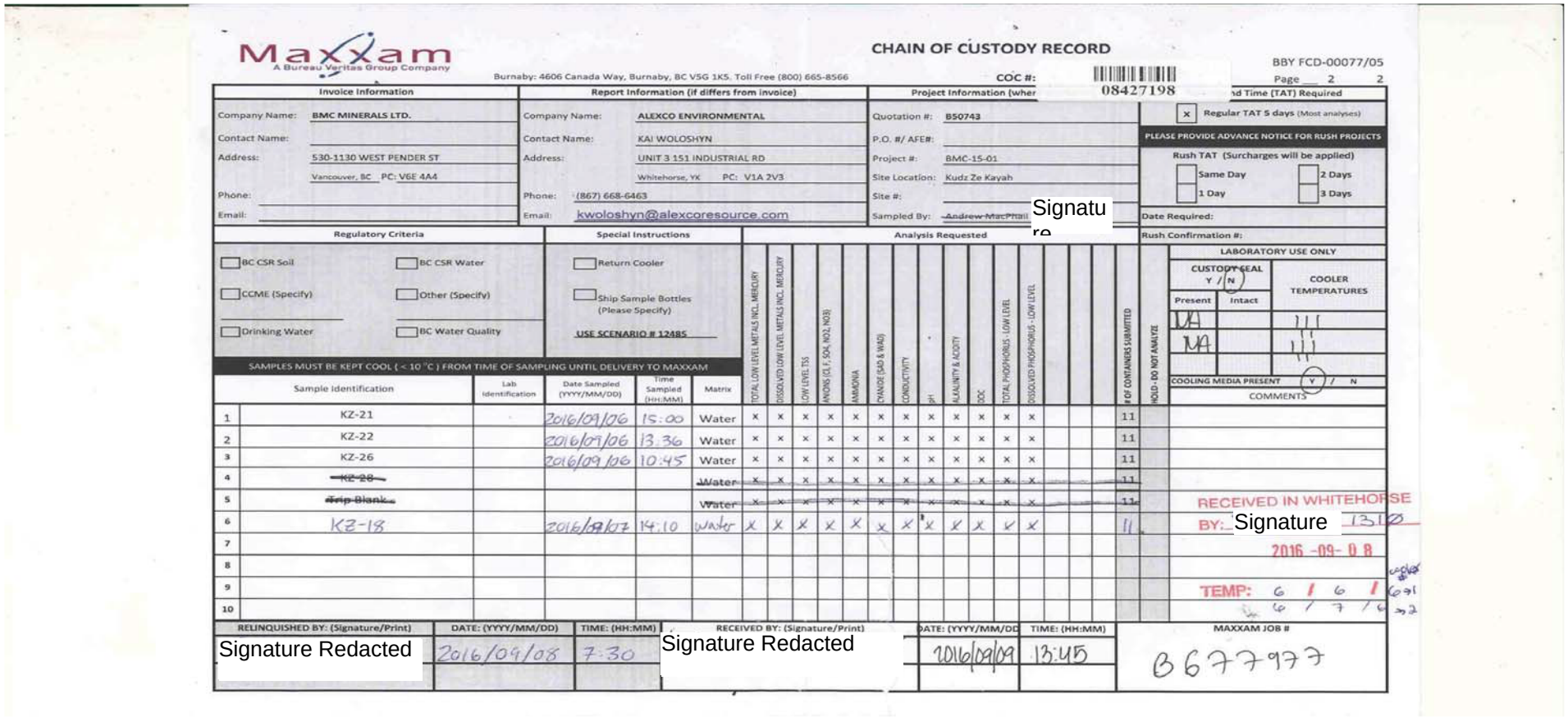
Present	Intact	COOLER TEMPERATURES
NA		11
NA		11
		11

COOLING MEDIA PRESENT (Y) / N

COMMENTS

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	2016/09/08	7:30	Signature Redacted	2016/09/09	13:45

MAXXAM JOB # B677977



Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08427198

BBY FCD-00077/05

Page 2 2

Invoice Information

Company Name: BMC MINERALS LTD.
Contact Name:
Address: 530-1130 WEST PENDER ST
Vancouver, BC PC: V6E 4A4
Phone:
Email:

Report Information (if differs from invoice)

Company Name: ALEXCO ENVIRONMENTAL
Contact Name: KAI WOLOSHYN
Address: UNIT 3 151 INDUSTRIAL RD
Whitehorse, YK PC: V1A 2V3
Phone: (867) 668-6463
Email: kwoloshyn@alexcoresource.com

Project Information (wher

Quotation #: B50743
P.O. #/ AFE#:
Project #: BMC-15-01
Site Location: Kudz Ze Kayah
Site #:
Sampled By: ~~Andrew MacPhail~~ Signatu re

d Time (TAT) Required

[x] Regular TAT 5 days (Most analyses)

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Rush TAT (Surcharges will be applied)
[ ] Same Day [ ] 2 Days
[ ] 1 Day [ ] 3 Days

Date Required:

Rush Confirmation #:

Regulatory Criteria

[ ] BC CSR Soil [ ] BC CSR Water
[ ] CCME (Specify) [ ] Other (Specify)
[ ] Drinking Water [ ] BC Water Quality

Special Instructions

[ ] Return Cooler
[ ] Ship Sample Bottles (Please Specify)
USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (CL, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (EADS & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-21		2016/09/06	15:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
2	KZ-22		2016/09/06	13:36	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3	KZ-26		2016/09/06	10:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
4	~~KZ-28~~				~~Water~~	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	~~Trip Blank~~				~~Water~~	x	x	x	x	x	x	x	x	x	x	x	x	11	
6	KZ-18		2016/09/07	14:10	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
7																			
8																			
9																			
10																			

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		1 1 1
NA		1 1 1
		1 1 1

COOLING MEDIA PRESENT (Y) / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Signature 1310
2016 -09- 08
TEMP: 6 / 6 / 6 91
6 / 7 / 6 92

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2016/09/08	7:30	Signature Redacted	2016/09/09	13:45	B677977

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

CO 08427227

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (w...		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[X] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:
						Rush Confirmation #:

Regulatory Criteria		Special Instructions
[ ] BC CSR Soil	[ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify)	[ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water	[ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	DISSOLVED LOW LEVEL METALS INCL. MERCURY	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	~~KZ-9_E-SEEP~~				~~Water~~	~~X~~	~~X~~	~~X~~	~~X~~	~~4~~		
3	~~KZ-9_W-SEEP~~				~~Water~~	~~X~~	~~X~~	~~X~~	~~X~~	~~4~~		
4	~~SEEP-3~~				~~Water~~	~~X~~	~~X~~	~~X~~	~~X~~	~~4~~		
5	SEEP-4		2016/09/08	13:00	Water	X	X	X	X	4		RECEIVED IN WHITEHORSE
6	~~SEEP-5~~				~~Water~~	~~X~~	~~X~~	~~X~~	~~X~~	~~4~~		BY: Signature Redacted @ 0900
7												2016-09-09
8												
9												TEMP: 6 / 7 / 6
10												

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		44.5

COOLING MEDIA PRESENT (Y) / N

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	2016/09/08	15:30	Signature Redacted	2016/09/12	10:20

B677977_COC

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC 08427191

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (wh	
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:	
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah
Phone:		Phone:	(867) 668-6463	Site #:	
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted

ound Time (TAT) Required

X Regular TAT 5 days (Most analyses)

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Rush TAT (Surcharges will be applied)

☐ Same Day ☐ 2 Days ☐ 1 Day ☐ 3 Days

Date Required:

Rush Confirmation #:

Regulatory Criteria

☐ BC CSR Soil ☐ BC CSR Water ☐ CCME (Specify) ☐ Other (Specify) ☐ Drinking Water ☐ BC Water Quality

Special Instructions

☐ Return Cooler ☐ Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

Analysis Requested

RECEIVED IN WHITEHORSE
BY: Signatur e @ 13:10
2016-09-08
TEMP: 2 / 3 / 3

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	DISSOLVED LOW LEVEL METALS INCL. MERCURY	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-9_E-SEEP		2016/09/07	16:05	Water	x	x	x	x	4	
3	KZ-9_W-SEEP		2016/09/07	15:52	Water	x	x	x	x	4	
4	SEEP-3		2016/09/07	15:08	Water	x	x	x	x	4	
5	~~SEEP-4~~				~~Water~~	x	x	x	x	4	
6	SEEP-5		2016/09/07	15:33	Water	x	x	x	x	4	
7											
8											
9											
10											

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		3.4
		1.1

COOLING MEDIA PRESENT Y / N

COMMENTS

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	2016/09/08	7:30	Signature Redacted	2016/09/09	13:45

B677968_COC

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08427228

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/09/19
Report #: R2263554
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B678454
Received: 2016/09/09, 09:00

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	5	N/A	2016/09/14	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	5	2016/09/13	2016/09/13	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	4	N/A	2016/09/13	BBY6SOP-00011	SM 22 4500-Cl- E m
Chloride by Automated Colourimetry	1	N/A	2016/09/16	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	5	N/A	2016/09/13	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	5	N/A	2016/09/13	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	4	N/A	2016/09/14	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2016/09/14	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	5	N/A	2016/09/13	BBY6SOP-00026	SM 22 2510 B m
Fluoride	5	N/A	2016/09/13	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	5	N/A	2016/09/14	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	5	N/A	2016/09/15	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	5	N/A	2016/09/14	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	5	2016/09/14	2016/09/14	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	4	N/A	2016/09/15	BBY WI-00033	Auto Calc
Ion Balance	1	N/A	2016/09/16	BBY WI-00033	Auto Calc
Sum of cations, anions	4	N/A	2016/09/14	Calc	
Sum of cations, anions	1	N/A	2016/09/15	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	5	N/A	2016/09/15	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	5	N/A	2016/09/14	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	5	N/A	2016/09/14	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	5	N/A	2016/09/14	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Unpreserved)	1	N/A	2016/09/14	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	4	N/A	2016/09/14	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	5	N/A	2016/09/13	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	5	N/A	2016/09/13	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	5	N/A	2016/09/14	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	4	N/A	2016/09/13	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	5	N/A	2016/09/13	BBY6SOP-00026	SM 22 4500-H+ B m

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08427228

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/09/19
Report #: R2263554
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B678454
Received: 2016/09/09, 09:00

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Sulphate by Automated Colourimetry	4	N/A	2016/09/13	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	1	N/A	2016/09/16	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	5	2016/09/15	2016/09/15	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	5	N/A	2016/09/15	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	5	2016/09/13	2016/09/14	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PM2543		PM2544		PM2545	PM2546		
Sampling Date		2016/09/08 13:30		2016/09/08 12:25		2016/09/08 09:10	2016/09/08 12:00		
COC Number		08427228		08427228		08427228	08427228		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	KZ-28	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	2.2	8395084	3.0	8398814	3.1	0.00080	N/A	8395084
Cation Sum	meq/L	2.1	8395084	3.1	8398814	3.0	0.0013	N/A	8395084
Filter and HNO3 Preservation	N/A	LAB	8395928	LAB	8395928	LAB	LAB	N/A	8395928
Ion Balance	N/A	0.95	8395083	1.0	8398813	0.97	NC	0.010	8395083
Nitrate (N)	mg/L	0.129	8395085	0.0248	8395085	0.0381	<0.0020	0.0020	8395085
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00073	8396387	0.00077	8396387	0.00075	0.00070	0.00050	8396387
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00081	8396389	0.00087	8396389	0.00077	0.00077	0.00050	8396389
Fluoride (F)	mg/L	0.043	8396631	0.060	8396631	0.058	0.015	0.010	8396631
Dissolved Organic Carbon (C)	mg/L	<0.50	8398194	2.13	8398194	2.49	<0.50	0.50	8398194
Acidity (pH 4.5)	mg/L	<0.50	8397076	<0.50	8397076	<0.50	<0.50	0.50	8397076
Alkalinity (Total as CaCO3)	mg/L	52.9	8396062	124	8396062	99.9	<0.50	0.50	8396062
Acidity (pH 8.3)	mg/L	<0.50	8397076	<0.50	8397076	<0.50	<0.50	0.50	8397076
Alkalinity (PP as CaCO3)	mg/L	<0.50	8396062	<0.50	8396062	<0.50	<0.50	0.50	8396062
Bicarbonate (HCO3)	mg/L	64.6	8396062	151	8396062	122	<0.50	0.50	8396062
Carbonate (CO3)	mg/L	<0.50	8396062	<0.50	8396062	<0.50	<0.50	0.50	8396062
Hydroxide (OH)	mg/L	<0.50	8396062	<0.50	8396062	<0.50	<0.50	0.50	8396062
Anions									
Dissolved Sulphate (SO4)	mg/L	53.2	8397100	25.0	8401043	52.3	<0.50	0.50	8397100
Dissolved Chloride (Cl)	mg/L	0.78	8397097	0.67	8401041	0.82	<0.50	0.50	8397097
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	8399287	0.0024 (1)	8399287	0.0030 (1)	<0.0020 (1)	0.0020	8399287
Total Ammonia (N)	mg/L	0.014	8396825	0.011	8396825	0.011	<0.0050	0.0050	8396825
Nitrate plus Nitrite (N)	mg/L	0.129 (1)	8397401	0.0248 (1)	8397401	0.0381 (1)	<0.0020 (1)	0.0020	8397401
Nitrite (N)	mg/L	<0.0020 (1)	8397405	<0.0020 (1)	8397405	<0.0020 (1)	<0.0020 (1)	0.0020	8397405
Total Phosphorus (P)	mg/L	<0.0020 (1)	8399308	0.0039 (1)	8399308	0.0041 (1)	<0.0020 (1)	0.0020	8399308
Physical Properties									
Conductivity	uS/cm	209	8396075	281	8396075	274	1.1	1.0	8396075
pH	pH	7.93	8396074	8.26	8396074	8.06	5.89		8396074

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PM2543		PM2544		PM2545	PM2546		
Sampling Date		2016/09/08 13:30		2016/09/08 12:25		2016/09/08 09:10	2016/09/08 12:00		
COC Number		08427228		08427228		08427228	08427228		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	KZ-28	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	<1.0 (1)	8395901	3.9	8395901	1.7	<1.0	1.0	8395901

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PM2547		
Sampling Date		2016/09/12 10:20		
COC Number		08427228		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Anion Sum	meq/L	0.00080	N/A	8395084
Cation Sum	meq/L	0.0018	N/A	8395084
Ion Balance	N/A	NC	0.010	8395083
Nitrate (N)	mg/L	<0.0020	0.0020	8395085
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8396387
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8396389
Fluoride (F)	mg/L	0.015	0.010	8396631
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8398189
Acidity (pH 4.5)	mg/L	<0.50	0.50	8397076
Alkalinity (Total as CaCO3)	mg/L	<0.50	0.50	8396062
Acidity (pH 8.3)	mg/L	<0.50	0.50	8397076
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8396062
Bicarbonate (HCO3)	mg/L	<0.50	0.50	8396062
Carbonate (CO3)	mg/L	<0.50	0.50	8396062
Hydroxide (OH)	mg/L	<0.50	0.50	8396062
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8397100
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8397097
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8399287
Total Ammonia (N)	mg/L	<0.0050	0.0050	8396827
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	8397401
Nitrite (N)	mg/L	<0.0020	0.0020	8397405
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8399308
Physical Properties				
Conductivity	uS/cm	1.1	1.0	8396075
pH	pH	5.75		8396074
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8395901

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PM2543	PM2544	PM2545	PM2546	PM2547		
Sampling Date		2016/09/08 13:30	2016/09/08 12:25	2016/09/08 09:10	2016/09/08 12:00	2016/09/12 10:20		
COC Number		08427228	08427228	08427228	08427228	08427228		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-28	TRIP BLANK	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	101	147	147	<0.50	<0.50	0.50	8394879
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8397363
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00476	0.00347	0.00498	<0.00050	<0.00050	0.00050	8396427
Dissolved Antimony (Sb)	mg/L	0.000026	<0.000020	0.000069	<0.000020	<0.000020	0.000020	8396427
Dissolved Arsenic (As)	mg/L	0.000072	0.000087	0.000279	<0.000020	<0.000020	0.000020	8396427
Dissolved Barium (Ba)	mg/L	0.0548	0.0403	0.0646	<0.000020	<0.000020	0.000020	8396427
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8396427
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8396427
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8396427
Dissolved Cadmium (Cd)	mg/L	0.000385	0.0000080	0.000323	<0.0000050	<0.0000050	0.0000050	8396427
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8396427
Dissolved Cobalt (Co)	mg/L	0.0000110	0.0000110	0.0000250	<0.0000050	<0.0000050	0.0000050	8396427
Dissolved Copper (Cu)	mg/L	0.000648	0.000199	0.00119	<0.000050	<0.000050	0.000050	8396427
Dissolved Iron (Fe)	mg/L	0.0011	0.0110	0.0684	<0.0010	<0.0010	0.0010	8396427
Dissolved Lead (Pb)	mg/L	0.0000140	<0.0000050	0.000115	<0.0000050	<0.0000050	0.0000050	8396427
Dissolved Lithium (Li)	mg/L	0.00094	0.00104	0.00119	<0.00050	<0.00050	0.00050	8396427
Dissolved Manganese (Mn)	mg/L	0.000170	0.00162	0.0166	<0.000050	<0.000050	0.000050	8396427
Dissolved Molybdenum (Mo)	mg/L	0.000597	0.000372	0.000404	<0.000050	<0.000050	0.000050	8396427
Dissolved Nickel (Ni)	mg/L	0.000498	0.000189	0.000469	<0.000020	<0.000020	0.000020	8396427
Dissolved Phosphorus (P)	mg/L	0.0030	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8396427
Dissolved Selenium (Se)	mg/L	0.000837	0.000551	0.000894	<0.000040	<0.000040	0.000040	8396427
Dissolved Silicon (Si)	mg/L	2.35	2.73	2.80	<0.050	<0.050	0.050	8396427
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8396427
Dissolved Strontium (Sr)	mg/L	0.0998	0.150	0.147	0.000052	<0.000050	0.000050	8396427
Dissolved Thallium (Tl)	mg/L	0.0000020	<0.0000020	0.0000020	<0.0000020	<0.0000020	0.0000020	8396427
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8396427
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8396427
Dissolved Uranium (U)	mg/L	0.00181	0.000675	0.000948	<0.0000020	<0.0000020	0.0000020	8396427
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8396427

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PM2543	PM2544	PM2545	PM2546	PM2547		
Sampling Date		2016/09/08 13:30	2016/09/08 12:25	2016/09/08 09:10	2016/09/08 12:00	2016/09/12 10:20		
COC Number		08427228	08427228	08427228	08427228	08427228		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-28	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0589	0.00031	0.0560	<0.00010	<0.00010	0.00010	8396427
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8396427
Dissolved Calcium (Ca)	mg/L	35.3	49.5	49.9	<0.050	<0.050	0.050	8395071
Dissolved Magnesium (Mg)	mg/L	3.00	5.69	5.40	<0.050	<0.050	0.050	8395071
Dissolved Potassium (K)	mg/L	1.48	0.749	1.40	<0.050	<0.050	0.050	8395071
Dissolved Sodium (Na)	mg/L	0.633	2.45	0.798	<0.050	<0.050	0.050	8395071
Dissolved Sulphur (S)	mg/L	16.3	7.8	12.9	<3.0	<3.0	3.0	8395071

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PM2543	PM2544	PM2545	PM2546	PM2547		
Sampling Date		2016/09/08 13:30	2016/09/08 12:25	2016/09/08 09:10	2016/09/08 12:00	2016/09/12 10:20		
COC Number		08427228	08427228	08427228	08427228	08427228		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	92.0	138	128	<0.50	<0.50	0.50	8394715
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8397309
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00947	0.00510	0.0347	0.00059	<0.00050	0.00050	8396010
Total Antimony (Sb)	mg/L	0.000021	<0.000020	0.000071	<0.000020	<0.000020	0.000020	8396010
Total Arsenic (As)	mg/L	0.000073	0.000077	0.000351	<0.000020	<0.000020	0.000020	8396010
Total Barium (Ba)	mg/L	0.0517	0.0365	0.0622	<0.000020	<0.000020	0.000020	8396010
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8396010
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8396010
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8396010
Total Cadmium (Cd)	mg/L	0.000382	0.0000150	0.000366	<0.0000050	<0.0000050	0.0000050	8396010
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8396010
Total Cobalt (Co)	mg/L	0.0000170	0.0000150	0.0000580	<0.0000050	<0.0000050	0.0000050	8396010
Total Copper (Cu)	mg/L	0.000724	0.000214	0.00157	<0.000050	<0.000050	0.000050	8396010
Total Iron (Fe)	mg/L	0.0096	0.0414	0.212	<0.0010	<0.0010	0.0010	8396010
Total Lead (Pb)	mg/L	0.0000720	0.0000080	0.000479	0.0000110	<0.0000050	0.0000050	8396010
Total Lithium (Li)	mg/L	0.00070	0.00090	0.00101	<0.00050	<0.00050	0.00050	8396010
Total Manganese (Mn)	mg/L	0.000537	0.00556	0.0245	<0.000050	<0.000050	0.000050	8396010
Total Molybdenum (Mo)	mg/L	0.000568	0.000362	0.000418	<0.000050	<0.000050	0.000050	8396010
Total Nickel (Ni)	mg/L	0.000515	0.000195	0.000566	<0.000020	<0.000020	0.000020	8396010
Total Phosphorus (P)	mg/L	<0.0020	0.0026	0.0039	<0.0020	<0.0020	0.0020	8396010
Total Selenium (Se)	mg/L	0.000795	0.000619	0.000851	<0.000040	<0.000040	0.000040	8396010
Total Silicon (Si)	mg/L	2.07	2.55	2.76	<0.050	<0.050	0.050	8396010
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8396010
Total Strontium (Sr)	mg/L	0.0878	0.127	0.126	<0.000050	<0.000050	0.000050	8396010
Total Thallium (Tl)	mg/L	0.0000030	<0.0000020	0.0000030	<0.0000020	<0.0000020	0.0000020	8396010
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8396010
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00174	<0.00050	<0.00050	0.00050	8396010
Total Uranium (U)	mg/L	0.00193	0.000676	0.000973	<0.0000020	<0.0000020	0.0000020	8396010
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8396010

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PM2543	PM2544	PM2545	PM2546	PM2547		
Sampling Date		2016/09/08 13:30	2016/09/08 12:25	2016/09/08 09:10	2016/09/08 12:00	2016/09/12 10:20		
COC Number		08427228	08427228	08427228	08427228	08427228		
	UNITS	**KZ-2**	**KZ-6**	**KZ-7**	**KZ-28**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.0591	0.00058	0.0652	0.00023	<0.00010	0.00010	8396010
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8396010
Total Calcium (Ca)	mg/L	31.7	45.5	42.0	<0.050	<0.050	0.050	8395072
Total Magnesium (Mg)	mg/L	3.11	5.98	5.62	<0.050	<0.050	0.050	8395072
Total Potassium (K)	mg/L	1.39	0.691	1.27	<0.050	<0.050	0.050	8395072
Total Sodium (Na)	mg/L	0.654	0.665	0.795	<0.050	<0.050	0.050	8395072
Total Sulphur (S)	mg/L	14.9	7.8	12.4	<3.0	<3.0	3.0	8395072

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PM2543
Sample ID: KZ-2
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8397076	N/A	2016/09/14	Name Redacted
Alkalinity - Water	AT/ALK	8396062	2016/09/13	2016/09/13	
Chloride by Automated Colourimetry	KONE/COL	8397097	N/A	2016/09/13	
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8398194	N/A	2016/09/14	
Conductance - water	AT/ALK	8396075	N/A	2016/09/13	
Fluoride	ISE/ISE	8396631	N/A	2016/09/13	
Hardness Total (calculated as CaCO3)	CALC	8394715	N/A	2016/09/14	
Hardness (calculated as CaCO3)	CALC	8394879	N/A	2016/09/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397363	N/A	2016/09/14	
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	
Ion Balance	CALC	8395083	N/A	2016/09/15	
Sum of cations, anions	CALC	8395084	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8395071	N/A	2016/09/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396427	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8395072	N/A	2016/09/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	
Ammonia-N (Preserved)	KONE/COL	8396825	N/A	2016/09/14	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8397401	N/A	2016/09/13	
Nitrite (N) (low level)	TRAA/COL	8397405	N/A	2016/09/13	
Nitrogen - Nitrate (as N)	CALC	8395085	N/A	2016/09/14	
Filter and HNO3 Preserve for Metals	ICP	8395928	N/A	2016/09/13	
pH Water	AT/ALK	8396074	N/A	2016/09/13	
Sulphate by Automated Colourimetry	KONE/COL	8397100	N/A	2016/09/13	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8399287	2016/09/15	2016/09/15	
Total Phosphorus - unpreserved	KONE/COL	8399308	N/A	2016/09/15	
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	

Maxxam ID: PM2544
Sample ID: KZ-6
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8397076	N/A	2016/09/14	Name Redacted
Alkalinity - Water	AT/ALK	8396062	2016/09/13	2016/09/13	
Chloride by Automated Colourimetry	KONE/COL	8401041	N/A	2016/09/16	
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8398194	N/A	2016/09/14	
Conductance - water	AT/ALK	8396075	N/A	2016/09/13	
Fluoride	ISE/ISE	8396631	N/A	2016/09/13	
Hardness Total (calculated as CaCO3)	CALC	8394715	N/A	2016/09/14	
Hardness (calculated as CaCO3)	CALC	8394879	N/A	2016/09/15	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PM2544
Sample ID: KZ-6
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397363	N/A	2016/09/14	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	
Ion Balance	CALC	8398813	N/A	2016/09/16	
Sum of cations, anions	CALC	8398814	N/A	2016/09/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8395071	N/A	2016/09/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396427	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8395072	N/A	2016/09/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	
Ammonia-N (Preserved)	KONE/COL	8396825	N/A	2016/09/14	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8397401	N/A	2016/09/13	
Nitrite (N) (low level)	TRAA/COL	8397405	N/A	2016/09/13	
Nitrogen - Nitrate (as N)	CALC	8395085	N/A	2016/09/14	
Filter and HNO3 Preserve for Metals	ICP	8395928	N/A	2016/09/13	
pH Water	AT/ALK	8396074	N/A	2016/09/13	
Sulphate by Automated Colourimetry	KONE/COL	8401043	N/A	2016/09/16	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8399287	2016/09/15	2016/09/15	
Total Phosphorus - unpreserved	KONE/COL	8399308	N/A	2016/09/15	
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	

Maxxam ID: PM2545
Sample ID: KZ-7
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8397076	N/A	2016/09/14	Name Redacted
Alkalinity - Water	AT/ALK	8396062	2016/09/13	2016/09/13	
Chloride by Automated Colourimetry	KONE/COL	8397097	N/A	2016/09/13	
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8398194	N/A	2016/09/14	
Conductance - water	AT/ALK	8396075	N/A	2016/09/13	
Fluoride	ISE/ISE	8396631	N/A	2016/09/13	
Hardness Total (calculated as CaCO3)	CALC	8394715	N/A	2016/09/14	
Hardness (calculated as CaCO3)	CALC	8394879	N/A	2016/09/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397363	N/A	2016/09/14	
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	
Ion Balance	CALC	8395083	N/A	2016/09/15	
Sum of cations, anions	CALC	8395084	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8395071	N/A	2016/09/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396427	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8395072	N/A	2016/09/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	
Ammonia-N (Preserved)	KONE/COL	8396825	N/A	2016/09/14	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8397401	N/A	2016/09/13	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PM2545
Sample ID: KZ-7
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8397405	N/A	2016/09/13	Name Redacted
Nitrogen - Nitrate (as N)	CALC	8395085	N/A	2016/09/14	
Filter and HNO3 Preserve for Metals	ICP	8395928	N/A	2016/09/13	
pH Water	AT/ALK	8396074	N/A	2016/09/13	
Sulphate by Automated Colourimetry	KONE/COL	8397100	N/A	2016/09/13	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8399287	2016/09/15	2016/09/15	
Total Phosphorus - unpreserved	KONE/COL	8399308	N/A	2016/09/15	
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	

Maxxam ID: PM2545 Dup
Sample ID: KZ-7
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8396825	N/A	2016/09/14	Name Redacted
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8399287	2016/09/15	2016/09/15	
Total Phosphorus - unpreserved	KONE/COL	8399308	N/A	2016/09/15	

Maxxam ID: PM2546
Sample ID: KZ-28
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8397076	N/A	2016/09/14	Name Redacted
Alkalinity - Water	AT/ALK	8396062	2016/09/13	2016/09/13	
Chloride by Automated Colourimetry	KONE/COL	8397097	N/A	2016/09/13	
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8398194	N/A	2016/09/14	
Conductance - water	AT/ALK	8396075	N/A	2016/09/13	
Fluoride	ISE/ISE	8396631	N/A	2016/09/13	
Hardness Total (calculated as CaCO3)	CALC	8394715	N/A	2016/09/14	
Hardness (calculated as CaCO3)	CALC	8394879	N/A	2016/09/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397363	N/A	2016/09/14	
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	
Ion Balance	CALC	8395083	N/A	2016/09/15	
Sum of cations, anions	CALC	8395084	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8395071	N/A	2016/09/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396427	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8395072	N/A	2016/09/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	
Ammonia-N (Preserved)	KONE/COL	8396825	N/A	2016/09/14	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8397401	N/A	2016/09/13	
Nitrite (N) (low level)	TRAA/COL	8397405	N/A	2016/09/13	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PM2546
Sample ID: KZ-28
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8395085	N/A	2016/09/14	Name Redacted
Filter and HNO3 Preserve for Metals	ICP	8395928	N/A	2016/09/13	
pH Water	AT/ALK	8396074	N/A	2016/09/13	
Sulphate by Automated Colourimetry	KONE/COL	8397100	N/A	2016/09/13	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8399287	2016/09/15	2016/09/15	
Total Phosphorus - unpreserved	KONE/COL	8399308	N/A	2016/09/15	
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	

Maxxam ID: PM2546 Dup
Sample ID: KZ-28
Matrix: Water

Collected: 2016/09/08
Shipped:
Received: 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	Name Redacted

Maxxam ID: PM2547
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/09/12
Shipped:
Received: 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8397076	N/A	2016/09/14	Name Redacted
Alkalinity - Water	AT/ALK	8396062	2016/09/13	2016/09/13	
Chloride by Automated Colourimetry	KONE/COL	8397097	N/A	2016/09/13	
Cyanide SAD (strong acid dissociable)	TECH/COL	8396387	N/A	2016/09/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8396389	N/A	2016/09/13	
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8398189	N/A	2016/09/14	
Conductance - water	AT/ALK	8396075	N/A	2016/09/13	
Fluoride	ISE/ISE	8396631	N/A	2016/09/13	
Hardness Total (calculated as CaCO3)	CALC	8394715	N/A	2016/09/14	
Hardness (calculated as CaCO3)	CALC	8394879	N/A	2016/09/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8397363	N/A	2016/09/14	
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	
Ion Balance	CALC	8395083	N/A	2016/09/15	
Sum of cations, anions	CALC	8395084	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8395071	N/A	2016/09/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8396427	N/A	2016/09/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8395072	N/A	2016/09/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8396010	N/A	2016/09/14	
Ammonia-N (Unpreserved)	KONE/COL	8396827	N/A	2016/09/14	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8397401	N/A	2016/09/13	
Nitrite (N) (low level)	TRAA/COL	8397405	N/A	2016/09/13	
Nitrogen - Nitrate (as N)	CALC	8395085	N/A	2016/09/14	
pH Water	AT/ALK	8396074	N/A	2016/09/13	
Sulphate by Automated Colourimetry	KONE/COL	8397100	N/A	2016/09/13	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PM2547 **Collected:** 2016/09/12
Sample ID: TRIP BLANK **Shipped:**
Matrix: Water **Received:** 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8399287	2016/09/15	2016/09/15	Name Redacted
Total Phosphorus - unpreserved	KONE/COL	8399308	N/A	2016/09/15	
Total Suspended Solids-Low Level	BAL/BAL	8395901	2016/09/13	2016/09/14	

Maxxam ID: PM2547 Dup **Collected:** 2016/09/12
Sample ID: TRIP BLANK **Shipped:**
Matrix: Water **Received:** 2016/09/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8397309	2016/09/14	2016/09/14	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	5.7°C

Sample PM2546-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Sample PM2547-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8395901	Total Suspended Solids	2016/09/14			103	80 - 120	<1.0	mg/L		
8396010	Total Aluminum (Al)	2016/09/14	107	80 - 120	119	80 - 120	<0.00050	mg/L	NC	20
8396010	Total Antimony (Sb)	2016/09/14	95	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8396010	Total Arsenic (As)	2016/09/14	94	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8396010	Total Barium (Ba)	2016/09/14	NC	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
8396010	Total Beryllium (Be)	2016/09/14	97	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8396010	Total Bismuth (Bi)	2016/09/14	94	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8396010	Total Boron (B)	2016/09/14	94	80 - 120	101	80 - 120	<0.010	mg/L	NC	20
8396010	Total Cadmium (Cd)	2016/09/14	90	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8396010	Total Chromium (Cr)	2016/09/14	99	80 - 120	106	80 - 120	<0.00010	mg/L	NC	20
8396010	Total Cobalt (Co)	2016/09/14	98	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8396010	Total Copper (Cu)	2016/09/14	97	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20
8396010	Total Iron (Fe)	2016/09/14	NC	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
8396010	Total Lead (Pb)	2016/09/14	98	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8396010	Total Lithium (Li)	2016/09/14	93	80 - 120	94	80 - 120	<0.00050	mg/L	NC	20
8396010	Total Manganese (Mn)	2016/09/14	96	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8396010	Total Molybdenum (Mo)	2016/09/14	NC	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8396010	Total Nickel (Ni)	2016/09/14	98	80 - 120	108	80 - 120	<0.000020	mg/L	NC	20
8396010	Total Phosphorus (P)	2016/09/14					<0.0020	mg/L	NC	20
8396010	Total Selenium (Se)	2016/09/14	96	80 - 120	106	80 - 120	<0.000040	mg/L	NC	20
8396010	Total Silicon (Si)	2016/09/14					<0.050	mg/L	NC	20
8396010	Total Silver (Ag)	2016/09/14	98	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8396010	Total Strontium (Sr)	2016/09/14	NC	80 - 120	95	80 - 120	<0.000050	mg/L	NC	20
8396010	Total Thallium (Tl)	2016/09/14	97	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8396010	Total Tin (Sn)	2016/09/14	96	80 - 120	109	80 - 120	<0.00020	mg/L	NC	20
8396010	Total Titanium (Ti)	2016/09/14	93	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8396010	Total Uranium (U)	2016/09/14	99	80 - 120	110	80 - 120	<0.0000020	mg/L	NC	20
8396010	Total Vanadium (V)	2016/09/14	97	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8396010	Total Zinc (Zn)	2016/09/14	99	80 - 120	110	80 - 120	<0.00010	mg/L	NC	20
8396010	Total Zirconium (Zr)	2016/09/14					<0.00010	mg/L	NC	20
8396062	Alkalinity (PP as CaCO3)	2016/09/13					<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8396062	Alkalinity (Total as CaCO3)	2016/09/13	NC	80 - 120	102	80 - 120	<0.50	mg/L	0.65	20
8396062	Bicarbonate (HCO3)	2016/09/13					<0.50	mg/L	0.65	20
8396062	Carbonate (CO3)	2016/09/13					<0.50	mg/L	NC	20
8396062	Hydroxide (OH)	2016/09/13					<0.50	mg/L	NC	20
8396074	pH	2016/09/13			101	97 - 103			0.12	N/A
8396075	Conductivity	2016/09/13			100	80 - 120	<1.0	uS/cm	3.8	20
8396387	Strong Acid Dissoc. Cyanide (CN)	2016/09/13	102	80 - 120	100	80 - 120	0.00051, RDL=0.00050	mg/L	NC	20
8396389	Weak Acid Dissoc. Cyanide (CN)	2016/09/13	103	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8396427	Dissolved Aluminum (Al)	2016/09/14	105	80 - 120	101	80 - 120	<0.00050	mg/L	0.88	20
8396427	Dissolved Antimony (Sb)	2016/09/14	97	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8396427	Dissolved Arsenic (As)	2016/09/14	102	80 - 120	98	80 - 120	<0.000020	mg/L	9.5	20
8396427	Dissolved Barium (Ba)	2016/09/14	NC	80 - 120	104	80 - 120	<0.000020	mg/L	0.55	20
8396427	Dissolved Beryllium (Be)	2016/09/14	101	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8396427	Dissolved Bismuth (Bi)	2016/09/14	97	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8396427	Dissolved Boron (B)	2016/09/14	105	80 - 120	100	80 - 120	<0.010	mg/L	NC	20
8396427	Dissolved Cadmium (Cd)	2016/09/14	96	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8396427	Dissolved Chromium (Cr)	2016/09/14	100	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
8396427	Dissolved Cobalt (Co)	2016/09/14	96	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8396427	Dissolved Copper (Cu)	2016/09/14	95	80 - 120	97	80 - 120	<0.000050	mg/L	0.68	20
8396427	Dissolved Iron (Fe)	2016/09/14	102	80 - 120	102	80 - 120	<0.0010	mg/L	4.1	20
8396427	Dissolved Lead (Pb)	2016/09/14	99	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8396427	Dissolved Lithium (Li)	2016/09/14	92	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8396427	Dissolved Manganese (Mn)	2016/09/14	100	80 - 120	96	80 - 120	<0.000050	mg/L	NC	20
8396427	Dissolved Molybdenum (Mo)	2016/09/14	NC	80 - 120	100	80 - 120	<0.000050	mg/L	1.4	20
8396427	Dissolved Nickel (Ni)	2016/09/14	96	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8396427	Dissolved Phosphorus (P)	2016/09/14					<0.0020	mg/L	NC	20
8396427	Dissolved Selenium (Se)	2016/09/14	98	80 - 120	101	80 - 120	<0.000040	mg/L	NC	20
8396427	Dissolved Silicon (Si)	2016/09/14					<0.050	mg/L	2.9	20
8396427	Dissolved Silver (Ag)	2016/09/14	105	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8396427	Dissolved Strontium (Sr)	2016/09/14	NC	80 - 120	98	80 - 120	<0.000050	mg/L	3.2	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8396427	Dissolved Thallium (Tl)	2016/09/14	96	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8396427	Dissolved Tin (Sn)	2016/09/14	100	80 - 120	108	80 - 120	<0.00020	mg/L	NC	20
8396427	Dissolved Titanium (Ti)	2016/09/14	101	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8396427	Dissolved Uranium (U)	2016/09/14	97	80 - 120	97	80 - 120	<0.0000020	mg/L	2.7	20
8396427	Dissolved Vanadium (V)	2016/09/14	99	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
8396427	Dissolved Zinc (Zn)	2016/09/14	101	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8396427	Dissolved Zirconium (Zr)	2016/09/14					<0.00010	mg/L	NC	20
8396631	Fluoride (F)	2016/09/13	101	80 - 120	104	80 - 120	0.016, RDL=0.010	mg/L	0	20
8396825	Total Ammonia (N)	2016/09/14	110	80 - 120	104	80 - 120	<0.0050	mg/L	NC	20
8396827	Total Ammonia (N)	2016/09/14	96	80 - 120	102	80 - 120	<0.0050	mg/L	NC	20
8397076	Acidity (pH 4.5)	2016/09/14					<0.50	mg/L	NC	20
8397076	Acidity (pH 8.3)	2016/09/14			96	80 - 120	<0.50	mg/L	NC	20
8397097	Dissolved Chloride (Cl)	2016/09/13	NC	80 - 120	106	80 - 120	<0.50	mg/L		
8397100	Dissolved Sulphate (SO4)	2016/09/13	NC	80 - 120	93	80 - 120	<0.50	mg/L	0.50	20
8397309	Total Mercury (Hg)	2016/09/14	101	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8397363	Dissolved Mercury (Hg)	2016/09/14	102	80 - 120	106	80 - 120	<0.0000020	mg/L	NC	20
8397401	Nitrate plus Nitrite (N)	2016/09/13	NC	80 - 120	109	80 - 120	<0.0020	mg/L	0.87	25
8397405	Nitrite (N)	2016/09/13	99	80 - 120	102	80 - 120	<0.0020	mg/L	NC	25
8398189	Dissolved Organic Carbon (C)	2016/09/14			109	80 - 120	<0.50	mg/L		
8398194	Dissolved Organic Carbon (C)	2016/09/14	105	80 - 120	106	80 - 120	<0.50	mg/L	12	20
8399287	Dissolved Phosphorus (P)	2016/09/15	98	80 - 120	104	80 - 120	<0.0020	mg/L	NC	20
8399308	Total Phosphorus (P)	2016/09/15	94	80 - 120	111	80 - 120	<0.0020	mg/L	NC	20
8401041	Dissolved Chloride (Cl)	2016/09/16	NC	80 - 120	100	80 - 120	<0.50	mg/L	0.16	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8401043	Dissolved Sulphate (SO4)	2016/09/16	NC	80 - 120	97	80 - 120	0.60, RDL=0.50	mg/L	4.8	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B678454
Report Date: 2016/09/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC # 08427228

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		2016/09/08	13:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3	KZ-6		2016/09/08	12:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
4	KZ-7		2016/09/08	9:10	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	~~KZ-9~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6	~~KZ-13~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
7	~~KZ-15~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
8	~~KZ-16~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
9	~~KZ-17~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
10	~~KZ-19~~				Water	x	x	x	x	x	x	x	x	x	x	x	x	11	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		1 1 1
		1 1

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Signature Redacted
2016-09-09
TEMP: 5 / 5 / 5

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	2016/09/08	15:30	Signature Redacted	2016/09/12	10:20

B678454_COC

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC # 08427229

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	~~KZ-21~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~11~~	
2	~~KZ-22~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~11~~	
3	~~KZ-26~~				~~Water~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~x~~	~~11~~	
4	KZ-28		2016/09/08	12:00 PM	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	Trip Blank		n/a	n/a	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6																			
7																			
8																			
9																			
10																			

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
N		11.1
		11

COOLING MEDIA PRESENT Y / N

COMMENTS

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	2016/09/08	15:30	Signature Redacted	2016/09/12	10:20

B678454_COC

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08428034

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/10/11
Report #: R2279622
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B687189
Received: 2016/10/03, 15:15

Sample Matrix: Water
Samples Received: 7

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	7	N/A	2016/10/06	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	7	2016/10/05	2016/10/05	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	7	N/A	2016/10/06	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	7	N/A	2016/10/05	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	7	N/A	2016/10/05	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	7	N/A	2016/10/06	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	7	N/A	2016/10/05	BBY6SOP-00026	SM 22 2510 B m
Fluoride	7	N/A	2016/10/05	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	7	N/A	2016/10/06	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	7	N/A	2016/10/06	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	7	N/A	2016/10/06	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	7	2016/10/06	2016/10/06	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	7	N/A	2016/10/06	BBY WI-00033	Auto Calc
Sum of cations, anions	7	N/A	2016/10/06	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	7	N/A	2016/10/06	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	7	N/A	2016/10/06	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	3	2016/10/05	2016/10/06	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	7	N/A	2016/10/06	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	4	N/A	2016/10/06	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	7	N/A	2016/10/06	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	7	N/A	2016/10/05	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	7	N/A	2016/10/05	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	7	N/A	2016/10/06	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	7	N/A	2016/10/05	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	7	N/A	2016/10/05	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	7	N/A	2016/10/06	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	7	2016/10/05	2016/10/05	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	7	N/A	2016/10/05	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	7	2016/10/05	2016/10/06	BBY6SOP-00034	SM 22 2540 D

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08428034

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/10/11
Report #: R2279622
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B687189
Received: 2016/10/03, 15:15

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PR5139		PR5140		PR5141	PR5142		
Sampling Date		2016/09/30 15:30		2016/09/30 17:05		2016/09/30 12:15	2016/10/01 09:10		
COC Number		08428034		08428034		08428034	08428034		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	KZ-15	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	4.8	8422093	4.1	8422093	4.3	3.7	N/A	8422093
Cation Sum	meq/L	4.6	8422093	4.1	8422093	4.3	3.6	N/A	8422093
Filter and HNO3 Preservation	N/A	LAB	8422689	LAB	8422689	LAB	LAB	N/A	8422689
Ion Balance	N/A	0.97	8422092	1.0	8422092	0.99	0.98	0.010	8422092
Nitrate (N)	mg/L	0.0122	8421618	0.0898	8421618	0.0812	0.164	0.0020	8421618
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00076	8423260	0.00070	8423260	0.00065	0.00054	0.00050	8423260
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00077	8423271	0.00074	8423271	0.00079	0.00084	0.00050	8423271
Fluoride (F)	mg/L	0.140	8423457	0.099	8423457	0.110	0.078	0.010	8423457
Dissolved Organic Carbon (C)	mg/L	4.86	8424813	2.95	8424812	3.99	2.02	0.50	8424813
Acidity (pH 4.5)	mg/L	<0.50	8423014	<0.50	8423018	<0.50	<0.50	0.50	8423018
Alkalinity (Total as CaCO3)	mg/L	195	8423400	166	8423403	177	151	0.50	8423403
Acidity (pH 8.3)	mg/L	<0.50	8423014	<0.50	8423018	<0.50	<0.50	0.50	8423018
Alkalinity (PP as CaCO3)	mg/L	<0.50	8423400	<0.50	8423403	1.85	<0.50	0.50	8423403
Bicarbonate (HCO3)	mg/L	237	8423400	203	8423403	211	185	0.50	8423403
Carbonate (CO3)	mg/L	<0.50	8423400	<0.50	8423403	2.22	<0.50	0.50	8423403
Hydroxide (OH)	mg/L	<0.50	8423400	<0.50	8423403	<0.50	<0.50	0.50	8423403
Anions									
Dissolved Sulphate (SO4)	mg/L	42.0	8424715	35.0	8424715	36.5	32.1	0.50	8424715
Dissolved Chloride (Cl)	mg/L	0.59	8424712	0.66	8424712	0.59	0.59	0.50	8424712
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0109 (1)	8423101	0.0057 (1)	8423101	0.0067 (1)	0.0035 (1)	0.0020	8423101
Total Ammonia (N)	mg/L	0.052	8424854	0.20	8424854	0.17	0.099	0.0050	8424854
Nitrate plus Nitrite (N)	mg/L	0.0122 (1)	8424477	0.0898 (1)	8424488	0.0812 (1)	0.164 (1)	0.0020	8424488
Nitrite (N)	mg/L	<0.0020 (1)	8424483	<0.0020 (1)	8424495	<0.0020 (1)	<0.0020 (1)	0.0020	8424495
Total Phosphorus (P)	mg/L	0.0148 (1)	8423108	0.0063 (1)	8423112	0.0049 (1)	0.0036 (1)	0.0020	8423108
Physical Properties									
Conductivity	uS/cm	439	8423402	379	8423411	399	347	1.0	8423411
pH	pH	8.22	8423401	8.28	8423410	8.36	8.25		8423410

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PR5139		PR5140		PR5141	PR5142		
Sampling Date		2016/09/30 15:30		2016/09/30 17:05		2016/09/30 12:15	2016/10/01 09:10		
COC Number		08428034		08428034		08428034	08428034		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	KZ-15	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	1.9	8422714	1.5	8422714	4.0	3.6	1.0	8422714
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PR5143		PR5144	PR5145		
Sampling Date		2016/10/01 11:05		2016/10/01 11:50	2016/10/02 09:30		
COC Number		08428034		08428034	08428034		
	UNITS	KZ-16	QC Batch	KZ-17	KZ16B	RDL	QC Batch
Calculated Parameters							
Anion Sum	meq/L	3.4	8422093	3.0	3.1	N/A	8422093
Cation Sum	meq/L	3.4	8422093	3.1	3.1	N/A	8422093
Filter and HNO3 Preservation	N/A	LAB	8422689	LAB	LAB	N/A	8422689
Ion Balance	N/A	0.98	8422092	1.0	1.0	0.010	8422092
Nitrate (N)	mg/L	0.175	8421618	0.158	0.178	0.0020	8421618
Misc. Inorganics							
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00068	8423260	0.00056	0.00052	0.00050	8423260
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00078	8423271	0.00072	0.00063	0.00050	8423271
Fluoride (F)	mg/L	0.059	8423457	0.100	0.053	0.010	8423457
Dissolved Organic Carbon (C)	mg/L	0.99	8424813	1.19	1.65	0.50	8424812
Acidity (pH 4.5)	mg/L	<0.50	8423018	<0.50	<0.50	0.50	8423018
Alkalinity (Total as CaCO3)	mg/L	140	8423403	123	126	0.50	8423403
Acidity (pH 8.3)	mg/L	<0.50	8423018	<0.50	<0.50	0.50	8423018
Alkalinity (PP as CaCO3)	mg/L	<0.50	8423403	<0.50	<0.50	0.50	8423403
Bicarbonate (HCO3)	mg/L	170	8423403	150	154	0.50	8423403
Carbonate (CO3)	mg/L	<0.50	8423403	<0.50	<0.50	0.50	8423403
Hydroxide (OH)	mg/L	<0.50	8423403	<0.50	<0.50	0.50	8423403
Anions							
Dissolved Sulphate (SO4)	mg/L	28.5	8424715	25.1	26.9	0.50	8424715
Dissolved Chloride (Cl)	mg/L	0.62	8424712	0.58	0.57	0.50	8424712
Nutrients							
Dissolved Phosphorus (P)	mg/L	0.0022 (1)	8423101	0.0027 (1)	0.0023	0.0020	8423101
Total Ammonia (N)	mg/L	0.10	8424857	0.29	0.011	0.0050	8424854
Nitrate plus Nitrite (N)	mg/L	0.175 (1)	8424488	0.158 (1)	0.178	0.0020	8424488
Nitrite (N)	mg/L	<0.0020 (1)	8424495	<0.0020 (1)	<0.0020	0.0020	8424495
Total Phosphorus (P)	mg/L	0.0050 (1)	8423112	0.0036 (1)	0.0027	0.0020	8423112
Physical Properties							
Conductivity	uS/cm	323	8423411	288	297	1.0	8423411
pH	pH	8.19	8423410	8.06	8.15		8423410

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PR5143		PR5144	PR5145		
Sampling Date		2016/10/01 11:05		2016/10/01 11:50	2016/10/02 09:30		
COC Number		08428034		08428034	08428034		
	UNITS	KZ-16	QC Batch	KZ-17	KZ16B	RDL	QC Batch
Physical Properties							
Total Suspended Solids	mg/L	<1.0	8422714	<1.0	<1.0	1.0	8422714
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PR5139		PR5140	PR5141		
Sampling Date		2016/09/30 15:30		2016/09/30 17:05	2016/09/30 12:15		
COC Number		08428034		08428034	08428034		
	UNITS	KZ-21	QC Batch	KZ-22	KZ-26	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	227	8422091	199	210	0.50	8422091
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	8424135	<0.0000020	<0.0000020	0.0000020	8424150
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00238	8423304	0.00179	0.00193	0.00050	8423304
Dissolved Antimony (Sb)	mg/L	0.000098	8423304	0.000056	0.000071	0.000020	8423304
Dissolved Arsenic (As)	mg/L	0.00141	8423304	0.000989	0.000907	0.000020	8423304
Dissolved Barium (Ba)	mg/L	0.0565	8423304	0.0595	0.0639	0.000020	8423304
Dissolved Beryllium (Be)	mg/L	<0.000010	8423304	<0.000010	<0.000010	0.000010	8423304
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8423304	<0.0000050	<0.0000050	0.0000050	8423304
Dissolved Boron (B)	mg/L	<0.010	8423304	<0.010	<0.010	0.010	8423304
Dissolved Cadmium (Cd)	mg/L	<0.0000050	8423304	0.0000090	0.0000080	0.0000050	8423304
Dissolved Chromium (Cr)	mg/L	<0.00010	8423304	<0.00010	<0.00010	0.00010	8423304
Dissolved Cobalt (Co)	mg/L	0.0000610	8423304	0.0000380	0.0000290	0.0000050	8423304
Dissolved Copper (Cu)	mg/L	0.000367	8423304	0.000348	0.000438	0.000050	8423304
Dissolved Iron (Fe)	mg/L	0.0432	8423304	0.0532	0.0363	0.0010	8423304
Dissolved Lead (Pb)	mg/L	<0.0000050	8423304	<0.0000050	<0.0000050	0.0000050	8423304
Dissolved Lithium (Li)	mg/L	0.00376	8423304	0.00264	0.00360 (1)	0.00050	8423304
Dissolved Manganese (Mn)	mg/L	0.0549	8423304	0.0237	0.0119	0.000050	8423304
Dissolved Molybdenum (Mo)	mg/L	0.00142	8423304	0.00104	0.00105	0.000050	8423304
Dissolved Nickel (Ni)	mg/L	0.00193	8423304	0.000955	0.000974	0.000020	8423304
Dissolved Phosphorus (P)	mg/L	0.0056	8423304	0.0020	0.0022	0.0020	8423304
Dissolved Selenium (Se)	mg/L	0.000910	8425639	0.00114	0.000968	0.000040	8425639
Dissolved Silicon (Si)	mg/L	4.60	8423304	3.84	4.11	0.050	8423304
Dissolved Silver (Ag)	mg/L	<0.0000050	8423304	<0.0000050	<0.0000050	0.0000050	8423304
Dissolved Strontium (Sr)	mg/L	0.194	8423304	0.185	0.195	0.000050	8423304
Dissolved Thallium (Tl)	mg/L	<0.0000020	8423304	<0.0000020	<0.0000020	0.0000020	8423304
Dissolved Tin (Sn)	mg/L	<0.00020	8423304	<0.00020	<0.00020	0.00020	8423304
Dissolved Titanium (Ti)	mg/L	<0.00050	8423304	<0.00050	<0.00050	0.00050	8423304
Dissolved Uranium (U)	mg/L	0.00279	8423304	0.00238	0.00233	0.0000020	8423304

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PR5139		PR5140	PR5141		
Sampling Date		2016/09/30 15:30		2016/09/30 17:05	2016/09/30 12:15		
COC Number		08428034		08428034	08428034		
	UNITS	KZ-21	QC Batch	KZ-22	KZ-26	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	8423304	<0.00020	<0.00020	0.00020	8423304
Dissolved Zinc (Zn)	mg/L	0.00043	8423304	0.00076	0.00060	0.00010	8423304
Dissolved Zirconium (Zr)	mg/L	0.00010	8423304	<0.00010	<0.00010	0.00010	8423304
Dissolved Calcium (Ca)	mg/L	58.1	8421359	55.7	56.9	0.050	8421359
Dissolved Magnesium (Mg)	mg/L	20.0	8421359	14.5	16.4	0.050	8421359
Dissolved Potassium (K)	mg/L	1.34	8421359	1.19	1.21	0.050	8421359
Dissolved Sodium (Na)	mg/L	1.16	8421359	1.09	1.20	0.050	8421359
Dissolved Sulphur (S)	mg/L	14.1	8421359	12.5	12.4	3.0	8421359

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PR5142	PR5143	PR5144		PR5145		
Sampling Date		2016/10/01 09:10	2016/10/01 11:05	2016/10/01 11:50		2016/10/02 09:30		
COC Number		08428034	08428034	08428034		08428034		
	UNITS	KZ-15	KZ-16	KZ-17	QC Batch	KZ16B	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	178	164	148	8422091	154	0.50	8422091
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8424135	<0.0000020	0.0000020	8424150
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00156	0.00124	0.00082	8423304	0.00159	0.00050	8423304
Dissolved Antimony (Sb)	mg/L	0.000030	<0.000020	0.000036	8423304	<0.000020	0.000020	8423304
Dissolved Arsenic (As)	mg/L	0.000458	0.000299	0.000271	8423304	0.000326	0.000020	8423304
Dissolved Barium (Ba)	mg/L	0.0659	0.0626	0.0547	8423304	0.0625	0.000020	8423304
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8423304	<0.000010	0.000010	8423304
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8423304	<0.0000050	0.0000050	8423304
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8423304	<0.010	0.010	8423304
Dissolved Cadmium (Cd)	mg/L	0.0000220	0.0000090	0.0000110	8423304	0.0000150	0.0000050	8423304
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8423304	<0.00010	0.00010	8423304
Dissolved Cobalt (Co)	mg/L	0.0000210	0.0000150	0.0000090	8423304	0.0000230	0.0000050	8423304
Dissolved Copper (Cu)	mg/L	0.000345	0.000288	0.000342	8423304	0.000275	0.000050	8423304
Dissolved Iron (Fe)	mg/L	0.0127	0.0043	<0.0010	8423304	0.0116	0.0010	8423304
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	8423304	<0.0000050	0.0000050	8423304
Dissolved Lithium (Li)	mg/L	0.00198	0.00177	0.00225	8423304	0.00088	0.00050	8423304
Dissolved Manganese (Mn)	mg/L	0.0160	0.00450	0.000328	8423304	0.00503	0.000050	8423304
Dissolved Molybdenum (Mo)	mg/L	0.000944	0.000466	0.00121	8423304	0.000464	0.000050	8423304
Dissolved Nickel (Ni)	mg/L	0.000409	0.000250	0.000285	8423304	0.000190	0.000020	8423304
Dissolved Phosphorus (P)	mg/L	0.0026	<0.0020	<0.0020	8423304	<0.0020	0.0020	8423304
Dissolved Selenium (Se)	mg/L	0.00151	0.00109	0.000772	8425639	0.00109	0.000040	8425639
Dissolved Silicon (Si)	mg/L	3.26	3.16	3.33	8423304	3.01	0.050	8423304
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8423304	<0.0000050	0.0000050	8423304
Dissolved Strontium (Sr)	mg/L	0.184	0.176	0.154	8423304	0.161	0.000050	8423304
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8423304	<0.0000020	0.0000020	8423304
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8423304	<0.00020	0.00020	8423304
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8423304	<0.00050	0.00050	8423304
Dissolved Uranium (U)	mg/L	0.00222	0.00165	0.00173	8423304	0.00153	0.0000020	8423304
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8423304	<0.00020	0.00020	8423304

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PR5142	PR5143	PR5144		PR5145		
Sampling Date		2016/10/01 09:10	2016/10/01 11:05	2016/10/01 11:50		2016/10/02 09:30		
COC Number		08428034	08428034	08428034		08428034		
	UNITS	KZ-15	KZ-16	KZ-17	QC Batch	KZ16B	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00213	0.00020	0.00040	8423304	0.00029	0.00010	8423304
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8423304	<0.00010	0.00010	8423304
Dissolved Calcium (Ca)	mg/L	54.9	51.9	45.8	8421359	50.0	0.050	8421359
Dissolved Magnesium (Mg)	mg/L	9.89	8.40	8.31	8421359	7.08	0.050	8421359
Dissolved Potassium (K)	mg/L	1.12	1.07	1.14	8421359	0.982	0.050	8421359
Dissolved Sodium (Na)	mg/L	1.21	0.952	0.897	8421359	0.853	0.050	8421359
Dissolved Sulphur (S)	mg/L	11.0	10.0	8.8	8421359	9.4	3.0	8421359

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PR5142	PR5143	PR5144	PR5145		
Sampling Date		2016/10/01 09:10	2016/10/01 11:05	2016/10/01 11:50	2016/10/02 09:30		
COC Number		08428034	08428034	08428034	08428034		
	UNITS	KZ-15	KZ-16	KZ-17	KZ16B	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	174	158	141	147	0.50	8422169
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8424144
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0118	0.00352	0.00137	0.00270	0.00050	8422961
Total Antimony (Sb)	mg/L	0.000033	<0.000020	0.000033	<0.000020	0.000020	8422961
Total Arsenic (As)	mg/L	0.000481	0.000253	0.000236	0.000306	0.000020	8422961
Total Barium (Ba)	mg/L	0.0648	0.0629	0.0543	0.0622	0.000020	8422961
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8422961
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8422961
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8422961
Total Cadmium (Cd)	mg/L	0.0000380	0.0000150	0.0000130	0.0000220	0.0000050	8422961
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8422961
Total Cobalt (Co)	mg/L	0.0000470	0.0000310	0.0000070	0.0000270	0.0000050	8422961
Total Copper (Cu)	mg/L	0.000432	0.000301	0.000384	0.000284	0.000050	8422961
Total Iron (Fe)	mg/L	0.0844	0.0207	0.0037	0.0218	0.0010	8422961
Total Lead (Pb)	mg/L	0.0000490	0.0000140	0.0000350	<0.0000050	0.0000050	8422961
Total Lithium (Li)	mg/L	0.00187	0.00152	0.00220	0.00076	0.00050	8422961
Total Manganese (Mn)	mg/L	0.0292	0.00773	0.000661	0.00535	0.000050	8422961
Total Molybdenum (Mo)	mg/L	0.000928	0.000456	0.00121	0.000429	0.000050	8422961
Total Nickel (Ni)	mg/L	0.000485	0.000313	0.000317	0.000218	0.000020	8422961
Total Phosphorus (P)	mg/L	0.0078	<0.0020	0.0066	<0.0020	0.0020	8422961
Total Selenium (Se)	mg/L	0.00131	0.000981	0.000711	0.000921	0.000040	8422961
Total Silicon (Si)	mg/L	3.03	2.86	2.91	2.74	0.050	8422961
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8422961
Total Strontium (Sr)	mg/L	0.177	0.163	0.146	0.149	0.000050	8422961
Total Thallium (Tl)	mg/L	0.0000030	<0.0000020	<0.0000020	<0.0000020	0.0000020	8422961
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8422961
Total Titanium (Ti)	mg/L	0.00093	<0.00050	<0.00050	<0.00050	0.00050	8422961
Total Uranium (U)	mg/L	0.00220	0.00161	0.00170	0.00149	0.0000020	8422961
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8422961
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PR5142	PR5143	PR5144	PR5145		
Sampling Date		2016/10/01 09:10	2016/10/01 11:05	2016/10/01 11:50	2016/10/02 09:30		
COC Number		08428034	08428034	08428034	08428034		
	UNITS	KZ-15	KZ-16	KZ-17	KZ16B	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00563	0.00064	0.00103	0.00080	0.00010	8422961
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8422961
Total Calcium (Ca)	mg/L	53.4	49.9	43.4	47.5	0.050	8421360
Total Magnesium (Mg)	mg/L	9.98	8.08	7.86	6.97	0.050	8421360
Total Potassium (K)	mg/L	1.11	1.03	1.09	0.957	0.050	8421360
Total Sodium (Na)	mg/L	1.02	0.939	0.880	0.842	0.050	8421360
Total Sulphur (S)	mg/L	10.1	8.7	7.8	8.3	3.0	8421360
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PR5139	PR5140	PR5141		
Sampling Date		2016/09/30 15:30	2016/09/30 17:05	2016/09/30 12:15		
COC Number		08428034	08428034	08428034		
	UNITS	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	228	202	199	0.50	8422169
Elements						
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000023	0.0000020	8424144
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.0128	0.0178	0.0360	0.0030	8423005
Total Antimony (Sb)	mg/L	0.000091	0.000051	0.000077	0.000020	8423005
Total Arsenic (As)	mg/L	0.00220	0.00143	0.00107	0.000020	8423005
Total Barium (Ba)	mg/L	0.0581	0.0639	0.0640	0.000050	8423005
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8423005
Total Bismuth (Bi)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8423005
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	8423005
Total Cadmium (Cd)	mg/L	0.0000100	0.0000190	0.0000220	0.0000050	8423005
Total Chromium (Cr)	mg/L	0.00013	0.00013	0.00015	0.00010	8423005
Total Cobalt (Co)	mg/L	0.000089	0.000079	0.000086	0.000010	8423005
Total Copper (Cu)	mg/L	0.00060	0.00069	0.00084	0.00010	8423005
Total Iron (Fe)	mg/L	0.429	0.243	0.229	0.0050	8423005
Total Lead (Pb)	mg/L	0.000023	0.000036	0.000069	0.000020	8423005
Total Lithium (Li)	mg/L	0.00338	0.00277	0.00289	0.00050	8423005
Total Manganese (Mn)	mg/L	0.0724	0.0504	0.0255	0.00010	8423005
Total Molybdenum (Mo)	mg/L	0.00140	0.00103	0.000982	0.000050	8423005
Total Nickel (Ni)	mg/L	0.00208	0.00125	0.00121	0.00010	8423005
Total Phosphorus (P)	mg/L	0.0156	0.0141	0.0124	0.0050	8423005
Total Selenium (Se)	mg/L	0.000811	0.00104	0.000846	0.000040	8423005
Total Silicon (Si)	mg/L	4.26	3.53	3.83	0.050	8423005
Total Silver (Ag)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8423005
Total Strontium (Sr)	mg/L	0.177	0.209	0.187	0.000050	8423005
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8423005
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8423005
Total Titanium (Ti)	mg/L	<0.0020	<0.0020	<0.0020	0.0020	8423005
Total Uranium (U)	mg/L	0.00276	0.00225	0.00229	0.0000050	8423005
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8423005
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		PR5139	PR5140	PR5141		
Sampling Date		2016/09/30 15:30	2016/09/30 17:05	2016/09/30 12:15		
COC Number		08428034	08428034	08428034		
	UNITS	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0020	0.0033	0.0019	0.0010	8423005
Total Zirconium (Zr)	mg/L	0.00011	<0.00010	<0.00010	0.00010	8423005
Total Calcium (Ca)	mg/L	57.4	53.0	54.3	0.25	8421360
Total Magnesium (Mg)	mg/L	20.5	16.9	15.4	0.25	8421360
Total Potassium (K)	mg/L	1.34	1.44	1.17	0.25	8421360
Total Sodium (Na)	mg/L	1.18	1.28	1.15	0.25	8421360
Total Sulphur (S)	mg/L	12.9	14.6	11.5	3.0	8421360
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PR5139
Sample ID: KZ-21
Matrix: Water

Collected: 2016/09/30
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8423014	N/A	2016/10/06	Name Redacted
Alkalinity - Water	AT/ALK	8423400	2016/10/05	2016/10/05	
Chloride by Automated Colourimetry	KONE/COL	8424712	N/A	2016/10/06	
Cyanide SAD (strong acid dissociable)	TECH/COL	8423260	N/A	2016/10/05	
Cyanide WAD (weak acid dissociable)	TECH/COL	8423271	N/A	2016/10/05	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8424813	N/A	2016/10/06	
Conductance - water	AT/ALK	8423402	N/A	2016/10/05	
Fluoride	ISE/ISE	8423457	N/A	2016/10/05	
Hardness Total (calculated as CaCO3)	CALC	8422169	N/A	2016/10/06	
Hardness (calculated as CaCO3)	CALC	8422091	N/A	2016/10/06	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8424135	N/A	2016/10/06	
Mercury (Total-LowLevel) by CVAF	CV/AF	8424144	2016/10/06	2016/10/06	
Ion Balance	CALC	8422092	N/A	2016/10/06	
Sum of cations, anions	CALC	8422093	N/A	2016/10/06	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8421359	N/A	2016/10/06	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8423304	N/A	2016/10/06	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8423005	2016/10/05	2016/10/06	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8421360	N/A	2016/10/06	
Ammonia-N (Preserved)	KONE/COL	8424854	N/A	2016/10/06	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8424477	N/A	2016/10/05	
Nitrite (N) (low level)	TRAA/COL	8424483	N/A	2016/10/05	
Nitrogen - Nitrate (as N)	CALC	8421618	N/A	2016/10/06	
Filter and HNO3 Preserve for Metals	ICP	8422689	N/A	2016/10/05	
pH Water	AT/ALK	8423401	N/A	2016/10/05	
Sulphate by Automated Colourimetry	KONE/COL	8424715	N/A	2016/10/06	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8423101	2016/10/05	2016/10/05	
Total Phosphorus - unpreserved	KONE/COL	8423108	N/A	2016/10/05	
Total Suspended Solids-Low Level	BAL/BAL	8422714	2016/10/05	2016/10/06	

Maxxam ID: PR5139 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2016/09/30
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8423260	N/A	2016/10/05	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8423271	N/A	2016/10/05	
Fluoride	ISE/ISE	8423457	N/A	2016/10/05	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8423304	N/A	2016/10/06	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PR5140
Sample ID: KZ-22
Matrix: Water

Collected: 2016/09/30
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8423018	N/A	2016/10/06	Name Redacted
Alkalinity - Water	AT/ALK	8423403	2016/10/05	2016/10/05	
Chloride by Automated Colourimetry	KONE/COL	8424712	N/A	2016/10/06	
Cyanide SAD (strong acid dissociable)	TECH/COL	8423260	N/A	2016/10/05	
Cyanide WAD (weak acid dissociable)	TECH/COL	8423271	N/A	2016/10/05	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8424812	N/A	2016/10/06	
Conductance - water	AT/ALK	8423411	N/A	2016/10/05	
Fluoride	ISE/ISE	8423457	N/A	2016/10/05	
Hardness Total (calculated as CaCO3)	CALC	8422169	N/A	2016/10/06	
Hardness (calculated as CaCO3)	CALC	8422091	N/A	2016/10/06	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8424150	N/A	2016/10/06	
Mercury (Total-LowLevel) by CVAF	CV/AF	8424144	2016/10/06	2016/10/06	
Ion Balance	CALC	8422092	N/A	2016/10/06	
Sum of cations, anions	CALC	8422093	N/A	2016/10/06	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8421359	N/A	2016/10/06	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8423304	N/A	2016/10/06	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8423005	2016/10/05	2016/10/06	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8421360	N/A	2016/10/06	
Ammonia-N (Preserved)	KONE/COL	8424854	N/A	2016/10/06	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8424488	N/A	2016/10/05	
Nitrite (N) (low level)	TRAA/COL	8424495	N/A	2016/10/05	
Nitrogen - Nitrate (as N)	CALC	8421618	N/A	2016/10/06	
Filter and HNO3 Preserve for Metals	ICP	8422689	N/A	2016/10/05	
pH Water	AT/ALK	8423410	N/A	2016/10/05	
Sulphate by Automated Colourimetry	KONE/COL	8424715	N/A	2016/10/06	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8423101	2016/10/05	2016/10/05	
Total Phosphorus - unpreserved	KONE/COL	8423112	N/A	2016/10/05	
Total Suspended Solids-Low Level	BAL/BAL	8422714	2016/10/05	2016/10/06	

Maxxam ID: PR5140 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2016/09/30
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - unpreserved	KONE/COL	8423112	N/A	2016/10/05	Name Redacted

Maxxam ID: PR5141
Sample ID: KZ-26
Matrix: Water

Collected: 2016/09/30
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8423018	N/A	2016/10/06	Name Redacted
Alkalinity - Water	AT/ALK	8423403	2016/10/05	2016/10/05	
Chloride by Automated Colourimetry	KONE/COL	8424712	N/A	2016/10/06	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PR5141
Sample ID: KZ-26
Matrix: Water

Collected: 2016/09/30
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8423260	N/A	2016/10/05	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8423271	N/A	2016/10/05	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8424813	N/A	2016/10/06	
Conductance - water	AT/ALK	8423411	N/A	2016/10/05	
Fluoride	ISE/ISE	8423457	N/A	2016/10/05	
Hardness Total (calculated as CaCO3)	CALC	8422169	N/A	2016/10/06	
Hardness (calculated as CaCO3)	CALC	8422091	N/A	2016/10/06	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8424150	N/A	2016/10/06	
Mercury (Total-LowLevel) by CVAF	CV/AF	8424144	2016/10/06	2016/10/06	
Ion Balance	CALC	8422092	N/A	2016/10/06	
Sum of cations, anions	CALC	8422093	N/A	2016/10/06	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8421359	N/A	2016/10/06	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8423304	N/A	2016/10/06	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8423005	2016/10/05	2016/10/06	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8421360	N/A	2016/10/06	
Ammonia-N (Preserved)	KONE/COL	8424854	N/A	2016/10/06	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8424488	N/A	2016/10/05	
Nitrite (N) (low level)	TRAA/COL	8424495	N/A	2016/10/05	
Nitrogen - Nitrate (as N)	CALC	8421618	N/A	2016/10/06	
Filter and HNO3 Preserve for Metals	ICP	8422689	N/A	2016/10/05	
pH Water	AT/ALK	8423410	N/A	2016/10/05	
Sulphate by Automated Colourimetry	KONE/COL	8424715	N/A	2016/10/06	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8423101	2016/10/05	2016/10/05	
Total Phosphorus - unpreserved	KONE/COL	8423108	N/A	2016/10/05	
Total Suspended Solids-Low Level	BAL/BAL	8422714	2016/10/05	2016/10/06	

Maxxam ID: PR5141 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2016/09/30
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8423101	2016/10/05	2016/10/05	Name Redacted

Maxxam ID: PR5142
Sample ID: KZ-15
Matrix: Water

Collected: 2016/10/01
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8423018	N/A	2016/10/06	Name Redacted
Alkalinity - Water	AT/ALK	8423403	2016/10/05	2016/10/05	
Chloride by Automated Colourimetry	KONE/COL	8424712	N/A	2016/10/06	
Cyanide SAD (strong acid dissociable)	TECH/COL	8423260	N/A	2016/10/05	
Cyanide WAD (weak acid dissociable)	TECH/COL	8423271	N/A	2016/10/05	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8424813	N/A	2016/10/06	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PR5142
Sample ID: KZ-15
Matrix: Water

Collected: 2016/10/01
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductance - water	AT/ALK	8423411	N/A	2016/10/05	Name Redacted
Fluoride	ISE/ISE	8423457	N/A	2016/10/05	
Hardness Total (calculated as CaCO3)	CALC	8422169	N/A	2016/10/06	
Hardness (calculated as CaCO3)	CALC	8422091	N/A	2016/10/06	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8424135	N/A	2016/10/06	
Mercury (Total-LowLevel) by CVAF	CV/AF	8424144	2016/10/06	2016/10/06	
Ion Balance	CALC	8422092	N/A	2016/10/06	
Sum of cations, anions	CALC	8422093	N/A	2016/10/06	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8421359	N/A	2016/10/06	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8423304	N/A	2016/10/06	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8421360	N/A	2016/10/06	
Elements by ICPMS Low Level (total)	ICP/CRCM	8422961	N/A	2016/10/06	
Ammonia-N (Preserved)	KONE/COL	8424854	N/A	2016/10/06	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8424488	N/A	2016/10/05	
Nitrite (N) (low level)	TRAA/COL	8424495	N/A	2016/10/05	
Nitrogen - Nitrate (as N)	CALC	8421618	N/A	2016/10/06	
Filter and HNO3 Preserve for Metals	ICP	8422689	N/A	2016/10/05	
pH Water	AT/ALK	8423410	N/A	2016/10/05	
Sulphate by Automated Colourimetry	KONE/COL	8424715	N/A	2016/10/06	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8423101	2016/10/05	2016/10/05	
Total Phosphorus - unpreserved	KONE/COL	8423108	N/A	2016/10/05	
Total Suspended Solids-Low Level	BAL/BAL	8422714	2016/10/05	2016/10/06	

Maxxam ID: PR5142 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2016/10/01
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8423403	2016/10/05	2016/10/05	Name Redacted
Conductance - water	AT/ALK	8423411	N/A	2016/10/05	
Elements by ICPMS Low Level (total)	ICP/CRCM	8422961	N/A	2016/10/06	
pH Water	AT/ALK	8423410	N/A	2016/10/05	

Maxxam ID: PR5143
Sample ID: KZ-16
Matrix: Water

Collected: 2016/10/01
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8423018	N/A	2016/10/06	Name Redacted
Alkalinity - Water	AT/ALK	8423403	2016/10/05	2016/10/05	
Chloride by Automated Colourimetry	KONE/COL	8424712	N/A	2016/10/06	
Cyanide SAD (strong acid dissociable)	TECH/COL	8423260	N/A	2016/10/05	
Cyanide WAD (weak acid dissociable)	TECH/COL	8423271	N/A	2016/10/05	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8424813	N/A	2016/10/06	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PR5143
Sample ID: KZ-16
Matrix: Water

Collected: 2016/10/01
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductance - water	AT/ALK	8423411	N/A	2016/10/05	Name Redacted
Fluoride	ISE/ISE	8423457	N/A	2016/10/05	
Hardness Total (calculated as CaCO3)	CALC	8422169	N/A	2016/10/06	
Hardness (calculated as CaCO3)	CALC	8422091	N/A	2016/10/06	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8424135	N/A	2016/10/06	
Mercury (Total-LowLevel) by CVAF	CV/AF	8424144	2016/10/06	2016/10/06	
Ion Balance	CALC	8422092	N/A	2016/10/06	
Sum of cations, anions	CALC	8422093	N/A	2016/10/06	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8421359	N/A	2016/10/06	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8423304	N/A	2016/10/06	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8421360	N/A	2016/10/06	
Elements by ICPMS Low Level (total)	ICP/CRCM	8422961	N/A	2016/10/06	
Ammonia-N (Preserved)	KONE/COL	8424857	N/A	2016/10/06	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8424488	N/A	2016/10/05	
Nitrite (N) (low level)	TRAA/COL	8424495	N/A	2016/10/05	
Nitrogen - Nitrate (as N)	CALC	8421618	N/A	2016/10/06	
Filter and HNO3 Preserve for Metals	ICP	8422689	N/A	2016/10/05	
pH Water	AT/ALK	8423410	N/A	2016/10/05	
Sulphate by Automated Colourimetry	KONE/COL	8424715	N/A	2016/10/06	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8423101	2016/10/05	2016/10/05	
Total Phosphorus - unpreserved	KONE/COL	8423112	N/A	2016/10/05	
Total Suspended Solids-Low Level	BAL/BAL	8422714	2016/10/05	2016/10/06	

Maxxam ID: PR5143 Dup
Sample ID: KZ-16
Matrix: Water

Collected: 2016/10/01
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8424813	N/A	2016/10/06	Name Redacted
Ammonia-N (Preserved)	KONE/COL	8424857	N/A	2016/10/06	

Maxxam ID: PR5144
Sample ID: KZ-17
Matrix: Water

Collected: 2016/10/01
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8423018	N/A	2016/10/06	Name Redacted
Alkalinity - Water	AT/ALK	8423403	2016/10/05	2016/10/05	
Chloride by Automated Colourimetry	KONE/COL	8424712	N/A	2016/10/06	
Cyanide SAD (strong acid dissociable)	TECH/COL	8423260	N/A	2016/10/05	
Cyanide WAD (weak acid dissociable)	TECH/COL	8423271	N/A	2016/10/05	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8424812	N/A	2016/10/06	
Conductance - water	AT/ALK	8423411	N/A	2016/10/05	
Fluoride	ISE/ISE	8423457	N/A	2016/10/05	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PR5144
Sample ID: KZ-17
Matrix: Water

Collected: 2016/10/01
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness Total (calculated as CaCO3)	CALC	8422169	N/A	2016/10/06	Name Redacted
Hardness (calculated as CaCO3)	CALC	8422091	N/A	2016/10/06	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8424135	N/A	2016/10/06	
Mercury (Total-LowLevel) by CVAF	CV/AF	8424144	2016/10/06	2016/10/06	
Ion Balance	CALC	8422092	N/A	2016/10/06	
Sum of cations, anions	CALC	8422093	N/A	2016/10/06	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8421359	N/A	2016/10/06	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8423304	N/A	2016/10/06	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8421360	N/A	2016/10/06	
Elements by ICPMS Low Level (total)	ICP/CRCM	8422961	N/A	2016/10/06	
Ammonia-N (Preserved)	KONE/COL	8424854	N/A	2016/10/06	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8424488	N/A	2016/10/05	
Nitrite (N) (low level)	TRAA/COL	8424495	N/A	2016/10/05	
Nitrogen - Nitrate (as N)	CALC	8421618	N/A	2016/10/06	
Filter and HNO3 Preserve for Metals	ICP	8422689	N/A	2016/10/05	
pH Water	AT/ALK	8423410	N/A	2016/10/05	
Sulphate by Automated Colourimetry	KONE/COL	8424715	N/A	2016/10/06	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8423101	2016/10/05	2016/10/05	
Total Phosphorus - unpreserved	KONE/COL	8423112	N/A	2016/10/05	
Total Suspended Solids-Low Level	BAL/BAL	8422714	2016/10/05	2016/10/06	

Maxxam ID: PR5144 Dup
Sample ID: KZ-17
Matrix: Water

Collected: 2016/10/01
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8424812	N/A	2016/10/06	Name Redacted

Maxxam ID: PR5145
Sample ID: KZ16B
Matrix: Water

Collected: 2016/10/02
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8423018	N/A	2016/10/06	Name Redacted
Alkalinity - Water	AT/ALK	8423403	2016/10/05	2016/10/05	
Chloride by Automated Colourimetry	KONE/COL	8424712	N/A	2016/10/06	
Cyanide SAD (strong acid dissociable)	TECH/COL	8423260	N/A	2016/10/05	
Cyanide WAD (weak acid dissociable)	TECH/COL	8423271	N/A	2016/10/05	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8424812	N/A	2016/10/06	
Conductance - water	AT/ALK	8423411	N/A	2016/10/05	
Fluoride	ISE/ISE	8423457	N/A	2016/10/05	
Hardness Total (calculated as CaCO3)	CALC	8422169	N/A	2016/10/06	
Hardness (calculated as CaCO3)	CALC	8422091	N/A	2016/10/06	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8424150	N/A	2016/10/06	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: PR5145
Sample ID: KZ16B
Matrix: Water

Collected: 2016/10/02
Shipped:
Received: 2016/10/03

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8424144	2016/10/06	2016/10/06	Name Redacted
Ion Balance	CALC	8422092	N/A	2016/10/06	
Sum of cations, anions	CALC	8422093	N/A	2016/10/06	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8421359	N/A	2016/10/06	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8423304	N/A	2016/10/06	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8421360	N/A	2016/10/06	
Elements by ICPMS Low Level (total)	ICP/CRCM	8422961	N/A	2016/10/06	
Ammonia-N (Preserved)	KONE/COL	8424854	N/A	2016/10/06	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8424488	N/A	2016/10/05	
Nitrite (N) (low level)	TRAA/COL	8424495	N/A	2016/10/05	
Nitrogen - Nitrate (as N)	CALC	8421618	N/A	2016/10/06	
Filter and HNO3 Preserve for Metals	ICP	8422689	N/A	2016/10/05	
pH Water	AT/ALK	8423410	N/A	2016/10/05	
Sulphate by Automated Colourimetry	KONE/COL	8424715	N/A	2016/10/06	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8423101	2016/10/05	2016/10/05	
Total Phosphorus - unpreserved	KONE/COL	8423112	N/A	2016/10/05	
Total Suspended Solids-Low Level	BAL/BAL	8422714	2016/10/05	2016/10/06	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	5.3°C
Package 2	6.0°C

Samples KZ-21, KZ-22 and KZ-26 were received at the analytical lab past recommended hold time for Nitrate, Nitrite, Total Phosphorus and Dissolved Phosphorus: Samples KZ-15, KZ-16, and KZ-17 were received at the analytical labon the hold time expiry date which did not allow sufficient time for preparation and analysis for Nitrate, Nitrite, Total Phosphorus and Dissolved Phosphorus.

Sample PR5139-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PR5140-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PR5141-01 : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample PR5139, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample PR5140, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample PR5141, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample PR5142, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample PR5143, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample PR5144, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample PR5145, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8422714	Total Suspended Solids	2016/10/06			102	80 - 120	<1.0	mg/L		
8422961	Total Aluminum (Al)	2016/10/06	99	80 - 120	111	80 - 120	<0.00050	mg/L	4.2	20
8422961	Total Antimony (Sb)	2016/10/06	103	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8422961	Total Arsenic (As)	2016/10/06	106	80 - 120	95	80 - 120	<0.000020	mg/L	8.6	20
8422961	Total Barium (Ba)	2016/10/06	NC	80 - 120	100	80 - 120	<0.000020	mg/L	2.3	20
8422961	Total Beryllium (Be)	2016/10/06	102	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
8422961	Total Bismuth (Bi)	2016/10/06	96	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8422961	Total Boron (B)	2016/10/06	101	80 - 120	98	80 - 120	<0.010	mg/L	NC	20
8422961	Total Cadmium (Cd)	2016/10/06	100	80 - 120	99	80 - 120	<0.0000050	mg/L	2.7	20
8422961	Total Chromium (Cr)	2016/10/06	100	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
8422961	Total Cobalt (Co)	2016/10/06	98	80 - 120	98	80 - 120	<0.0000050	mg/L	12	20
8422961	Total Copper (Cu)	2016/10/06	94	80 - 120	96	80 - 120	<0.000050	mg/L	1.6	20
8422961	Total Iron (Fe)	2016/10/06	NC	80 - 120	97	80 - 120	<0.0010	mg/L	1.1	20
8422961	Total Lead (Pb)	2016/10/06	98	80 - 120	98	80 - 120	<0.0000050	mg/L	2.0	20
8422961	Total Lithium (Li)	2016/10/06	101	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8422961	Total Manganese (Mn)	2016/10/06	NC	80 - 120	98	80 - 120	<0.000050	mg/L	0.82	20
8422961	Total Molybdenum (Mo)	2016/10/06	NC	80 - 120	97	80 - 120	<0.000050	mg/L	0.11	20
8422961	Total Nickel (Ni)	2016/10/06	97	80 - 120	98	80 - 120	<0.000020	mg/L	6.0	20
8422961	Total Phosphorus (P)	2016/10/06					0.0023, RDL=0.0020	mg/L	NC	20
8422961	Total Selenium (Se)	2016/10/06	106	80 - 120	95	80 - 120	<0.000040	mg/L	5.6	20
8422961	Total Silicon (Si)	2016/10/06					<0.050	mg/L	0.098	20
8422961	Total Silver (Ag)	2016/10/06	109	80 - 120	91	80 - 120	<0.0000050	mg/L	NC	20
8422961	Total Strontium (Sr)	2016/10/06	NC	80 - 120	90	80 - 120	<0.000050	mg/L	1.7	20
8422961	Total Thallium (Tl)	2016/10/06	88	80 - 120	99	80 - 120	0.0000020, RDL=0.0000020	mg/L	NC	20
8422961	Total Tin (Sn)	2016/10/06	107	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8422961	Total Titanium (Ti)	2016/10/06	91	80 - 120	81	80 - 120	<0.00050	mg/L	NC	20
8422961	Total Uranium (U)	2016/10/06	102	80 - 120	97	80 - 120	<0.0000020	mg/L	0.91	20
8422961	Total Vanadium (V)	2016/10/06	102	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
8422961	Total Zinc (Zn)	2016/10/06	NC	80 - 120	96	80 - 120	<0.00010	mg/L	0.16	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8422961	Total Zirconium (Zr)	2016/10/06					<0.00010	mg/L	NC	20
8423005	Total Aluminum (Al)	2016/10/06	103	80 - 120	113	80 - 120	<0.0030	mg/L	NC	20
8423005	Total Antimony (Sb)	2016/10/06	100	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8423005	Total Arsenic (As)	2016/10/06	108	80 - 120	108	80 - 120	<0.000020	mg/L	2.8	20
8423005	Total Barium (Ba)	2016/10/06	NC	80 - 120	103	80 - 120	<0.000050	mg/L	1.2	20
8423005	Total Beryllium (Be)	2016/10/06	105	80 - 120	108	80 - 120	<0.000010	mg/L	NC	20
8423005	Total Bismuth (Bi)	2016/10/06	92	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8423005	Total Boron (B)	2016/10/06	NC	80 - 120	102	80 - 120	<0.010	mg/L	2.4	20
8423005	Total Cadmium (Cd)	2016/10/06	101	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8423005	Total Chromium (Cr)	2016/10/06	100	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
8423005	Total Cobalt (Co)	2016/10/06	98	80 - 120	98	80 - 120	<0.000010	mg/L	2.9	20
8423005	Total Copper (Cu)	2016/10/06	95	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8423005	Total Iron (Fe)	2016/10/06	NC	80 - 120	99	80 - 120	<0.0050	mg/L	0.024	20
8423005	Total Lead (Pb)	2016/10/06	96	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8423005	Total Lithium (Li)	2016/10/06	NC	80 - 120	96	80 - 120	<0.00050	mg/L	1.8	20
8423005	Total Manganese (Mn)	2016/10/06	NC	80 - 120	100	80 - 120	<0.00010	mg/L	3.2	20
8423005	Total Molybdenum (Mo)	2016/10/06	103	80 - 120	99	80 - 120	<0.000050	mg/L	2.5	20
8423005	Total Nickel (Ni)	2016/10/06	95	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8423005	Total Phosphorus (P)	2016/10/06					<0.0050	mg/L		
8423005	Total Selenium (Se)	2016/10/06	110	80 - 120	114	80 - 120	<0.000040	mg/L	NC	20
8423005	Total Silicon (Si)	2016/10/06					<0.050	mg/L	2.7	20
8423005	Total Silver (Ag)	2016/10/06	110	80 - 120	101	80 - 120	<0.000010	mg/L	NC	20
8423005	Total Strontium (Sr)	2016/10/06	NC	80 - 120	95	80 - 120	<0.000050	mg/L	1.0	20
8423005	Total Thallium (Tl)	2016/10/06	92	80 - 120	81	80 - 120	<0.0000020	mg/L	NC	20
8423005	Total Tin (Sn)	2016/10/06	107	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
8423005	Total Titanium (Ti)	2016/10/06	84	80 - 120	96	80 - 120	<0.0020	mg/L	NC	20
8423005	Total Uranium (U)	2016/10/06	102	80 - 120	94	80 - 120	<0.0000050	mg/L	4.1	20
8423005	Total Vanadium (V)	2016/10/06	103	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8423005	Total Zinc (Zn)	2016/10/06	95	80 - 120	117	80 - 120	<0.0010	mg/L	NC	20
8423005	Total Zirconium (Zr)	2016/10/06					<0.00010	mg/L	NC	20
8423014	Acidity (pH 4.5)	2016/10/06					<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8423014	Acidity (pH 8.3)	2016/10/06			98	80 - 120	<0.50	mg/L	NC	20
8423018	Acidity (pH 4.5)	2016/10/06					<0.50	mg/L	NC	20
8423018	Acidity (pH 8.3)	2016/10/06			99	80 - 120	<0.50	mg/L	NC	20
8423101	Dissolved Phosphorus (P)	2016/10/05	101	80 - 120	102	80 - 120	<0.0020	mg/L	NC	20
8423108	Total Phosphorus (P)	2016/10/05	95	80 - 120	101	80 - 120	<0.0020	mg/L	6.6	20
8423112	Total Phosphorus (P)	2016/10/05	107	80 - 120	99	80 - 120	<0.0020	mg/L	NC	20
8423260	Strong Acid Dissoc. Cyanide (CN)	2016/10/05	99	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8423271	Weak Acid Dissoc. Cyanide (CN)	2016/10/05	101	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8423304	Dissolved Aluminum (Al)	2016/10/06	106	80 - 120	113	80 - 120	<0.00050	mg/L	NC	20
8423304	Dissolved Antimony (Sb)	2016/10/06	102	80 - 120	95	80 - 120	<0.000020	mg/L	NC	20
8423304	Dissolved Arsenic (As)	2016/10/06	108	80 - 120	97	80 - 120	<0.000020	mg/L	0.071	20
8423304	Dissolved Barium (Ba)	2016/10/06	NC	80 - 120	98	80 - 120	<0.000020	mg/L	1.9	20
8423304	Dissolved Beryllium (Be)	2016/10/06	106	80 - 120	95	80 - 120	<0.000010	mg/L	NC	20
8423304	Dissolved Bismuth (Bi)	2016/10/06	89	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8423304	Dissolved Boron (B)	2016/10/06	98	80 - 120	95	80 - 120	<0.010	mg/L	NC	20
8423304	Dissolved Cadmium (Cd)	2016/10/06	103	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8423304	Dissolved Chromium (Cr)	2016/10/06	92	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
8423304	Dissolved Cobalt (Co)	2016/10/06	89	80 - 120	97	80 - 120	<0.0000050	mg/L	18	20
8423304	Dissolved Copper (Cu)	2016/10/06	86	80 - 120	98	80 - 120	<0.000050	mg/L	3.9	20
8423304	Dissolved Iron (Fe)	2016/10/06	97	80 - 120	99	80 - 120	<0.0010	mg/L	0.51	20
8423304	Dissolved Lead (Pb)	2016/10/06	90	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8423304	Dissolved Lithium (Li)	2016/10/06	98	80 - 120	96	80 - 120	<0.00050	mg/L	5.9	20
8423304	Dissolved Manganese (Mn)	2016/10/06	NC	80 - 120	97	80 - 120	<0.000050	mg/L	1.1	20
8423304	Dissolved Molybdenum (Mo)	2016/10/06	NC	80 - 120	99	80 - 120	<0.000050	mg/L	0.35	20
8423304	Dissolved Nickel (Ni)	2016/10/06	88	80 - 120	98	80 - 120	<0.000020	mg/L	4.4	20
8423304	Dissolved Phosphorus (P)	2016/10/06					<0.0020	mg/L	NC	20
8423304	Dissolved Silicon (Si)	2016/10/06					<0.050	mg/L	1.0	20
8423304	Dissolved Silver (Ag)	2016/10/06	109	80 - 120	77 (1)	80 - 120	<0.0000050	mg/L	NC	20
8423304	Dissolved Strontium (Sr)	2016/10/06	NC	80 - 120	100	80 - 120	<0.000050	mg/L	4.0	20
8423304	Dissolved Thallium (Tl)	2016/10/06	81	80 - 120	99	80 - 120	0.0000020, RDL=0.0000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8423304	Dissolved Tin (Sn)	2016/10/06	97	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8423304	Dissolved Titanium (Ti)	2016/10/06	91	80 - 120	82	80 - 120	<0.00050	mg/L	NC	20
8423304	Dissolved Uranium (U)	2016/10/06	92	80 - 120	97	80 - 120	<0.0000020	mg/L	1.6	20
8423304	Dissolved Vanadium (V)	2016/10/06	95	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
8423304	Dissolved Zinc (Zn)	2016/10/06	115	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
8423304	Dissolved Zirconium (Zr)	2016/10/06					<0.00010	mg/L	NC	20
8423400	Alkalinity (PP as CaCO3)	2016/10/05					<0.50	mg/L	NC	20
8423400	Alkalinity (Total as CaCO3)	2016/10/05	NC	80 - 120	97	80 - 120	<0.50	mg/L	0.91	20
8423400	Bicarbonate (HCO3)	2016/10/05					<0.50	mg/L	0.91	20
8423400	Carbonate (CO3)	2016/10/05					<0.50	mg/L	NC	20
8423400	Hydroxide (OH)	2016/10/05					<0.50	mg/L	NC	20
8423401	pH	2016/10/05			102	97 - 103			0.97	N/A
8423402	Conductivity	2016/10/05			99	80 - 120	<1.0	uS/cm		
8423403	Alkalinity (PP as CaCO3)	2016/10/05					<0.50	mg/L	NC	20
8423403	Alkalinity (Total as CaCO3)	2016/10/05	NC	80 - 120	96	80 - 120	<0.50	mg/L	0.31	20
8423403	Bicarbonate (HCO3)	2016/10/05					<0.50	mg/L	0.31	20
8423403	Carbonate (CO3)	2016/10/05					<0.50	mg/L	NC	20
8423403	Hydroxide (OH)	2016/10/05					<0.50	mg/L	NC	20
8423410	pH	2016/10/05			101	97 - 103			0.24	N/A
8423411	Conductivity	2016/10/05			100	80 - 120	<1.0	uS/cm	0.87	20
8423457	Fluoride (F)	2016/10/05			102	80 - 120	0.010, RDL=0.010	mg/L	0	20
8424135	Dissolved Mercury (Hg)	2016/10/06	90	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8424144	Total Mercury (Hg)	2016/10/06	92	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	20
8424150	Dissolved Mercury (Hg)	2016/10/06	92	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8424477	Nitrate plus Nitrite (N)	2016/10/05	106	80 - 120	103	80 - 120	<0.0020	mg/L	NC	25
8424483	Nitrite (N)	2016/10/05	99	80 - 120	93	80 - 120	<0.0020	mg/L	NC	25
8424488	Nitrate plus Nitrite (N)	2016/10/05	NC	80 - 120	103	80 - 120	<0.0020	mg/L	0.30	25
8424495	Nitrite (N)	2016/10/05	99	80 - 120	95	80 - 120	<0.0020	mg/L	NC	25
8424712	Dissolved Chloride (Cl)	2016/10/06	99	80 - 120	94	80 - 120	<0.50	mg/L	0.77	20
8424715	Dissolved Sulphate (SO4)	2016/10/06	104	80 - 120	92	80 - 120	<0.50	mg/L	2.4	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8424812	Dissolved Organic Carbon (C)	2016/10/06	105	80 - 120	113	80 - 120	<0.50	mg/L	NC	20
8424813	Dissolved Organic Carbon (C)	2016/10/06	107	80 - 120	115	80 - 120	<0.50	mg/L	NC	20
8424854	Total Ammonia (N)	2016/10/06	NC	80 - 120	100	80 - 120	<0.0050	mg/L	2.5	20
8424857	Total Ammonia (N)	2016/10/06	NC	80 - 120	101	80 - 120	<0.0050	mg/L	1.4	20
8425639	Dissolved Selenium (Se)	2016/10/07	108	80 - 120	95	80 - 120	<0.000040	mg/L	0	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

(1) Blank Spike outside acceptance criteria (10% of analytes failure allowed).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B687189
Report Date: 2016/10/11

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Name Redacted Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC: 08428034

BBY FCD-00077/05

Page 1 of 1

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-21		30-Sep-15	15:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3	KZ-22		30-Sep-16	17:05	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
4	KZ-26		30-Sep-16	12:15	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5																						
6																						
7	KZ-15		01-Oct-16	9:10	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
8	KZ-16		01-Oct-16	11:05	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
9	KZ-17		01-Oct-16	11:50	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
10	KZ-16B		02-Oct-16	9:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		11.2
NA		13.1

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Signature Redacted @ 15:15
2016-10-03

TEMP: 6 / 5 / 5 → 1 (cock #)
7 6 5 → 2

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	2016/10/03	11:30	Signature Redacted	2016/10/04	13:35

B687189_COC

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08428205, 08428206, 08428211

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/10/26
Report #: R2289955
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B688838
Received: 2016/10/06, 09:50

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	5	N/A	2016/10/08	BBY6SOP-00037	SM 22 2310 B m
Acidity pH 4.5 & pH 8.3 (as CaCO3)	10	N/A	2016/10/13	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	15	2016/10/08	2016/10/08	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	10	N/A	2016/10/11	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	10	N/A	2016/10/12	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	10	N/A	2016/10/12	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	10	N/A	2016/10/12	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	15	N/A	2016/10/08	BBY6SOP-00026	SM 22 2510 B m
Fluoride	10	N/A	2016/10/11	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	9	N/A	2016/10/12	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	1	N/A	2016/10/13	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	14	N/A	2016/10/12	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	1	N/A	2016/10/13	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	10	N/A	2016/10/11	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Dissolved-LowLevel) by CVAF	5	N/A	2016/10/12	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	6	2016/10/11	2016/10/11	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	3	2016/10/12	2016/10/12	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	1	2016/10/26	2016/10/26	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	9	N/A	2016/10/12	BBY WI-00033	Auto Calc
Ion Balance	1	N/A	2016/10/13	BBY WI-00033	Auto Calc
Sum of cations, anions	9	N/A	2016/10/12	Calc	
Sum of cations, anions	1	N/A	2016/10/13	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	14	N/A	2016/10/12	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2016/10/13	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	15	N/A	2016/10/12	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	9	N/A	2016/10/12	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2016/10/13	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	10	N/A	2016/10/12	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	10	N/A	2016/10/11	BBY6SOP-00009	SM 22 4500-NH3- G m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08428205, 08428206, 08428211

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/10/26
Report #: R2289955
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B688838
Received: 2016/10/06, 09:50

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrate+Nitrite (N) (low level)	10	N/A	2016/10/08	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	10	N/A	2016/10/08	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	10	N/A	2016/10/12	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	14	N/A	2016/10/11	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	15	N/A	2016/10/08	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	10	N/A	2016/10/11	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	10	2016/10/11	2016/10/12	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	10	N/A	2016/10/12	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	10	2016/10/08	2016/10/11	BBY6SOP-00034	SM 22 2540 D

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PS4994		PS4995		PS4996		
Sampling Date		2016/10/04 13:47		2016/10/03 13:30		2016/10/03 12:50		
COC Number		08428205		08428205		08428205		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.3	8426132	3.2	8432218	3.0	N/A	8426132
Cation Sum	meq/L	2.2	8426132	3.2	8432218	2.9	N/A	8426132
Filter and HNO3 Preservation	N/A	LAB	8428543	LAB	8428543	LAB	N/A	8428543
Ion Balance	N/A	0.98	8426418	1.0	8432217	0.98	0.010	8426418
Nitrate (N)	mg/L	0.147	8426133	0.0813	8426133	0.0897	0.0020	8426133
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8430883	<0.00050	8430883	<0.00050	0.00050	8430883
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8430891	<0.00050	8430891	<0.00050	0.00050	8430891
Fluoride (F)	mg/L	0.039	8429543	0.060	8429543	0.057	0.010	8429543
Dissolved Organic Carbon (C)	mg/L	1.13	8430899	1.55	8430899	2.22	0.50	8430899
Acidity (pH 4.5)	mg/L	<0.50	8427488	<0.50	8427488	<0.50	0.50	8427498
Alkalinity (Total as CaCO3)	mg/L	56.5	8427378	132	8427378	108	0.50	8427378
Acidity (pH 8.3)	mg/L	<0.50	8427488	<0.50	8427488	<0.50	0.50	8427498
Alkalinity (PP as CaCO3)	mg/L	<0.50	8427378	<0.50	8427378	<0.50	0.50	8427378
Bicarbonate (HCO3)	mg/L	68.9	8427378	161	8427378	132	0.50	8427378
Carbonate (CO3)	mg/L	<0.50	8427378	<0.50	8427378	<0.50	0.50	8427378
Hydroxide (OH)	mg/L	<0.50	8427378	<0.50	8427378	<0.50	0.50	8427378
Anions								
Dissolved Sulphate (SO4)	mg/L	53.7	8429141	23.5	8429141	38.9	0.50	8429141
Dissolved Chloride (Cl)	mg/L	0.56	8429138	0.71	8429138	<0.50	0.50	8429138
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0023 (1)	8429710	0.0023 (1)	8429710	0.0035 (1)	0.0020	8429713
Total Ammonia (N)	mg/L	0.0079	8429663	0.011	8429663	0.0091	0.0050	8429663
Nitrate plus Nitrite (N)	mg/L	0.147 (1)	8430715	0.0813 (1)	8430715	0.0897 (1)	0.0020	8430715
Nitrite (N)	mg/L	<0.0020 (1)	8430717	<0.0020 (1)	8430717	<0.0020 (1)	0.0020	8430717
Total Phosphorus (P)	mg/L	0.0027 (1)	8429711	0.0045 (1)	8429711	0.0039 (1)	0.0020	8429714
Physical Properties								
Conductivity	uS/cm	236	8427379	298	8427379	292	1.0	8427379
pH	pH	7.59	8427380	7.99	8427380	7.96		8427380

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PS4994		PS4995		PS4996		
Sampling Date		2016/10/04 13:47		2016/10/03 13:30		2016/10/03 12:50		
COC Number		08428205		08428205		08428205		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8427448	<1.0	8427448	<1.0	1.0	8427448
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PS4997			PS4998			PS4999		
Sampling Date		2016/10/04 08:50			2016/10/03 11:49			2016/10/04 09:50		
COC Number		08428205			08428205			08428205		
	UNITS	KZ-9	RDL	QC Batch	KZ-13	RDL	QC Batch	KZ-18	RDL	QC Batch
Calculated Parameters										
Anion Sum	meq/L	3.4	N/A	8426132	1.5	N/A	8426132	3.8	N/A	8426132
Cation Sum	meq/L	3.3	N/A	8426132	1.5	N/A	8426132	3.7	N/A	8426132
Filter and HNO3 Preservation	N/A	LAB	N/A	8428543	LAB	N/A	8428543	LAB	N/A	8428543
Ion Balance	N/A	0.97	0.010	8426418	0.97	0.010	8426418	0.98	0.010	8426418
Nitrate (N)	mg/L	0.173	0.0020	8426133	0.0618	0.0020	8426133	0.133	0.0020	8426133
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8430883	<0.00050	0.00050	8430883	<0.00050	0.00050	8430883
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8430891	<0.00050	0.00050	8430891	<0.00050	0.00050	8430891
Fluoride (F)	mg/L	0.067	0.010	8429549	0.044	0.010	8429543	0.059	0.010	8429549
Dissolved Organic Carbon (C)	mg/L	1.64	0.50	8430899	4.80	0.50	8430899	1.84	0.50	8430899
Acidity (pH 4.5)	mg/L	<0.50	0.50	8427498	<0.50	0.50	8427498	<0.50	0.50	8427498
Alkalinity (Total as CaCO3)	mg/L	135	0.50	8427378	59.9	0.50	8427378	159	0.50	8427378
Acidity (pH 8.3)	mg/L	<0.50	0.50	8427498	<0.50	0.50	8427498	<0.50	0.50	8427498
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8427378	<0.50	0.50	8427378	<0.50	0.50	8427378
Bicarbonate (HCO3)	mg/L	164	0.50	8427378	73.1	0.50	8427378	194	0.50	8427378
Carbonate (CO3)	mg/L	<0.50	0.50	8427378	<0.50	0.50	8427378	<0.50	0.50	8427378
Hydroxide (OH)	mg/L	<0.50	0.50	8427378	<0.50	0.50	8427378	<0.50	0.50	8427378
Anions										
Dissolved Sulphate (SO4)	mg/L	33.3	0.50	8429141	13.8	0.50	8429141	25.8	0.50	8429141
Dissolved Chloride (Cl)	mg/L	0.92	0.50	8429138	0.57	0.50	8429138	0.91	0.50	8429138
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0045 (1)	0.0020	8429713	0.0056 (1)	0.0020	8429713	0.0175 (1)	0.0020	8429713
Total Ammonia (N)	mg/L	0.017	0.0050	8429663	0.010	0.0050	8429663	0.0085	0.0050	8429663
Nitrate plus Nitrite (N)	mg/L	0.173 (1)	0.0020	8430715	0.0618 (1)	0.0020	8430715	0.133 (1)	0.0020	8430715
Nitrite (N)	mg/L	<0.0020 (1)	0.0020	8430717	<0.0020 (1)	0.0020	8430717	<0.0020 (1)	0.0020	8430717
Total Phosphorus (P)	mg/L	0.0062 (1)	0.0020	8429714	0.0060 (1)	0.0020	8429714	0.0284 (1)	0.0020	8429714
Physical Properties										
Conductivity	uS/cm	331	1.0	8427379	151	1.0	8427379	349	1.0	8427379
pH	pH	7.95		8427380	7.66		8427380	8.03		8427380

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PS4997			PS4998			PS4999		
Sampling Date		2016/10/04 08:50			2016/10/03 11:49			2016/10/04 09:50		
COC Number		08428205			08428205			08428205		
	UNITS	KZ-9	RDL	QC Batch	KZ-13	RDL	QC Batch	KZ-18	RDL	QC Batch
Physical Properties										
Total Suspended Solids	mg/L	2.7	1.0	8427448	1.1	1.1	8427448	1.4	1.0	8427448
RDL = Reportable Detection Limit										

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PS5000		PS5001	PS5002		PS5003		
Sampling Date		2016/10/03 10:30		2016/10/04 14:00	2016/10/03		2016/10/06 09:50		
COC Number		08428205		08428205	08428206		08428206		
	UNITS	KZ-27	QC Batch	KZ-19	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	1.5	8426132	2.3	0.0000	8426132	0.00020	N/A	8426132
Cation Sum	meq/L	1.4	8426132	2.2	0.0037	8426132	0.0060	N/A	8426132
Filter and HNO3 Preservation	N/A	LAB	8428543	LAB	LAB	8428543		N/A	8428543
Ion Balance	N/A	0.98	8426418	0.98	NC	8426418	NC	0.010	8426418
Nitrate (N)	mg/L	0.0029	8426133	0.148	<0.0020	8426133	0.0025	0.0020	8426133
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8430883	<0.00050	<0.00050	8430883	<0.00050	0.00050	8430883
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8430891	<0.00050	<0.00050	8430891	<0.00050	0.00050	8430891
Fluoride (F)	mg/L	0.082	8429549	0.039	<0.010	8429543	<0.010	0.010	8429543
Dissolved Organic Carbon (C)	mg/L	3.56	8430899	1.20	<0.50	8430899	<0.50	0.50	8430899
Acidity (pH 4.5)	mg/L	<0.50	8427498	<0.50	<0.50	8427488	<0.50	0.50	8427498
Alkalinity (Total as CaCO3)	mg/L	55.3	8427378	56.9	<0.50	8427378	<0.50	0.50	8427378
Acidity (pH 8.3)	mg/L	<0.50	8427498	<0.50	0.62	8427488	<0.50	0.50	8427498
Alkalinity (PP as CaCO3)	mg/L	<0.50	8427378	<0.50	<0.50	8427378	<0.50	0.50	8427378
Bicarbonate (HCO3)	mg/L	67.4	8427378	69.4	<0.50	8427378	<0.50	0.50	8427378
Carbonate (CO3)	mg/L	<0.50	8427378	<0.50	<0.50	8427378	<0.50	0.50	8427378
Hydroxide (OH)	mg/L	<0.50	8427378	<0.50	<0.50	8427378	<0.50	0.50	8427378
Anions									
Dissolved Sulphate (SO4)	mg/L	15.7	8429141	53.0	<0.50	8429141	<0.50	0.50	8429141
Dissolved Chloride (Cl)	mg/L	0.52	8429138	<0.50	<0.50	8429138	<0.50	0.50	8429138
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0066 (1)	8429713	<0.0020 (1)	<0.0020 (1)	8429710	<0.0020 (2)	0.0020	8429713
Total Ammonia (N)	mg/L	0.010	8429663	0.011	0.013	8429663	0.0090	0.0050	8429663
Nitrate plus Nitrite (N)	mg/L	0.0029 (1)	8430715	0.148 (1)	<0.0020 (1)	8430715	0.0025	0.0020	8430715
Nitrite (N)	mg/L	<0.0020 (1)	8430717	<0.0020 (1)	<0.0020 (1)	8430717	<0.0020	0.0020	8430717
Total Phosphorus (P)	mg/L	0.0222 (1)	8429714	0.0030 (1)	<0.0020 (1)	8429711	0.0024 (2)	0.0020	8429714
Physical Properties									
Conductivity	uS/cm	148	8427379	236	1.3	8427379	1.1	1.0	8427379
pH	pH	7.70	8427380	7.63	5.57	8427380	5.27		8427380

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.
(2) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		PS5000		PS5001	PS5002		PS5003		
Sampling Date		2016/10/03 10:30		2016/10/04 14:00	2016/10/03		2016/10/06 09:50		
COC Number		08428205		08428205	08428206		08428206		
	UNITS	KZ-27	QC Batch	KZ-19	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8427448	<1.0	<1.0	8427448	<1.0	1.0	8427448
RDL = Reportable Detection Limit									

Maxxam ID		PS5241	PS5242	PS5243		PS5244		PS5245		
Sampling Date		2016/10/04 10:40	2016/10/04 10:52	2016/10/04 11:30		2016/10/04 11:56		2016/10/03 15:23		
COC Number		08428211	08428211	08428211		08428211		08428211		
	UNITS	KZ-9_E-SEEP	KZ-9_W-SEEP	SEEP-3	QC Batch	SEEP-5	QC Batch	SEEP-4	RDL	QC Batch
Calculated Parameters										
Filter and HNO3 Preservation	N/A	LAB	LAB	LAB	8428543	LAB	8428543	LAB	N/A	8428543
Misc. Inorganics										
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	8427482	<0.50	8427482	<0.50	0.50	8427482
Alkalinity (Total as CaCO3)	mg/L	804	227	145	8427355	208	8427376	120	0.50	8427355
Acidity (pH 8.3)	mg/L	199	2.76	<0.50	8427482	25.1	8427482	2.21	0.50	8427482
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	8427355	<0.50	8427376	<0.50	0.50	8427355
Bicarbonate (HCO3)	mg/L	981	277	177	8427355	254	8427376	146	0.50	8427355
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	8427355	<0.50	8427376	<0.50	0.50	8427355
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	8427355	<0.50	8427376	<0.50	0.50	8427355
Physical Properties										
Conductivity	uS/cm	1560	506	335	8427359	424	8427375	311	1.0	8427359
pH	pH	6.61	7.99	8.03	8427360	6.74	8427374	7.67		8427360
RDL = Reportable Detection Limit										
N/A = Not Applicable										

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PS4994		PS4995		PS4996		
Sampling Date		2016/10/04 13:47		2016/10/03 13:30		2016/10/03 12:50		
COC Number		08428205		08428205		08428205		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	108	8425828	155	8431585	143	0.50	8425828
Elements								
Dissolved Mercury (Hg)	mg/L	0.0000023	8429105	<0.0000020	8429105	<0.0000020	0.0000020	8429105
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00281	8429179	0.00244	8429179	0.00314	0.00050	8429179
Dissolved Antimony (Sb)	mg/L	0.000023	8429179	<0.000020	8429179	0.000058	0.000020	8429179
Dissolved Arsenic (As)	mg/L	0.000076	8429179	0.000059	8429179	0.000175	0.000020	8429179
Dissolved Barium (Ba)	mg/L	0.0612	8429179	0.0387	8429179	0.0681	0.000020	8429179
Dissolved Beryllium (Be)	mg/L	<0.000010	8429179	<0.000010	8429179	<0.000010	0.000010	8429179
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8429179	<0.0000050	8429179	<0.0000050	0.0000050	8429179
Dissolved Boron (B)	mg/L	<0.010	8429179	<0.010	8429179	<0.010	0.010	8429179
Dissolved Cadmium (Cd)	mg/L	0.000261	8429179	0.0000090	8429179	0.000357	0.0000050	8429179
Dissolved Chromium (Cr)	mg/L	<0.00010	8429179	<0.00010	8429179	<0.00010	0.00010	8429179
Dissolved Cobalt (Co)	mg/L	0.0000080	8429179	0.0000090	8429179	0.0000340	0.0000050	8429179
Dissolved Copper (Cu)	mg/L	0.000501	8429179	0.000115	8429179	0.000657	0.000050	8429179
Dissolved Iron (Fe)	mg/L	<0.0010	8429179	0.0084	8429179	0.0661	0.0010	8429179
Dissolved Lead (Pb)	mg/L	0.0000180	8429179	<0.0000050	8429179	0.0000440	0.0000050	8429179
Dissolved Lithium (Li)	mg/L	0.00053	8429179	<0.00050	8429179	0.00079	0.00050	8429179
Dissolved Manganese (Mn)	mg/L	<0.000050	8429179	0.000729	8429179	0.0245	0.000050	8429179
Dissolved Molybdenum (Mo)	mg/L	0.000581	8429179	0.000442	8429179	0.000461	0.000050	8429179
Dissolved Nickel (Ni)	mg/L	0.000401	8429179	0.000144	8429179	0.000431	0.000020	8429179
Dissolved Phosphorus (P)	mg/L	0.0027	8429179	0.0031	8429179	<0.0020	0.0020	8429179
Dissolved Selenium (Se)	mg/L	0.00110	8429179	0.000651	8429179	0.00123	0.000040	8429179
Dissolved Silicon (Si)	mg/L	2.16	8429179	2.57	8429179	2.73	0.050	8429179
Dissolved Silver (Ag)	mg/L	0.0000140	8429179	<0.0000050	8429179	<0.0000050	0.0000050	8429179
Dissolved Strontium (Sr)	mg/L	0.113	8429179	0.141	8429179	0.146	0.000050	8429179
Dissolved Thallium (Tl)	mg/L	0.0000070	8429179	0.0000020	8429179	0.0000030	0.0000020	8429179
Dissolved Tin (Sn)	mg/L	<0.00020	8429179	<0.00020	8429179	<0.00020	0.00020	8429179
Dissolved Titanium (Ti)	mg/L	<0.00050	8429179	<0.00050	8429179	<0.00050	0.00050	8429179
Dissolved Uranium (U)	mg/L	0.00251	8429179	0.000873	8429179	0.00110	0.0000020	8429179
Dissolved Vanadium (V)	mg/L	<0.00020	8429179	<0.00020	8429179	<0.00020	0.00020	8429179
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PS4994		PS4995		PS4996		
Sampling Date		2016/10/04 13:47		2016/10/03 13:30		2016/10/03 12:50		
COC Number		08428205		08428205		08428205		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0381	8429179	0.00030	8429179	0.0669	0.00010	8429179
Dissolved Zirconium (Zr)	mg/L	<0.00010	8429179	<0.00010	8429179	<0.00010	0.00010	8429179
Dissolved Calcium (Ca)	mg/L	36.8	8425829	51.4	8431904	47.8	0.050	8425829
Dissolved Magnesium (Mg)	mg/L	3.83	8425829	6.40	8431904	5.80	0.050	8425829
Dissolved Potassium (K)	mg/L	1.62	8425829	0.705	8431904	1.29	0.050	8425829
Dissolved Sodium (Na)	mg/L	0.744	8425829	1.26 (1)	8431904	0.851	0.050	8425829
Dissolved Sulphur (S)	mg/L	17.1	8425829	8.0	8431904	13.0	3.0	8425829

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PS4997		PS4998		PS4999		
Sampling Date		2016/10/04 08:50		2016/10/03 11:49		2016/10/04 09:50		
COC Number		08428205		08428205		08428205		
	UNITS	KZ-9	QC Batch	KZ-13	QC Batch	KZ-18	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	162	8425828	69.0	8425828	182	0.50	8425828
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8429105	<0.0000020	8429105	<0.0000020	0.0000020	8429108
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00227	8429179	0.00789	8429179	0.00632	0.00050	8429179
Dissolved Antimony (Sb)	mg/L	0.000053	8429179	0.000030	8429179	<0.000020	0.000020	8429179
Dissolved Arsenic (As)	mg/L	0.000155	8429179	0.000188	8429179	0.000298	0.000020	8429179
Dissolved Barium (Ba)	mg/L	0.0903	8429179	0.0945	8429179	0.0374	0.000020	8429179
Dissolved Beryllium (Be)	mg/L	<0.000010	8429179	<0.000010	8429179	<0.000010	0.000010	8429179
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8429179	<0.0000050	8429179	<0.0000050	0.0000050	8429179
Dissolved Boron (B)	mg/L	<0.010	8429179	<0.010	8429179	<0.010	0.010	8429179
Dissolved Cadmium (Cd)	mg/L	0.0000950	8429179	0.0000210	8429179	0.0000160	0.0000050	8429179
Dissolved Chromium (Cr)	mg/L	<0.00010	8429179	<0.00010	8429179	<0.00010	0.00010	8429179
Dissolved Cobalt (Co)	mg/L	0.0000380	8429179	0.0000140	8429179	0.0000080	0.0000050	8429179
Dissolved Copper (Cu)	mg/L	0.000394	8429179	0.000455	8429179	0.000090	0.000050	8429179
Dissolved Iron (Fe)	mg/L	0.0666	8429179	0.0195	8429179	0.0025	0.0010	8429179
Dissolved Lead (Pb)	mg/L	0.0000120	8429179	0.0000050	8429179	<0.0000050	0.0000050	8429179
Dissolved Lithium (Li)	mg/L	0.00169	8429179	0.00057	8429179	0.00066	0.00050	8429179
Dissolved Manganese (Mn)	mg/L	0.0313	8429179	0.00288	8429179	0.00185	0.000050	8429179
Dissolved Molybdenum (Mo)	mg/L	0.000631	8431837	0.000544	8429179	0.000857	0.000050	8429179
Dissolved Nickel (Ni)	mg/L	0.000323	8429179	0.000390	8429179	0.000300	0.000020	8429179
Dissolved Phosphorus (P)	mg/L	<0.0020	8429179	0.0034	8429179	0.0062	0.0020	8429179
Dissolved Selenium (Se)	mg/L	0.00133	8429179	0.000148	8429179	0.00110	0.000040	8429179
Dissolved Silicon (Si)	mg/L	2.87	8429179	2.82	8429179	2.81	0.050	8429179
Dissolved Silver (Ag)	mg/L	0.0000050	8429179	<0.0000050	8429179	<0.0000050	0.0000050	8429179
Dissolved Strontium (Sr)	mg/L	0.168	8429179	0.0650	8429179	0.150	0.000050	8429179
Dissolved Thallium (Tl)	mg/L	0.0000030	8429179	0.0000020	8429179	<0.0000020	0.0000020	8429179
Dissolved Tin (Sn)	mg/L	<0.00020	8429179	<0.00020	8429179	<0.00020	0.00020	8429179
Dissolved Titanium (Ti)	mg/L	<0.00050	8429179	<0.00050	8429179	<0.00050	0.00050	8429179
Dissolved Uranium (U)	mg/L	0.00151	8429179	0.000604	8429179	0.00171	0.0000020	8429179
Dissolved Vanadium (V)	mg/L	<0.00020	8429179	<0.00020	8429179	<0.00020	0.00020	8429179
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PS4997		PS4998		PS4999		
Sampling Date		2016/10/04 08:50		2016/10/03 11:49		2016/10/04 09:50		
COC Number		08428205		08428205		08428205		
	UNITS	KZ-9	QC Batch	KZ-13	QC Batch	KZ-18	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0211	8429179	0.00277	8429179	0.00074	0.00010	8429179
Dissolved Zirconium (Zr)	mg/L	<0.00010	8429179	<0.00010	8429179	<0.00010	0.00010	8429179
Dissolved Calcium (Ca)	mg/L	54.3	8425829	23.4	8425829	48.2	0.050	8425829
Dissolved Magnesium (Mg)	mg/L	6.33	8425829	2.56	8425829	15.0	0.050	8425829
Dissolved Potassium (K)	mg/L	1.25	8425829	1.30	8425829	0.423	0.050	8425829
Dissolved Sodium (Na)	mg/L	0.952	8425829	0.923	8425829	0.737	0.050	8425829
Dissolved Sulphur (S)	mg/L	11.2	8425829	4.1	8425829	8.4	3.0	8425829
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PS5000	PS5001	PS5002	PS5003		
Sampling Date		2016/10/03 10:30	2016/10/04 14:00	2016/10/03	2016/10/06 09:50		
COC Number		08428205	08428205	08428206	08428206		
	UNITS	KZ-27	KZ-19	KZ-28	TRIP BLANK	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	68.0	107	<0.50	<0.50	0.50	8425828
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8429108
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00223	0.00377	<0.00050	<0.00050	0.00050	8429179
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000027	<0.000020	<0.000020	0.000020	8429179
Dissolved Arsenic (As)	mg/L	0.000168	0.000065	<0.000020	<0.000020	0.000020	8429179
Dissolved Barium (Ba)	mg/L	0.0284	0.0658	0.000024	<0.000020	0.000020	8429179
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8429179
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8429179
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8429179
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.000262	<0.0000050	<0.0000050	0.0000050	8429179
Dissolved Chromium (Cr)	mg/L	0.00014	<0.00010	<0.00010	<0.00010	0.00010	8429179
Dissolved Cobalt (Co)	mg/L	0.0000110	0.0000060	<0.0000050	<0.0000050	0.0000050	8429179
Dissolved Copper (Cu)	mg/L	0.000238	0.000487	<0.000050	<0.000050	0.000050	8429179
Dissolved Iron (Fe)	mg/L	0.0093	<0.0010	<0.0010	<0.0010	0.0010	8429179
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000130	<0.0000050	<0.0000050	0.0000050	8429179
Dissolved Lithium (Li)	mg/L	0.00255	0.00053	<0.00050	<0.00050	0.00050	8429179
Dissolved Manganese (Mn)	mg/L	0.000136	<0.000050	<0.000050	<0.000050	0.000050	8429179
Dissolved Molybdenum (Mo)	mg/L	0.000433	0.000610	<0.000050	<0.000050	0.000050	8429179
Dissolved Nickel (Ni)	mg/L	0.00187	0.000375	<0.000020	<0.000020	0.000020	8429179
Dissolved Phosphorus (P)	mg/L	0.0039	<0.0020	0.0020	<0.0020	0.0020	8429179
Dissolved Selenium (Se)	mg/L	0.000074	0.00115	<0.000040	<0.000040	0.000040	8429179
Dissolved Silicon (Si)	mg/L	2.44	2.23	<0.050	<0.050	0.050	8429179
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8429179
Dissolved Strontium (Sr)	mg/L	0.0569	0.111	<0.000050	<0.000050	0.000050	8429179
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000030	<0.0000020	<0.0000020	0.0000020	8429179
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8429179
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8429179
Dissolved Uranium (U)	mg/L	0.00190	0.00262	<0.0000020	<0.0000020	0.0000020	8429179
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8429179
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PS5000	PS5001	PS5002	PS5003		
Sampling Date		2016/10/03 10:30	2016/10/04 14:00	2016/10/03	2016/10/06 09:50		
COC Number		08428205	08428205	08428206	08428206		
	UNITS	KZ-27	KZ-19	KZ-28	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00016	0.0374	<0.00010	<0.00010	0.00010	8429179
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8429179
Dissolved Calcium (Ca)	mg/L	15.0	36.6	<0.050	<0.050	0.050	8425829
Dissolved Magnesium (Mg)	mg/L	7.41	3.84	<0.050	<0.050	0.050	8425829
Dissolved Potassium (K)	mg/L	0.844	1.59	<0.050	<0.050	0.050	8425829
Dissolved Sodium (Na)	mg/L	0.991	0.734	<0.050	<0.050	0.050	8425829
Dissolved Sulphur (S)	mg/L	5.2	17.5	<3.0	<3.0	3.0	8425829

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PS5241	PS5242	PS5243	PS5244	PS5245		
Sampling Date		2016/10/04 10:40	2016/10/04 10:52	2016/10/04 11:30	2016/10/04 11:56	2016/10/03 15:23		
COC Number		08428211	08428211	08428211	08428211	08428211		
	UNITS	KZ-9_E-SEEP	KZ-9_W-SEEP	SEEP-3	SEEP-5	SEEP-4	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	952	258	172	220	152	0.50	8427077
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000031	<0.0000020	<0.0000020	0.0000020	8430230
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0276	0.00060	0.00122	0.00097	0.00103	0.00050	8429706
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000021	<0.000020	0.000039	<0.000020	0.000020	8429706
Dissolved Arsenic (As)	mg/L	0.00115	0.000077	0.000149	0.000292	0.000044	0.000020	8429706
Dissolved Barium (Ba)	mg/L	0.0750	0.184	0.119	0.104	0.118	0.000020	8429706
Dissolved Beryllium (Be)	mg/L	0.000122	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8429706
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8429706
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8429706
Dissolved Cadmium (Cd)	mg/L	0.0000390	0.0000390	0.0000070	0.0000300	0.0000150	0.0000050	8429706
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00028	<0.00010	<0.00010	<0.00010	0.00010	8429706
Dissolved Cobalt (Co)	mg/L	0.00223	<0.0000050	0.0000080	0.000263	0.0000070	0.0000050	8429706
Dissolved Copper (Cu)	mg/L	0.000085	<0.000050	0.000080	0.000204	0.000210	0.000050	8429706
Dissolved Iron (Fe)	mg/L	0.497	<0.0010	<0.0010	0.240	<0.0010	0.0010	8429706
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000270	0.0000050	<0.0000050	0.0000050	8429706
Dissolved Lithium (Li)	mg/L	0.0525	0.00141	<0.00050	0.00731	<0.00050	0.00050	8429706
Dissolved Manganese (Mn)	mg/L	1.82	0.000468	0.000146	0.458	0.000107	0.000050	8429706
Dissolved Molybdenum (Mo)	mg/L	0.000161	0.00135	0.000563	0.000081	0.000515	0.000050	8429706
Dissolved Nickel (Ni)	mg/L	0.00735	0.000054	0.000038	0.00113	0.000136	0.000020	8429706
Dissolved Phosphorus (P)	mg/L	0.0060	<0.0020	<0.0020	0.0192	0.0024	0.0020	8429706
Dissolved Selenium (Se)	mg/L	<0.000040	0.00362	0.000798	0.000363	0.000814	0.000040	8429706
Dissolved Silicon (Si)	mg/L	14.6	3.61	2.32	6.99	2.82	0.050	8429706
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8429706
Dissolved Strontium (Sr)	mg/L	1.23	0.257	0.200	0.244	0.205	0.000050	8429706
Dissolved Thallium (Tl)	mg/L	0.0000050	0.0000020	0.0000020	0.0000050	0.0000020	0.0000020	8429706
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8429706
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8429706
Dissolved Uranium (U)	mg/L	0.00107	0.00289	0.00101	0.000666	0.00106	0.0000020	8429706
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8429706

RDL = Reportable Detection Limit

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		PS5241	PS5242	PS5243	PS5244	PS5245		
Sampling Date		2016/10/04 10:40	2016/10/04 10:52	2016/10/04 11:30	2016/10/04 11:56	2016/10/03 15:23		
COC Number		08428211	08428211	08428211	08428211	08428211		
	UNITS	KZ-9_E-SEEP	KZ-9_W-SEEP	SEEP-3	SEEP-5	SEEP-4	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0269	0.00052	0.00052	0.0139	0.00027	0.00010	8429706
Dissolved Zirconium (Zr)	mg/L	0.00019	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8429706
Dissolved Calcium (Ca)	mg/L	325	83.8	65.3	74.0	56.7	0.050	8425829
Dissolved Magnesium (Mg)	mg/L	34.3	11.7	2.31	8.56	2.53	0.050	8425829
Dissolved Potassium (K)	mg/L	5.10	1.09	1.17	1.60	1.77	0.050	8425829
Dissolved Sodium (Na)	mg/L	9.10	1.20	0.787	2.57	0.683	0.050	8425829
Dissolved Sulphur (S)	mg/L	8.1	15.1	8.5	3.8	12.6	3.0	8425829

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PS4994		PS4995		PS4996		
Sampling Date		2016/10/04 13:47		2016/10/03 13:30		2016/10/03 12:50		
COC Number		08428205		08428205		08428205		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	112	8425781	154	8431584	149	0.50	8425781
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	8429284	<0.0000020	8429284	<0.0000020	0.0000020	8429284
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00637	8429745	0.00504	8429745	0.0331	0.00050	8429745
Total Antimony (Sb)	mg/L	0.000020	8429745	<0.000020	8429745	0.000055	0.000020	8429745
Total Arsenic (As)	mg/L	0.000067	8429745	0.000077	8429745	0.000414	0.000020	8429745
Total Barium (Ba)	mg/L	0.0623	8429745	0.0388	8429745	0.0688	0.000020	8429745
Total Beryllium (Be)	mg/L	<0.000010	8429745	<0.000010	8429745	<0.000010	0.000010	8429745
Total Bismuth (Bi)	mg/L	<0.0000050	8429745	<0.0000050	8429745	<0.0000050	0.0000050	8429745
Total Boron (B)	mg/L	<0.010	8429745	<0.010	8429745	<0.010	0.010	8429745
Total Cadmium (Cd)	mg/L	0.000272	8429745	0.0000130	8429745	0.000528	0.0000050	8429745
Total Chromium (Cr)	mg/L	<0.00010	8429745	<0.00010	8429745	0.00011	0.00010	8429745
Total Cobalt (Co)	mg/L	0.0000110	8429745	0.0000140	8429745	0.000132	0.0000050	8429745
Total Copper (Cu)	mg/L	0.000592	8429745	0.000147	8429745	0.00124	0.000050	8429745
Total Iron (Fe)	mg/L	0.0070	8429745	0.0578	8429745	0.456	0.0010	8429745
Total Lead (Pb)	mg/L	0.0000650	8429745	0.0000110	8429745	0.000438	0.0000050	8429745
Total Lithium (Li)	mg/L	0.00113	8429745	0.00065	8429745	0.00129	0.00050	8429745
Total Manganese (Mn)	mg/L	0.000312	8429745	0.0107	8429745	0.0597	0.000050	8429745
Total Molybdenum (Mo)	mg/L	0.000595	8429745	0.000431	8429745	0.000475	0.000050	8429745
Total Nickel (Ni)	mg/L	0.000407	8429745	0.000171	8429745	0.000625	0.000020	8429745
Total Phosphorus (P)	mg/L	0.0041	8429745	0.0021	8429745	0.0041	0.0020	8429745
Total Selenium (Se)	mg/L	0.00116	8429745	0.000699	8429745	0.00126	0.000040	8429745
Total Silicon (Si)	mg/L	2.17	8429745	2.57	8429745	2.72	0.050	8429745
Total Silver (Ag)	mg/L	<0.0000050	8429745	<0.0000050	8429745	<0.0000050	0.0000050	8429745
Total Strontium (Sr)	mg/L	0.120	8429745	0.152	8429745	0.156	0.000050	8429745
Total Thallium (Tl)	mg/L	0.0000030	8429745	<0.0000020	8429745	0.0000030	0.0000020	8429745
Total Tin (Sn)	mg/L	<0.00020	8429745	<0.00020	8429745	<0.00020	0.00020	8429745
Total Titanium (Ti)	mg/L	<0.00050	8429745	<0.00050	8429745	0.00147	0.00050	8429745
Total Uranium (U)	mg/L	0.00261	8429745	0.000891	8429745	0.00114	0.0000020	8429745
Total Vanadium (V)	mg/L	<0.00020	8429745	<0.00020	8429745	<0.00020	0.00020	8429745

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PS4994		PS4995		PS4996		
Sampling Date		2016/10/04 13:47		2016/10/03 13:30		2016/10/03 12:50		
COC Number		08428205		08428205		08428205		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0391	8429745	0.00067	8429745	0.0910	0.00010	8429745
Total Zirconium (Zr)	mg/L	<0.00010	8429745	<0.00010	8429745	<0.00010	0.00010	8429745
Total Calcium (Ca)	mg/L	38.4	8425830	51.1	8431906	50.0	0.050	8425830
Total Magnesium (Mg)	mg/L	3.87	8425830	6.35	8431906	5.87	0.050	8425830
Total Potassium (K)	mg/L	1.64	8425830	0.728	8431906	1.34	0.050	8425830
Total Sodium (Na)	mg/L	0.724	8425830	0.676	8431906	0.857	0.050	8425830
Total Sulphur (S)	mg/L	17.3	8425830	8.3	8431906	13.2	3.0	8425830

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PS4997	PS4998	PS4999		PS5000		
Sampling Date		2016/10/04 08:50	2016/10/03 11:49	2016/10/04 09:50		2016/10/03 10:30		
COC Number		08428205	08428205	08428205		08428205		
	UNITS	KZ-9	KZ-13	KZ-18	QC Batch	KZ-27	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	172	70.9	184	8425781	68.3	0.50	8425781
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8429284	<0.0000020	0.0000020	8430078
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0405	0.0182	0.0115	8429745	0.00563	0.00050	8429745
Total Antimony (Sb)	mg/L	0.000040	0.000028	<0.000020	8429745	<0.000020	0.000020	8429745
Total Arsenic (As)	mg/L	0.000371	0.000207	0.000291	8429745	0.000197	0.000020	8429745
Total Barium (Ba)	mg/L	0.0764	0.0918	0.0381	8429745	0.0284	0.000020	8429745
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8429745	<0.000010	0.000010	8429745
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8429745	<0.0000050	0.0000050	8429745
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	8429745	<0.010	0.010	8429745
Total Cadmium (Cd)	mg/L	0.000155	0.0000270	0.0000180	8429745	<0.0000050	0.0000050	8429745
Total Chromium (Cr)	mg/L	0.00013	0.00010	<0.00010	8429745	0.00018	0.00010	8429745
Total Cobalt (Co)	mg/L	0.000133	0.0000320	0.0000160	8429745	0.0000200	0.0000050	8429745
Total Copper (Cu)	mg/L	0.000789	0.00196	0.000172	8429745	0.000286	0.000050	8429745
Total Iron (Fe)	mg/L	0.583	0.0747	0.0138	8429745	0.0404	0.0010	8429745
Total Lead (Pb)	mg/L	0.000266	0.0000580	0.0000090	8429745	0.0000120	0.0000050	8429745
Total Lithium (Li)	mg/L	0.00160	0.00105	0.00100	8429745	0.00265	0.00050	8429745
Total Manganese (Mn)	mg/L	0.0600	0.0187	0.00338	8429745	0.00371	0.000050	8429745
Total Molybdenum (Mo)	mg/L	0.000572	0.000552	0.000879	8429745	0.000448	0.000050	8429745
Total Nickel (Ni)	mg/L	0.000504	0.000972	0.000319	8429745	0.00198	0.000020	8429745
Total Phosphorus (P)	mg/L	0.0057	0.0070	0.0078	8429745	0.0041	0.0020	8429745
Total Selenium (Se)	mg/L	0.00138	0.000164	0.00115	8429745	0.000086	0.000040	8429745
Total Silicon (Si)	mg/L	3.01	2.88	2.94	8429745	2.54	0.050	8429745
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8429745	<0.0000050	0.0000050	8429745
Total Strontium (Sr)	mg/L	0.183	0.0701	0.159	8429745	0.0589	0.000050	8429745
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8429745	<0.0000020	0.0000020	8429745
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8429745	<0.00020	0.00020	8429745
Total Titanium (Ti)	mg/L	0.00274	0.00066	0.00060	8429745	<0.00050	0.00050	8429745
Total Uranium (U)	mg/L	0.00134	0.000606	0.00174	8429745	0.00197	0.0000020	8429745
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8429745	<0.00020	0.00020	8429745

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PS4997	PS4998	PS4999		PS5000		
Sampling Date		2016/10/04 08:50	2016/10/03 11:49	2016/10/04 09:50		2016/10/03 10:30		
COC Number		08428205	08428205	08428205		08428205		
	UNITS	KZ-9	KZ-13	KZ-18	QC Batch	KZ-27	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0332	0.00425	0.00102	8429745	0.00024	0.00010	8429745
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8429745	<0.00010	0.00010	8429745
Total Calcium (Ca)	mg/L	57.9	24.1	47.9	8425830	15.2	0.050	8425830
Total Magnesium (Mg)	mg/L	6.67	2.61	15.5	8425830	7.36	0.050	8425830
Total Potassium (K)	mg/L	1.31	1.33	0.434	8425830	0.847	0.050	8425830
Total Sodium (Na)	mg/L	0.964	0.917	0.751	8425830	0.965	0.050	8425830
Total Sulphur (S)	mg/L	11.5	4.3	8.7	8425830	5.4	3.0	8425830
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PS5001	PS5002		PS5003		
Sampling Date		2016/10/04 14:00	2016/10/03		2016/10/06 09:50		
COC Number		08428205	08428206		08428206		
	UNITS	KZ-19	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	109	<0.50	8425781	<0.50	0.50	8425781
Elements							
Total Mercury (Hg)	mg/L	0.0000021	<0.0000020	8430078	<0.0000020	0.0000020	8448430
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00814	<0.00050	8429745	<0.00050	0.00050	8429745
Total Antimony (Sb)	mg/L	<0.000020	<0.000020	8429745	<0.000020	0.000020	8429745
Total Arsenic (As)	mg/L	0.000065	<0.000020	8429745	<0.000020	0.000020	8429745
Total Barium (Ba)	mg/L	0.0624	<0.000020	8429745	<0.000020	0.000020	8429745
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	8429745	<0.000010	0.000010	8429745
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8429745	<0.0000050	0.0000050	8429745
Total Boron (B)	mg/L	<0.010	<0.010	8429745	<0.010	0.010	8429745
Total Cadmium (Cd)	mg/L	0.000275	<0.0000050	8429745	<0.0000050	0.0000050	8429745
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	8429745	<0.00010	0.00010	8429745
Total Cobalt (Co)	mg/L	0.0000130	<0.0000050	8429745	<0.0000050	0.0000050	8429745
Total Copper (Cu)	mg/L	0.000607	<0.000050	8429745	<0.000050	0.000050	8429745
Total Iron (Fe)	mg/L	0.0087	<0.0010	8429745	<0.0010	0.0010	8429745
Total Lead (Pb)	mg/L	0.0000370	<0.0000050	8429745	<0.0000050	0.0000050	8429745
Total Lithium (Li)	mg/L	0.00086	<0.00050	8429745	<0.00050	0.00050	8429745
Total Manganese (Mn)	mg/L	0.000363	<0.000050	8429745	<0.000050	0.000050	8429745
Total Molybdenum (Mo)	mg/L	0.000577	<0.000050	8429745	<0.000050	0.000050	8429745
Total Nickel (Ni)	mg/L	0.000407	<0.000020	8429745	<0.000020	0.000020	8429745
Total Phosphorus (P)	mg/L	0.0051	<0.0020	8429745	<0.0020	0.0020	8429745
Total Selenium (Se)	mg/L	0.00119	<0.000040	8429745	<0.000040	0.000040	8429745
Total Silicon (Si)	mg/L	2.22	<0.050	8429745	<0.050	0.050	8429745
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	8429745	<0.0000050	0.0000050	8429745
Total Strontium (Sr)	mg/L	0.120	<0.000050	8429745	<0.000050	0.000050	8429745
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8429745	<0.0000020	0.0000020	8429745
Total Tin (Sn)	mg/L	<0.00020	<0.00020	8429745	<0.00020	0.00020	8429745
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	8429745	<0.00050	0.00050	8429745
Total Uranium (U)	mg/L	0.00248	<0.0000020	8429745	<0.0000020	0.0000020	8429745
Total Vanadium (V)	mg/L	<0.00020	<0.00020	8429745	<0.00020	0.00020	8429745

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		PS5001	PS5002		PS5003		
Sampling Date		2016/10/04 14:00	2016/10/03		2016/10/06 09:50		
COC Number		08428205	08428206		08428206		
	UNITS	KZ-19	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0397	<0.00010	8429745	<0.00010	0.00010	8429745
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	8429745	<0.00010	0.00010	8429745
Total Calcium (Ca)	mg/L	37.2	<0.050	8425830	<0.050	0.050	8425830
Total Magnesium (Mg)	mg/L	3.88	<0.050	8425830	<0.050	0.050	8425830
Total Potassium (K)	mg/L	1.61	<0.050	8425830	<0.050	0.050	8425830
Total Sodium (Na)	mg/L	0.740	<0.050	8425830	<0.050	0.050	8425830
Total Sulphur (S)	mg/L	17.9	<3.0	8425830	<3.0	3.0	8425830
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS4994
Sample ID: KZ-2
Matrix: Water

Collected: 2016/10/04
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427488	N/A	2016/10/13	Name Redacted
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	
Fluoride	ISE/ISE	8429543	N/A	2016/10/11	
Hardness Total (calculated as CaCO3)	CALC	8425781	N/A	2016/10/12	
Hardness (calculated as CaCO3)	CALC	8425828	N/A	2016/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429105	N/A	2016/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8429284	2016/10/11	2016/10/11	
Ion Balance	CALC	8426418	N/A	2016/10/12	
Sum of cations, anions	CALC	8426132	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8425830	N/A	2016/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8429745	N/A	2016/10/12	
Ammonia-N (Preserved)	KONE/COL	8429663	N/A	2016/10/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8430715	N/A	2016/10/08	
Nitrite (N) (low level)	TRAA/COL	8430717	N/A	2016/10/08	
Nitrogen - Nitrate (as N)	CALC	8426133	N/A	2016/10/12	
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	
pH Water	AT/ALK	8427380	N/A	2016/10/08	
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429710	2016/10/11	2016/10/12	
Total Phosphorus - unpreserved	KONE/COL	8429711	N/A	2016/10/12	
Total Suspended Solids-Low Level	BAL/BAL	8427448	2016/10/08	2016/10/11	

Maxxam ID: PS4994 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2016/10/04
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS4995
Sample ID: KZ-6
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427488	N/A	2016/10/13	Name Redacted
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	
Fluoride	ISE/ISE	8429543	N/A	2016/10/11	
Hardness Total (calculated as CaCO3)	CALC	8431584	N/A	2016/10/13	
Hardness (calculated as CaCO3)	CALC	8431585	N/A	2016/10/13	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429105	N/A	2016/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8429284	2016/10/11	2016/10/11	
Ion Balance	CALC	8432217	N/A	2016/10/13	
Sum of cations, anions	CALC	8432218	N/A	2016/10/13	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8431904	N/A	2016/10/13	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8431906	N/A	2016/10/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8429745	N/A	2016/10/12	
Ammonia-N (Preserved)	KONE/COL	8429663	N/A	2016/10/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8430715	N/A	2016/10/08	
Nitrite (N) (low level)	TRAA/COL	8430717	N/A	2016/10/08	
Nitrogen - Nitrate (as N)	CALC	8426133	N/A	2016/10/12	
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	
pH Water	AT/ALK	8427380	N/A	2016/10/08	
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429710	2016/10/11	2016/10/12	
Total Phosphorus - unpreserved	KONE/COL	8429711	N/A	2016/10/12	
Total Suspended Solids-Low Level	BAL/BAL	8427448	2016/10/08	2016/10/11	

Maxxam ID: PS4996
Sample ID: KZ-7
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427498	N/A	2016/10/13	Name Redacted
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	
Fluoride	ISE/ISE	8429543	N/A	2016/10/11	
Hardness Total (calculated as CaCO3)	CALC	8425781	N/A	2016/10/12	
Hardness (calculated as CaCO3)	CALC	8425828	N/A	2016/10/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS4996
Sample ID: KZ-7
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429105	N/A	2016/10/11	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8429284	2016/10/11	2016/10/11	
Ion Balance	CALC	8426418	N/A	2016/10/12	
Sum of cations, anions	CALC	8426132	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8425830	N/A	2016/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8429745	N/A	2016/10/12	
Ammonia-N (Preserved)	KONE/COL	8429663	N/A	2016/10/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8430715	N/A	2016/10/08	
Nitrite (N) (low level)	TRAA/COL	8430717	N/A	2016/10/08	
Nitrogen - Nitrate (as N)	CALC	8426133	N/A	2016/10/12	
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	
pH Water	AT/ALK	8427380	N/A	2016/10/08	
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429713	2016/10/12	2016/10/12	
Total Phosphorus - unpreserved	KONE/COL	8429714	N/A	2016/10/12	
Total Suspended Solids-Low Level	BAL/BAL	8427448	2016/10/08	2016/10/11	

Maxxam ID: PS4997
Sample ID: KZ-9
Matrix: Water

Collected: 2016/10/04
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427498	N/A	2016/10/13	Name Redacted
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	
Fluoride	ISE/ISE	8429549	N/A	2016/10/11	
Hardness Total (calculated as CaCO3)	CALC	8425781	N/A	2016/10/12	
Hardness (calculated as CaCO3)	CALC	8425828	N/A	2016/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429105	N/A	2016/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8429284	2016/10/11	2016/10/11	
Ion Balance	CALC	8426418	N/A	2016/10/12	
Sum of cations, anions	CALC	8426132	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8425830	N/A	2016/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8429745	N/A	2016/10/12	
Ammonia-N (Preserved)	KONE/COL	8429663	N/A	2016/10/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8430715	N/A	2016/10/08	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS4997
Sample ID: KZ-9
Matrix: Water

Collected: 2016/10/04
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8430717	N/A	2016/10/08	Name Redacted
Nitrogen - Nitrate (as N)	CALC	8426133	N/A	2016/10/12	
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	
pH Water	AT/ALK	8427380	N/A	2016/10/08	
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429713	2016/10/12	2016/10/12	
Total Phosphorus - unpreserved	KONE/COL	8429714	N/A	2016/10/12	
Total Suspended Solids-Low Level	BAL/BAL	8427448	2016/10/08	2016/10/11	

Maxxam ID: PS4998
Sample ID: KZ-13
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427498	N/A	2016/10/13	Name Redacted
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	
Fluoride	ISE/ISE	8429543	N/A	2016/10/11	
Hardness Total (calculated as CaCO3)	CALC	8425781	N/A	2016/10/12	
Hardness (calculated as CaCO3)	CALC	8425828	N/A	2016/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429105	N/A	2016/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8429284	2016/10/11	2016/10/11	
Ion Balance	CALC	8426418	N/A	2016/10/12	
Sum of cations, anions	CALC	8426132	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8425830	N/A	2016/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8429745	N/A	2016/10/12	
Ammonia-N (Preserved)	KONE/COL	8429663	N/A	2016/10/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8430715	N/A	2016/10/08	
Nitrite (N) (low level)	TRAA/COL	8430717	N/A	2016/10/08	
Nitrogen - Nitrate (as N)	CALC	8426133	N/A	2016/10/12	
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	
pH Water	AT/ALK	8427380	N/A	2016/10/08	
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429713	2016/10/12	2016/10/12	
Total Phosphorus - unpreserved	KONE/COL	8429714	N/A	2016/10/12	
Total Suspended Solids-Low Level	BAL/BAL	8427448	2016/10/08	2016/10/11	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS4998 Dup
Sample ID: KZ-13
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427498	N/A	2016/10/13	Name Redacted

Maxxam ID: PS4999
Sample ID: KZ-18
Matrix: Water

Collected: 2016/10/04
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427498	N/A	2016/10/13	Name Redacted
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	
Fluoride	ISE/ISE	8429549	N/A	2016/10/11	
Hardness Total (calculated as CaCO3)	CALC	8425781	N/A	2016/10/12	
Hardness (calculated as CaCO3)	CALC	8425828	N/A	2016/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429108	N/A	2016/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8429284	2016/10/11	2016/10/11	
Ion Balance	CALC	8426418	N/A	2016/10/12	
Sum of cations, anions	CALC	8426132	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8425830	N/A	2016/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8429745	N/A	2016/10/12	
Ammonia-N (Preserved)	KONE/COL	8429663	N/A	2016/10/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8430715	N/A	2016/10/08	
Nitrite (N) (low level)	TRAA/COL	8430717	N/A	2016/10/08	
Nitrogen - Nitrate (as N)	CALC	8426133	N/A	2016/10/12	
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	
pH Water	AT/ALK	8427380	N/A	2016/10/08	
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429713	2016/10/12	2016/10/12	
Total Phosphorus - unpreserved	KONE/COL	8429714	N/A	2016/10/12	
Total Suspended Solids-Low Level	BAL/BAL	8427448	2016/10/08	2016/10/11	

Maxxam ID: PS5000
Sample ID: KZ-27
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427498	N/A	2016/10/13	Name Redacted
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS5000
Sample ID: KZ-27
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	
Fluoride	ISE/ISE	8429549	N/A	2016/10/11	
Hardness Total (calculated as CaCO3)	CALC	8425781	N/A	2016/10/12	
Hardness (calculated as CaCO3)	CALC	8425828	N/A	2016/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429108	N/A	2016/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8430078	2016/10/12	2016/10/12	
Ion Balance	CALC	8426418	N/A	2016/10/12	
Sum of cations, anions	CALC	8426132	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8425830	N/A	2016/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8429745	N/A	2016/10/12	
Ammonia-N (Preserved)	KONE/COL	8429663	N/A	2016/10/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8430715	N/A	2016/10/08	
Nitrite (N) (low level)	TRAA/COL	8430717	N/A	2016/10/08	
Nitrogen - Nitrate (as N)	CALC	8426133	N/A	2016/10/12	
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	
pH Water	AT/ALK	8427380	N/A	2016/10/08	
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429713	2016/10/12	2016/10/12	
Total Phosphorus - unpreserved	KONE/COL	8429714	N/A	2016/10/12	
Total Suspended Solids-Low Level	BAL/BAL	8427448	2016/10/08	2016/10/11	

Maxxam ID: PS5000 Dup
Sample ID: KZ-27
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	Name Redacted
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	

Maxxam ID: PS5001
Sample ID: KZ-19
Matrix: Water

Collected: 2016/10/04
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427488	N/A	2016/10/13	Name Redacted
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS5001
Sample ID: KZ-19
Matrix: Water

Collected: 2016/10/04
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	Name Redacted
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	
Fluoride	ISE/ISE	8429543	N/A	2016/10/11	
Hardness Total (calculated as CaCO3)	CALC	8425781	N/A	2016/10/12	
Hardness (calculated as CaCO3)	CALC	8425828	N/A	2016/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429108	N/A	2016/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8430078	2016/10/12	2016/10/12	
Ion Balance	CALC	8426418	N/A	2016/10/12	
Sum of cations, anions	CALC	8426132	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8425830	N/A	2016/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8429745	N/A	2016/10/12	
Ammonia-N (Preserved)	KONE/COL	8429663	N/A	2016/10/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8430715	N/A	2016/10/08	
Nitrite (N) (low level)	TRAA/COL	8430717	N/A	2016/10/08	
Nitrogen - Nitrate (as N)	CALC	8426133	N/A	2016/10/12	
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	
pH Water	AT/ALK	8427380	N/A	2016/10/08	
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429710	2016/10/11	2016/10/12	
Total Phosphorus - unpreserved	KONE/COL	8429711	N/A	2016/10/12	
Total Suspended Solids-Low Level	BAL/BAL	8427448	2016/10/08	2016/10/11	

Maxxam ID: PS5002
Sample ID: KZ-28
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427488	N/A	2016/10/13	Name Redacted
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	
Fluoride	ISE/ISE	8429543	N/A	2016/10/11	
Hardness Total (calculated as CaCO3)	CALC	8425781	N/A	2016/10/12	
Hardness (calculated as CaCO3)	CALC	8425828	N/A	2016/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429108	N/A	2016/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8430078	2016/10/12	2016/10/12	
Ion Balance	CALC	8426418	N/A	2016/10/12	
Sum of cations, anions	CALC	8426132	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS5002
Sample ID: KZ-28
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	Name Redacted
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8425830	N/A	2016/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8429745	N/A	2016/10/12	
Ammonia-N (Preserved)	KONE/COL	8429663	N/A	2016/10/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8430715	N/A	2016/10/08	
Nitrite (N) (low level)	TRAA/COL	8430717	N/A	2016/10/08	
Nitrogen - Nitrate (as N)	CALC	8426133	N/A	2016/10/12	
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	
pH Water	AT/ALK	8427380	N/A	2016/10/08	
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429710	2016/10/11	2016/10/12	
Total Phosphorus - unpreserved	KONE/COL	8429711	N/A	2016/10/12	
Total Suspended Solids-Low Level	BAL/BAL	8427448	2016/10/08	2016/10/11	

Maxxam ID: PS5002 Dup
Sample ID: KZ-28
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	Name Redacted
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	
pH Water	AT/ALK	8427380	N/A	2016/10/08	

Maxxam ID: PS5003
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/10/06
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427498	N/A	2016/10/13	Name Redacted
Alkalinity - Water	AT/ALK	8427378	2016/10/08	2016/10/08	
Chloride by Automated Colourimetry	KONE/COL	8429138	N/A	2016/10/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8430883	N/A	2016/10/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8430891	N/A	2016/10/12	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8430899	N/A	2016/10/12	
Conductance - water	AT/ALK	8427379	N/A	2016/10/08	
Fluoride	ISE/ISE	8429543	N/A	2016/10/11	
Hardness Total (calculated as CaCO3)	CALC	8425781	N/A	2016/10/12	
Hardness (calculated as CaCO3)	CALC	8425828	N/A	2016/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429108	N/A	2016/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8448430	2016/10/26	2016/10/26	
Ion Balance	CALC	8426418	N/A	2016/10/12	
Sum of cations, anions	CALC	8426132	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429179	N/A	2016/10/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS5003
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/10/06
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8425830	N/A	2016/10/12	Name Redacted
Elements by ICPMS Low Level (total)	ICP/CRCM	8429745	N/A	2016/10/12	
Ammonia-N (Preserved)	KONE/COL	8429663	N/A	2016/10/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8430715	N/A	2016/10/08	
Nitrite (N) (low level)	TRAA/COL	8430717	N/A	2016/10/08	
Nitrogen - Nitrate (as N)	CALC	8426133	N/A	2016/10/12	
pH Water	AT/ALK	8427380	N/A	2016/10/08	
Sulphate by Automated Colourimetry	KONE/COL	8429141	N/A	2016/10/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429713	2016/10/12	2016/10/12	
Total Phosphorus - unpreserved	KONE/COL	8429714	N/A	2016/10/12	
Total Suspended Solids-Low Level	BAL/BAL	8427448	2016/10/08	2016/10/11	

Maxxam ID: PS5003 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/10/06
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8429108	N/A	2016/10/11	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8448430	2016/10/26	2016/10/26	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8429713	2016/10/12	2016/10/12	
Total Phosphorus - unpreserved	KONE/COL	8429714	N/A	2016/10/12	

Maxxam ID: PS5241
Sample ID: KZ-9_E-SEEP
Matrix: Water

Collected: 2016/10/04
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427482	N/A	2016/10/08	Name Redacted
Alkalinity - Water	AT/ALK	8427355	2016/10/08	2016/10/08	
Conductance - water	AT/ALK	8427359	N/A	2016/10/08	
Hardness (calculated as CaCO3)	CALC	8427077	N/A	2016/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8430230	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429706	N/A	2016/10/12	
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	
pH Water	AT/ALK	8427360	N/A	2016/10/08	

Maxxam ID: PS5242
Sample ID: KZ-9_W-SEEP
Matrix: Water

Collected: 2016/10/04
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427482	N/A	2016/10/08	Name Redacted
Alkalinity - Water	AT/ALK	8427355	2016/10/08	2016/10/08	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS5242 **Collected:** 2016/10/04
Sample ID: KZ-9_W-SEEP **Shipped:**
Matrix: Water **Received:** 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductance - water	AT/ALK	8427359	N/A	2016/10/08	Name Redacted
Hardness (calculated as CaCO3)	CALC	8427077	N/A	2016/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8430230	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429706	N/A	2016/10/12	
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	
pH Water	AT/ALK	8427360	N/A	2016/10/08	

Maxxam ID: PS5243 **Collected:** 2016/10/04
Sample ID: SEEP-3 **Shipped:**
Matrix: Water **Received:** 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427482	N/A	2016/10/08	Name Redacted
Alkalinity - Water	AT/ALK	8427355	2016/10/08	2016/10/08	
Conductance - water	AT/ALK	8427359	N/A	2016/10/08	
Hardness (calculated as CaCO3)	CALC	8427077	N/A	2016/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8430230	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429706	N/A	2016/10/12	
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	
pH Water	AT/ALK	8427360	N/A	2016/10/08	

Maxxam ID: PS5244 **Collected:** 2016/10/04
Sample ID: SEEP-5 **Shipped:**
Matrix: Water **Received:** 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427482	N/A	2016/10/08	Name Redacted
Alkalinity - Water	AT/ALK	8427376	2016/10/08	2016/10/08	
Conductance - water	AT/ALK	8427375	N/A	2016/10/08	
Hardness (calculated as CaCO3)	CALC	8427077	N/A	2016/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8430230	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429706	N/A	2016/10/12	
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	
pH Water	AT/ALK	8427374	N/A	2016/10/08	

Maxxam ID: PS5244 Dup **Collected:** 2016/10/04
Sample ID: SEEP-5 **Shipped:**
Matrix: Water **Received:** 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8427376	2016/10/08	2016/10/08	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: PS5244 Dup
Sample ID: SEEP-5
Matrix: Water

Collected: 2016/10/04
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductance - water	AT/ALK	8427375	N/A	2016/10/08	Name Redacted
pH Water	AT/ALK	8427374	N/A	2016/10/08	

Maxxam ID: PS5245
Sample ID: SEEP-4
Matrix: Water

Collected: 2016/10/03
Shipped:
Received: 2016/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8427482	N/A	2016/10/08	Name Redacted
Alkalinity - Water	AT/ALK	8427355	2016/10/08	2016/10/08	
Conductance - water	AT/ALK	8427359	N/A	2016/10/08	
Hardness (calculated as CaCO3)	CALC	8427077	N/A	2016/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8430230	N/A	2016/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8425829	N/A	2016/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8429706	N/A	2016/10/12	
Filter and HNO3 Preserve for Metals	ICP	8428543	N/A	2016/10/11	
pH Water	AT/ALK	8427360	N/A	2016/10/08	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.7°C
Package 2	3.3°C

Revised Report V2 (M_S, 2016/10/26): Revised mercury result for sample TRIP BLANK due to re-analysis.

Samples collected on October 3rd were received at analytical lab past hold time for Nitrate, Nitrite, Total Phosphorus, and Dissolved Phosphorus. Samples collected on October 4th were received at analytical lab on date of hold time expiry, samples were analyzed past hold time for Nitrate, Nitrite, Total Phosphorus, and Dissolved Phosphorus.

Sample PS5002-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Sample PS5003-01 : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Sample PS4997, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8427355	Alkalinity (PP as CaCO3)	2016/10/08					<0.50	mg/L	NC	20
8427355	Alkalinity (Total as CaCO3)	2016/10/08	97	80 - 120	94	80 - 120	<0.50	mg/L	4.9	20
8427355	Bicarbonate (HCO3)	2016/10/08					<0.50	mg/L	4.9	20
8427355	Carbonate (CO3)	2016/10/08					<0.50	mg/L	NC	20
8427355	Hydroxide (OH)	2016/10/08					<0.50	mg/L	NC	20
8427359	Conductivity	2016/10/08			100	80 - 120	<1.0	uS/cm	0	20
8427360	pH	2016/10/08			101	97 - 103			0.41	N/A
8427374	pH	2016/10/08			101	97 - 103			2.1	N/A
8427375	Conductivity	2016/10/08			100	80 - 120	<1.0	uS/cm	0.24	20
8427376	Alkalinity (PP as CaCO3)	2016/10/08					<0.50	mg/L	NC	20
8427376	Alkalinity (Total as CaCO3)	2016/10/08	NC	80 - 120	97	80 - 120	<0.50	mg/L	0.082	20
8427376	Bicarbonate (HCO3)	2016/10/08					<0.50	mg/L	0.082	20
8427376	Carbonate (CO3)	2016/10/08					<0.50	mg/L	NC	20
8427376	Hydroxide (OH)	2016/10/08					<0.50	mg/L	NC	20
8427378	Alkalinity (PP as CaCO3)	2016/10/08					<0.50	mg/L	NC	20
8427378	Alkalinity (Total as CaCO3)	2016/10/08	NC	80 - 120	96	80 - 120	<0.50	mg/L	1.0	20
8427378	Bicarbonate (HCO3)	2016/10/08					<0.50	mg/L	1.0	20
8427378	Carbonate (CO3)	2016/10/08					<0.50	mg/L	NC	20
8427378	Hydroxide (OH)	2016/10/08					<0.50	mg/L	NC	20
8427379	Conductivity	2016/10/08			102	80 - 120	<1.0	uS/cm	0.84	20
8427380	pH	2016/10/08			101	97 - 103			1.8	N/A
8427448	Total Suspended Solids	2016/10/11			94	80 - 120	<1.0	mg/L		
8427482	Acidity (pH 4.5)	2016/10/08					<0.50	mg/L	NC	20
8427482	Acidity (pH 8.3)	2016/10/08			100	80 - 120	<0.50	mg/L	NC	20
8427488	Acidity (pH 4.5)	2016/10/13			0	N/A	<0.50	mg/L	NC	20
8427488	Acidity (pH 8.3)	2016/10/13			99	80 - 120	<0.50	mg/L	NC	20
8427498	Acidity (pH 4.5)	2016/10/13					<0.50	mg/L	NC	20
8427498	Acidity (pH 8.3)	2016/10/13			101	80 - 120	<0.50	mg/L	NC	20
8429105	Dissolved Mercury (Hg)	2016/10/11	83	80 - 120	84	80 - 120	<0.0000020	mg/L	NC	20
8429108	Dissolved Mercury (Hg)	2016/10/11	101	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8429138	Dissolved Chloride (Cl)	2016/10/11	106	80 - 120	94	80 - 120	<0.50	mg/L	NC	20

Maxxam Job #: B688838
Report Date: 2016/10/26

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8429141	Dissolved Sulphate (SO4)	2016/10/11	NC	80 - 120	91	80 - 120	<0.50	mg/L	0.69	20
8429179	Dissolved Aluminum (Al)	2016/10/12	108	80 - 120	103	80 - 120	<0.00050	mg/L	0.50	20
8429179	Dissolved Antimony (Sb)	2016/10/12	99	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8429179	Dissolved Arsenic (As)	2016/10/12	102	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8429179	Dissolved Barium (Ba)	2016/10/12	NC	80 - 120	99	80 - 120	<0.000020	mg/L	1.1	20
8429179	Dissolved Beryllium (Be)	2016/10/12	100	80 - 120	99	80 - 120	<0.000010	mg/L	NC	20
8429179	Dissolved Bismuth (Bi)	2016/10/12	98	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8429179	Dissolved Boron (B)	2016/10/12	99	80 - 120	99	80 - 120	<0.010	mg/L	NC	20
8429179	Dissolved Cadmium (Cd)	2016/10/12	100	80 - 120	96	80 - 120	<0.0000050	mg/L	0.77	20
8429179	Dissolved Chromium (Cr)	2016/10/12	102	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8429179	Dissolved Cobalt (Co)	2016/10/12	100	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8429179	Dissolved Copper (Cu)	2016/10/12	98	80 - 120	100	80 - 120	<0.000050	mg/L	2.2	20
8429179	Dissolved Iron (Fe)	2016/10/12	108	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
8429179	Dissolved Lead (Pb)	2016/10/12	99	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8429179	Dissolved Lithium (Li)	2016/10/12	102	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8429179	Dissolved Manganese (Mn)	2016/10/12	102	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8429179	Dissolved Molybdenum (Mo)	2016/10/12	NC	80 - 120	101	80 - 120	<0.000050	mg/L	0.34	20
8429179	Dissolved Nickel (Ni)	2016/10/12	99	80 - 120	101	80 - 120	<0.000020	mg/L	5.6	20
8429179	Dissolved Phosphorus (P)	2016/10/12					<0.0020	mg/L	NC	20
8429179	Dissolved Selenium (Se)	2016/10/12	102	80 - 120	99	80 - 120	<0.000040	mg/L	0.55	20
8429179	Dissolved Silicon (Si)	2016/10/12					<0.050	mg/L	1.6	20
8429179	Dissolved Silver (Ag)	2016/10/12	99	80 - 120	86	80 - 120	<0.0000050	mg/L	NC	20
8429179	Dissolved Strontium (Sr)	2016/10/12	NC	80 - 120	96	80 - 120	<0.000050	mg/L	1.6	20
8429179	Dissolved Thallium (Tl)	2016/10/12	86	80 - 120	97	80 - 120	0.0000020, RDL=0.0000020	mg/L	NC	20
8429179	Dissolved Tin (Sn)	2016/10/12	100	80 - 120	113	80 - 120	<0.00020	mg/L	NC	20
8429179	Dissolved Titanium (Ti)	2016/10/12	99	80 - 120	91	80 - 120	<0.00050	mg/L	NC	20
8429179	Dissolved Uranium (U)	2016/10/12	99	80 - 120	98	80 - 120	<0.0000020	mg/L	0.87	20
8429179	Dissolved Vanadium (V)	2016/10/12	101	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8429179	Dissolved Zinc (Zn)	2016/10/12	NC	80 - 120	99	80 - 120	<0.00010	mg/L	0.48	20
8429179	Dissolved Zirconium (Zr)	2016/10/12					<0.00010	mg/L	NC	20

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8429284	Total Mercury (Hg)	2016/10/11	97	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8429543	Fluoride (F)	2016/10/11	102	80 - 120	100	80 - 120	<0.010	mg/L	0	20
8429549	Fluoride (F)	2016/10/11	104	80 - 120	100	80 - 120	<0.010	mg/L	NC	20
8429663	Total Ammonia (N)	2016/10/11	NC	80 - 120	103	80 - 120	<0.0050	mg/L	0.34	20
8429706	Dissolved Aluminum (Al)	2016/10/12	105	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8429706	Dissolved Antimony (Sb)	2016/10/12	104	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8429706	Dissolved Arsenic (As)	2016/10/12	105	80 - 120	98	80 - 120	<0.000020	mg/L	3.3	20
8429706	Dissolved Barium (Ba)	2016/10/12	NC	80 - 120	100	80 - 120	<0.000020	mg/L	1.5	20
8429706	Dissolved Beryllium (Be)	2016/10/12	101	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
8429706	Dissolved Bismuth (Bi)	2016/10/12	100	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8429706	Dissolved Boron (B)	2016/10/12	98	80 - 120	97	80 - 120	<0.010	mg/L	NC	20
8429706	Dissolved Cadmium (Cd)	2016/10/12	99	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8429706	Dissolved Chromium (Cr)	2016/10/12	101	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8429706	Dissolved Cobalt (Co)	2016/10/12	98	80 - 120	100	80 - 120	<0.0000050	mg/L	0	20
8429706	Dissolved Copper (Cu)	2016/10/12	95	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8429706	Dissolved Iron (Fe)	2016/10/12	109	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
8429706	Dissolved Lead (Pb)	2016/10/12	102	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8429706	Dissolved Lithium (Li)	2016/10/12	100	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8429706	Dissolved Manganese (Mn)	2016/10/12	100	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8429706	Dissolved Molybdenum (Mo)	2016/10/12	NC	80 - 120	100	80 - 120	<0.000050	mg/L	2.8	20
8429706	Dissolved Nickel (Ni)	2016/10/12	97	80 - 120	99	80 - 120	<0.000020	mg/L	5.0	20
8429706	Dissolved Phosphorus (P)	2016/10/12					<0.0020	mg/L	NC	20
8429706	Dissolved Selenium (Se)	2016/10/12	103	80 - 120	98	80 - 120	<0.000040	mg/L	1.8	20
8429706	Dissolved Silicon (Si)	2016/10/12					<0.050	mg/L	0.43	20
8429706	Dissolved Silver (Ag)	2016/10/12	90	80 - 120	83	80 - 120	<0.0000050	mg/L	NC	20
8429706	Dissolved Strontium (Sr)	2016/10/12	NC	80 - 120	94	80 - 120	<0.000050	mg/L	1.2	20
8429706	Dissolved Thallium (Tl)	2016/10/12	88	80 - 120	101	80 - 120	0.0000030, RDL=0.0000020	mg/L	NC	20
8429706	Dissolved Tin (Sn)	2016/10/12	105	80 - 120	114	80 - 120	<0.00020	mg/L	NC	20
8429706	Dissolved Titanium (Ti)	2016/10/12	101	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8429706	Dissolved Uranium (U)	2016/10/12	107	80 - 120	102	80 - 120	<0.0000020	mg/L	2.1	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8429706	Dissolved Vanadium (V)	2016/10/12	102	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8429706	Dissolved Zinc (Zn)	2016/10/12	108	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8429706	Dissolved Zirconium (Zr)	2016/10/12					<0.00010	mg/L	NC	20
8429710	Dissolved Phosphorus (P)	2016/10/12	NC	80 - 120	106	80 - 120	<0.0020	mg/L	0.099	20
8429711	Total Phosphorus (P)	2016/10/12	NC	80 - 120	102	80 - 120	<0.0020	mg/L	0.11	20
8429713	Dissolved Phosphorus (P)	2016/10/12	104	80 - 120	92	80 - 120	<0.0020	mg/L	NC	20
8429714	Total Phosphorus (P)	2016/10/12	100	80 - 120	92	80 - 120	<0.0020	mg/L	NC	20
8429745	Total Aluminum (Al)	2016/10/12	103	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8429745	Total Antimony (Sb)	2016/10/12	98	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8429745	Total Arsenic (As)	2016/10/12	105	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8429745	Total Barium (Ba)	2016/10/12	94	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8429745	Total Beryllium (Be)	2016/10/12	102	80 - 120	101	80 - 120	<0.000010	mg/L	NC	20
8429745	Total Bismuth (Bi)	2016/10/12	97	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8429745	Total Boron (B)	2016/10/12	98	80 - 120	101	80 - 120	<0.010	mg/L	NC	20
8429745	Total Cadmium (Cd)	2016/10/12	103	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8429745	Total Chromium (Cr)	2016/10/12	99	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8429745	Total Cobalt (Co)	2016/10/12	100	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8429745	Total Copper (Cu)	2016/10/12	100	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8429745	Total Iron (Fe)	2016/10/12	103	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
8429745	Total Lead (Pb)	2016/10/12	93	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8429745	Total Lithium (Li)	2016/10/12	98	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8429745	Total Manganese (Mn)	2016/10/12	98	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8429745	Total Molybdenum (Mo)	2016/10/12	99	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8429745	Total Nickel (Ni)	2016/10/12	99	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8429745	Total Phosphorus (P)	2016/10/12					<0.0020	mg/L	NC	20
8429745	Total Selenium (Se)	2016/10/12	107	80 - 120	100	80 - 120	<0.000040	mg/L	NC	20
8429745	Total Silicon (Si)	2016/10/12					<0.050	mg/L	NC	20
8429745	Total Silver (Ag)	2016/10/12	81	80 - 120	92	80 - 120	<0.0000050	mg/L	NC	20
8429745	Total Strontium (Sr)	2016/10/12	99	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8429745	Total Thallium (Tl)	2016/10/12	96	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8429745	Total Tin (Sn)	2016/10/12	93	80 - 120	114	80 - 120	<0.00020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8429745	Total Titanium (Ti)	2016/10/12	100	80 - 120	92	80 - 120	<0.00050	mg/L	NC	20
8429745	Total Uranium (U)	2016/10/12	95	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8429745	Total Vanadium (V)	2016/10/12	99	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8429745	Total Zinc (Zn)	2016/10/12	114	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8429745	Total Zirconium (Zr)	2016/10/12					<0.00010	mg/L	NC	20
8430078	Total Mercury (Hg)	2016/10/12	85	80 - 120	97	80 - 120	<0.0000020	mg/L		
8430230	Dissolved Mercury (Hg)	2016/10/12	94	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8430715	Nitrate plus Nitrite (N)	2016/10/08	103	80 - 120	101	80 - 120	<0.0020	mg/L	NC	25
8430717	Nitrite (N)	2016/10/08	97	80 - 120	95	80 - 120	<0.0020	mg/L	NC	25
8430883	Strong Acid Dissoc. Cyanide (CN)	2016/10/12	103	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8430891	Weak Acid Dissoc. Cyanide (CN)	2016/10/12	105	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8430899	Dissolved Organic Carbon (C)	2016/10/12	106	80 - 120	113	80 - 120	<0.50	mg/L	NC	20
8431837	Dissolved Molybdenum (Mo)	2016/10/13	100	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8448430	Total Mercury (Hg)	2016/10/26							NC	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B688838
Report Date: 2016/10/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Name Redacted Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC # 08428205

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (wh	
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:	
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah
Phone:		Phone:	(867) 668-6463	Site #:	
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature

und Time (TAT) Required

[X] Regular TAT 5 days (Most analyses)

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Rush TAT (Surcharges will be applied)

[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days

Date Required:

Rush Confirmation #:

Regulatory Criteria

[ ] BC CSR Soil [ ] BC CSR Water [ ] CCME (Specify) [ ] Other (Specify) [ ] Drinking Water [ ] BC Water Quality

Special Instructions

[ ] Return Cooler [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		04-Oct-16	13:47	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3	KZ-6		03-Oct-16	13:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
4	KZ-7		03-Oct-16	12:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	KZ-9		04-Oct-16	8:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6	KZ-13		03-Oct-16	11:49	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
7	KZ-18		04-Oct-16	9:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
8	KZ-27		03-Oct-16	10:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
9	KZ-19		04-Oct-16	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		11
NA		12

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED AT: WHITEHORSE

BY Signature Redacted @ 0950

2016-10-06

TEMP: 4 / 3 / 4 → cooler #1

4 3 3 → 2

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	06/10/2016	11:00	Signature Redacted	2016/10/07	13:35

B688838_COC

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08428206

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where	
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:	
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah
Phone:		Phone:	(867) 668-6463	Site #:	
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature

Time (TAT) Required

[x] Regular TAT 5 days (Most analyses)

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Rush TAT (Surcharges will be applied)

[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days

Date Required:

Rush Confirmation #:

Regulatory Criteria

[ ] BC CSR Soil [ ] BC CSR Water
[ ] CCME (Specify) [ ] Other (Specify)
[ ] Drinking Water [ ] BC Water Quality

Special Instructions

[ ] Return Cooler
[ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1																			
2																			
3																			
4	KZ-28		03-Oct-16		Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6																			
7																			
8																			
9																			
10																			

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		11.1
NA		12.1

COOLING MEDIA PRESENT Y / N

COMMENTS

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	06/10/2016	11:00	Signature Redacted	2016/10/07	13:35

B688838_COC

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC 08428211

BBY FCD-00077/05

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Andrew MacPhail	Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

RECEIVED IN WHITEHORSE
BY: Signature Redacted @ 0958
2016-10-06
TEMP: 3 / 3 / 3

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		2.13

COOLING MEDIA PRESENT Y / N

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	DISSOLVED LOW LEVEL METALS INCL. MERCURY	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-9_E-SEEP		04-Oct-16	10:40	Water	x	x	x	x	4		Metals vials unpreserved and unfiltered, merc vials preserved but not filtered
3	KZ-9_W-SEEP		04-Oct-16	10:52	Water	x	x	x	x	4		Metals vials unpreserved and unfiltered, merc vials preserved but not filtered
4	SEEP-3		04-Oct-16	11:30	Water	x	x	x	x	4		Metals vials unpreserved and unfiltered, merc vials preserved but not filtered
5	SEEP-5		04-Oct-16	11:56	Water	x	x	x	x	4		Metals vials unpreserved and unfiltered, merc vials preserved but not filtered
6	SEEP-4		03-Oct-16	15:23	Water	x	x	x	x	4		Metals vials unpreserved and unfiltered, merc vials preserved but not filtered
7												
8												
9												
10												

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	October 6th, 2016	11:00	Signature Redacted	2016/10/07	13:35

B688875_COC

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08431182, 08431181

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/11/28
Report #: R2307681
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B6A4199
Received: 2016/11/18, 10:00

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	15	N/A	2016/11/22	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	15	2016/11/22	2016/11/22	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	14	N/A	2016/11/22	BBY6SOP-00011	SM 22 4500-Cl- E m
Chloride by Automated Colourimetry	1	N/A	2016/11/23	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	15	N/A	2016/11/22	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	15	N/A	2016/11/22	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	15	N/A	2016/11/23	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	15	N/A	2016/11/22	BBY6SOP-00026	SM 22 2510 B m
Fluoride	15	N/A	2016/11/22	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	15	N/A	2016/11/23	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	15	N/A	2016/11/23	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	15	N/A	2016/11/23	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	15	2016/11/23	2016/11/23	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	15	N/A	2016/11/23	BBY WI-00033	Auto Calc
Sum of cations, anions	15	N/A	2016/11/23	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	15	N/A	2016/11/23	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	15	N/A	2016/11/23	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	15	N/A	2016/11/23	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	15	N/A	2016/11/22	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	15	N/A	2016/11/22	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	15	N/A	2016/11/22	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	15	N/A	2016/11/22	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	15	N/A	2016/11/23	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	14	N/A	2016/11/22	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	15	N/A	2016/11/22	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	15	N/A	2016/11/22	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	15	2016/11/22	2016/11/22	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	15	N/A	2016/11/22	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	15	2016/11/22	2016/11/23	BBY6SOP-00034	SM 22 2540 D

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08431182, 08431181

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2016/11/28
Report #: R2307681
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B6A4199
Received: 2016/11/18, 10:00

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods. Results relate to samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.

(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.

Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QC0159		QC0160		QC0161		
Sampling Date		2016/11/16 14:00		2016/11/16 11:30		2016/11/16 10:20		
COC Number		08431182		08431182		08431182		
	UNITS	KZ-2	QC Batch	KZ-6	RDL	KZ-7	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.6	8479232	3.6	N/A	3.6	N/A	8479232
Cation Sum	meq/L	2.5	8479232	3.3	N/A	3.5	N/A	8479232
Filter and HNO3 Preservation	N/A	LAB	8479659	LAB	N/A	LAB	N/A	8479659
Ion Balance	N/A	0.95	8479231	0.93	0.010	0.96	0.010	8479231
Nitrate (N)	mg/L	0.160	8478849	0.161	0.0020	0.122	0.0020	8478849
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00051	8480432	0.00051	0.00050	0.00057	0.00050	8480432
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00060	8480441	0.00062	0.00050	0.00065	0.00050	8480441
Fluoride (F)	mg/L	0.048	8481748	0.070	0.010	0.069	0.010	8481748
Dissolved Organic Carbon (C)	mg/L	1.06	8481791	1.04	0.50	1.46	0.50	8481790
Acidity (pH 4.5)	mg/L	<0.50	8480155	<0.50	0.50	<0.50	0.50	8480155
Alkalinity (Total as CaCO3)	mg/L	70.8	8480163	150	0.50	140	0.50	8480163
Acidity (pH 8.3)	mg/L	<0.50	8480155	<0.50	0.50	<0.50	0.50	8480155
Alkalinity (PP as CaCO3)	mg/L	<0.50	8480163	<0.50	0.50	<0.50	0.50	8480163
Bicarbonate (HCO3)	mg/L	86.4	8480163	183	0.50	171	0.50	8480163
Carbonate (CO3)	mg/L	<0.50	8480163	<0.50	0.50	<0.50	0.50	8480163
Hydroxide (OH)	mg/L	<0.50	8480163	<0.50	0.50	<0.50	0.50	8480163
Anions								
Dissolved Sulphate (SO4)	mg/L	56.4	8480684	25.1	0.50	38.6	0.50	8480684
Dissolved Chloride (Cl)	mg/L	<0.50	8480682	0.57	0.50	<0.50	0.50	8480682
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	8480247	<0.0020 (1)	0.0020	0.0024 (1)	0.0020	8480247
Total Ammonia (N)	mg/L	0.0077	8480385	0.025	0.0050	0.030	0.0050	8480385
Nitrate plus Nitrite (N)	mg/L	0.160 (1)	8481589	0.161 (1)	0.0020	0.125 (1)	0.0020	8481548
Nitrite (N)	mg/L	<0.0020 (1)	8481599	<0.0020 (1)	0.0020	0.0022 (1)	0.0020	8481550
Total Phosphorus (P)	mg/L	<0.0020 (1)	8480253	<0.0020 (1)	0.0020	<0.0020 (1)	0.0020	8480253
Physical Properties								
Conductivity	uS/cm	260	8480173	329	1.0	338	1.0	8480173
pH	pH	7.91	8480174	8.26		8.05		8480174

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QC0159		QC0160		QC0161		
Sampling Date		2016/11/16 14:00		2016/11/16 11:30		2016/11/16 10:20		
COC Number		08431182		08431182		08431182		
	UNITS	KZ-2	QC Batch	KZ-6	RDL	KZ-7	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8479539	<1.0	1.0	1.5 (1)	1.3	8479539

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QC0162		QC0163		QC0164		QC0166		
Sampling Date		2016/11/16 08:50		2016/11/16 12:30		2016/11/15 12:35		2016/11/15 13:30		
COC Number		08431182		08431182		08431182		08431182		
	UNITS	KZ-9	QC Batch	KZ-13	QC Batch	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Calculated Parameters										
Anion Sum	meq/L	4.1	8479232	1.9	8479232	4.6	8479232	4.6	N/A	8479232
Cation Sum	meq/L	3.8	8479232	1.8	8479232	4.2	8479232	4.4	N/A	8479232
Filter and HNO3 Preservation	N/A	LAB	8479659	LAB	8479659	LAB	8479659	LAB	N/A	8479659
Ion Balance	N/A	0.95	8479231	0.95	8479231	0.93	8479231	0.97	0.010	8479231
Nitrate (N)	mg/L	0.208	8478849	0.0969	8478849	0.228	8478849	0.272	0.0020	8478849
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00057	8480432	0.00064	8480432	0.00055	8480432	0.00059	0.00050	8480432
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00061	8480441	0.00071	8480441	0.00058	8480441	0.00057	0.00050	8480441
Fluoride (F)	mg/L	0.082	8481748	0.050	8481748	0.094	8481748	0.072	0.010	8481748
Dissolved Organic Carbon (C)	mg/L	1.11	8481790	2.50	8481790	1.11	8481790	0.99	0.50	8481791
Acidity (pH 4.5)	mg/L	<0.50	8480155	<0.50	8480155	<0.50	8480155	<0.50	0.50	8480155
Alkalinity (Total as CaCO3)	mg/L	166	8480163	76.1	8480163	195	8480163	194	0.50	8480163
Acidity (pH 8.3)	mg/L	2.97	8480155	<0.50	8480155	<0.50	8480155	0.93	0.50	8480155
Alkalinity (PP as CaCO3)	mg/L	<0.50	8480163	<0.50	8480163	<0.50	8480163	<0.50	0.50	8480163
Bicarbonate (HCO3)	mg/L	203	8480163	92.8	8480163	237	8480163	236	0.50	8480163
Carbonate (CO3)	mg/L	<0.50	8480163	<0.50	8480163	<0.50	8480163	<0.50	0.50	8480163
Hydroxide (OH)	mg/L	<0.50	8480163	<0.50	8480163	<0.50	8480163	<0.50	0.50	8480163
Anions										
Dissolved Sulphate (SO4)	mg/L	34.2	8480684	16.0	8480684	31.9	8480684	33.0	0.50	8480684
Dissolved Chloride (Cl)	mg/L	0.62	8482348	<0.50	8480682	<0.50	8480682	0.56	0.50	8480682
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0022 (1)	8480247	<0.0020 (1)	8480247	0.0023 (1)	8480247	<0.0020 (1)	0.0020	8480247
Total Ammonia (N)	mg/L	0.020	8480387	0.023	8480385	0.022	8480385	0.019	0.0050	8480385
Nitrate plus Nitrite (N)	mg/L	0.208 (1)	8481548	0.0969 (1)	8481548	0.230 (1)	8481548	0.272 (1)	0.0020	8481548
Nitrite (N)	mg/L	<0.0020 (1)	8481550	<0.0020 (1)	8481550	0.0021 (1)	8481550	<0.0020 (1)	0.0020	8481550
Total Phosphorus (P)	mg/L	0.0021 (1)	8480253	<0.0020 (1)	8480253	0.0035 (1)	8480253	<0.0020 (1)	0.0020	8480253
Physical Properties										
Conductivity	uS/cm	380	8480173	181	8480173	416	8480173	417	1.0	8480173
pH	pH	7.89	8480174	7.96	8480174	8.15	8480174	8.09		8480174

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QC0162		QC0163		QC0164		QC0166		
Sampling Date		2016/11/16 08:50		2016/11/16 12:30		2016/11/15 12:35		2016/11/15 13:30		
COC Number		08431182		08431182		08431182		08431182		
	UNITS	KZ-9	QC Batch	KZ-13	QC Batch	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Physical Properties										
Total Suspended Solids	mg/L	1.6	8479539	1.0	8479539	2.1	8479536	<1.0	1.0	8479536
RDL = Reportable Detection Limit										

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QC0167			QC0168		QC0169		
Sampling Date		2016/11/15 14:25			2016/11/15 12:42		2016/11/15 11:10		
COC Number		08431182			08431182		08431181		
	UNITS	KZ-17	RDL	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	4.1	N/A	8479232	0.012	8479232	6.0	N/A	8479232
Cation Sum	meq/L	3.6	N/A	8479232	0.0029	8479232	5.7	N/A	8479232
Filter and HNO3 Preservation	N/A	LAB	N/A	8479659	LAB	8479659	LAB	N/A	8479659
Ion Balance	N/A	0.88	0.010	8479231	0.25 (1)	8479231	0.95	0.010	8479231
Nitrate (N)	mg/L	0.260	0.0020	8478849	<0.0020	8478849	0.107	0.0020	8478849
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00069	0.00050	8480437	0.00056	8480437	0.00071	0.00050	8480437
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00066	0.00050	8480441	<0.00050	8480441	0.00066	0.00050	8480441
Fluoride (F)	mg/L	0.088	0.010	8481748	0.013	8481748	0.180	0.010	8481748
Dissolved Organic Carbon (C)	mg/L	1.51	0.50	8481791	<0.50	8481791	3.27	0.50	8481791
Acidity (pH 4.5)	mg/L	<0.50	0.50	8480155	<0.50	8480155	<0.50	0.50	8480155
Alkalinity (Total as CaCO3)	mg/L	168	0.50	8480163	<0.50	8480163	258	0.50	8480163
Acidity (pH 8.3)	mg/L	1.25	0.50	8480155	<0.50	8480155	2.22	0.50	8480155
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8480163	<0.50	8480163	<0.50	0.50	8480163
Bicarbonate (HCO3)	mg/L	205	0.50	8480163	<0.50	8480163	315	0.50	8480163
Carbonate (CO3)	mg/L	<0.50	0.50	8480163	<0.50	8480163	<0.50	0.50	8480163
Hydroxide (OH)	mg/L	<0.50	0.50	8480163	<0.50	8480163	<0.50	0.50	8480163
Anions									
Dissolved Sulphate (SO4)	mg/L	32.0	0.50	8480684	0.53	8480691	40.7	0.50	8480684
Dissolved Chloride (Cl)	mg/L	0.58	0.50	8480682	<0.50	8480688	0.81	0.50	8480682
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020 (2)	0.0020	8480247	<0.0020 (2)	8480247	0.0102 (2)	0.0020	8480247
Total Ammonia (N)	mg/L	0.024	0.0050	8480385	0.019	8480385	0.086	0.0050	8480385
Nitrate plus Nitrite (N)	mg/L	0.260 (2)	0.0020	8481589	<0.0020 (2)	8481589	0.110 (2)	0.0020	8481548
Nitrite (N)	mg/L	<0.0020 (2)	0.0020	8481599	<0.0020 (2)	8481599	0.0030 (2)	0.0020	8481550
Total Phosphorus (P)	mg/L	<0.0020 (2)	0.0020	8480253	<0.0020 (2)	8480253	0.0132 (2)	0.0020	8480253
Physical Properties									
Conductivity	uS/cm	372	1.0	8480173	1.3	8480173	537	1.0	8480173

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to higher measurement uncertainty at this level (Ion Sum < 3 meq/L for both cations and anions).

(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QC0167			QC0168		QC0169		
Sampling Date		2016/11/15 14:25			2016/11/15 12:42		2016/11/15 11:10		
COC Number		08431182			08431182		08431181		
	UNITS	KZ-17	RDL	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
pH	pH	8.03		8480174	5.79	8480174	8.10		8480174
Physical Properties									
Total Suspended Solids	mg/L	<1.1 (1)	1.1	8479536	<1.0	8479536	1.8	1.0	8479536

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QC0170		QC0171	QC0172		QC0173		
Sampling Date		2016/11/15 10:29		2016/11/15 08:45	2016/11/15 09:00		2016/11/18 10:00		
COC Number		08431181		08431181	08431181		08431181		
	UNITS	KZ-22	QC Batch	KZ-26	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	5.4	8479232	5.5	5.6	8479232	0.00070	N/A	8479232
Cation Sum	meq/L	5.2	8479232	5.2	5.4	8479232	0.0037	N/A	8479232
Filter and HNO3 Preservation	N/A	LAB	8479659	LAB	LAB	8479659		N/A	8479659
Ion Balance	N/A	0.97	8479231	0.94	0.97	8479231	NC	0.010	8479231
Nitrate (N)	mg/L	0.174	8478849	0.159	0.159	8478849	<0.0020	0.0020	8478849
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00080	8480437	0.00072	0.00069	8480437	0.00081	0.00050	8480437
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00064	8480441	0.00080	0.00072	8480441	0.00063	0.00050	8480441
Fluoride (F)	mg/L	0.130	8481748	0.120	0.120	8481748	0.013	0.010	8481748
Dissolved Organic Carbon (C)	mg/L	1.91	8481790	2.46	2.58	8481791	<0.50	0.50	8481790
Acidity (pH 4.5)	mg/L	<0.50	8480155	<0.50	<0.50	8480155	<0.50	0.50	8480155
Alkalinity (Total as CaCO3)	mg/L	227	8480163	232	233	8480163	<0.50	0.50	8480163
Acidity (pH 8.3)	mg/L	<0.50	8480155	<0.50	<0.50	8480155	<0.50	0.50	8480155
Alkalinity (PP as CaCO3)	mg/L	<0.50	8480163	2.99	2.52	8480163	<0.50	0.50	8480163
Bicarbonate (HCO3)	mg/L	277	8480163	276	278	8480163	<0.50	0.50	8480163
Carbonate (CO3)	mg/L	<0.50	8480163	3.59	3.02	8480163	<0.50	0.50	8480163
Hydroxide (OH)	mg/L	<0.50	8480163	<0.50	<0.50	8480163	<0.50	0.50	8480163
Anions									
Dissolved Sulphate (SO4)	mg/L	40.6	8480691	41.3	42.4	8480691	<0.50	0.50	8480691
Dissolved Chloride (Cl)	mg/L	<0.50	8480688	0.54	0.57	8480688	<0.50	0.50	8480688
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0052 (1)	8480247	0.0020 (1)	0.0029 (1)	8480247	<0.0020 (1)	0.0020	8480247
Total Ammonia (N)	mg/L	0.047	8480385	0.026	0.033	8480385	<0.0050	0.0050	8480385
Nitrate plus Nitrite (N)	mg/L	0.174 (1)	8481589	0.159 (1)	0.159 (1)	8481589	<0.0020 (1)	0.0020	8481589
Nitrite (N)	mg/L	<0.0020 (1)	8481599	<0.0020 (1)	<0.0020 (1)	8481599	<0.0020 (1)	0.0020	8481599
Total Phosphorus (P)	mg/L	0.0049 (1)	8480253	<0.0020 (1)	0.0026 (1)	8480253	<0.0020 (1)	0.0020	8480253
Physical Properties									
Conductivity	uS/cm	484	8480173	488	489	8480173	1.3	1.0	8480173
pH	pH	8.19	8480174	8.35	8.34	8480174	5.43		8480174

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QC0170		QC0171	QC0172		QC0173		
Sampling Date		2016/11/15 10:29		2016/11/15 08:45	2016/11/15 09:00		2016/11/18 10:00		
COC Number		08431181		08431181	08431181		08431181		
	UNITS	KZ-22	QC Batch	KZ-26	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8479536	<1.0	<1.0	8479536	<1.0	1.0	8479539
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QC0174		
Sampling Date		2016/11/16 09:30		
COC Number		08431181		
	UNITS	KZ-18	RDL	QC Batch
Calculated Parameters				
Anion Sum	meq/L	4.2	N/A	8479232
Cation Sum	meq/L	4.2	N/A	8479232
Filter and HNO3 Preservation	N/A	LAB	N/A	8479659
Ion Balance	N/A	1.0	0.010	8479231
Nitrate (N)	mg/L	0.186	0.0020	8478849
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00071	0.00050	8480437
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00073	0.00050	8480441
Fluoride (F)	mg/L	0.066	0.010	8481748
Dissolved Organic Carbon (C)	mg/L	0.77	0.50	8481791
Acidity (pH 4.5)	mg/L	<0.50	0.50	8480155
Alkalinity (Total as CaCO3)	mg/L	186	0.50	8480163
Acidity (pH 8.3)	mg/L	0.55	0.50	8480155
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8480163
Bicarbonate (HCO3)	mg/L	227	0.50	8480163
Carbonate (CO3)	mg/L	<0.50	0.50	8480163
Hydroxide (OH)	mg/L	<0.50	0.50	8480163
Anions				
Dissolved Sulphate (SO4)	mg/L	23.5	0.50	8480691
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8480688
Nutrients				
Dissolved Phosphorus (P)	mg/L	0.0302 (1)	0.0020	8480247
Total Ammonia (N)	mg/L	0.011	0.0050	8480385
Nitrate plus Nitrite (N)	mg/L	0.186 (1)	0.0020	8481589
Nitrite (N)	mg/L	<0.0020 (1)	0.0020	8481599
Total Phosphorus (P)	mg/L	0.0320 (1)	0.0020	8480253
Physical Properties				
Conductivity	uS/cm	382	1.0	8480173
pH	pH	8.10		8480174

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QC0174		
Sampling Date		2016/11/16 09:30		
COC Number		08431181		
	UNITS	KZ-18	RDL	QC Batch
Physical Properties				
Total Suspended Solids	mg/L	1.3	1.0	8479539
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QC0159		QC0160		QC0161		
Sampling Date		2016/11/16 14:00		2016/11/16 11:30		2016/11/16 10:20		
COC Number		08431182		08431182		08431182		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	120	8478434	162	8478434	169	0.50	8478434
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8481384	<0.0000020	8481384	<0.0000020	0.0000020	8481384
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00173	8480015	0.00177	8480015	0.00141	0.00050	8480015
Dissolved Antimony (Sb)	mg/L	0.000022	8480015	<0.000020	8480015	0.000046	0.000020	8480015
Dissolved Arsenic (As)	mg/L	0.000058	8480015	0.000074	8480015	0.000136	0.000020	8480015
Dissolved Barium (Ba)	mg/L	0.0716	8480015	0.0483	8480015	0.0864	0.000020	8480015
Dissolved Beryllium (Be)	mg/L	<0.000010	8480015	<0.000010	8480015	<0.000010	0.000010	8480015
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8480015	<0.0000050	8480015	<0.0000050	0.0000050	8480015
Dissolved Boron (B)	mg/L	<0.010	8480015	<0.010	8480015	<0.010	0.010	8480015
Dissolved Cadmium (Cd)	mg/L	0.000259	8480015	0.0000140	8480015	0.000137	0.0000050	8480015
Dissolved Chromium (Cr)	mg/L	<0.00010	8480015	<0.00010	8480015	<0.00010	0.00010	8480015
Dissolved Cobalt (Co)	mg/L	0.0000080	8480015	0.0000090	8480015	0.0000970	0.0000050	8480015
Dissolved Copper (Cu)	mg/L	0.000498	8480015	0.000146	8480015	0.000230	0.000050	8480015
Dissolved Iron (Fe)	mg/L	<0.0010	8480015	0.0084	8480015	0.0158	0.0010	8480015
Dissolved Lead (Pb)	mg/L	0.0000200	8480015	0.0000130	8480015	0.0000050	0.0000050	8480015
Dissolved Lithium (Li)	mg/L	0.00135	8480015	0.00093	8480015	0.00238	0.00050	8480015
Dissolved Manganese (Mn)	mg/L	<0.000050	8480015	0.000436	8480015	0.0923	0.000050	8480015
Dissolved Molybdenum (Mo)	mg/L	0.000609	8480015	0.000516	8480015	0.000546	0.000050	8480015
Dissolved Nickel (Ni)	mg/L	0.000363	8480015	0.000159 (1)	8483493	0.000491	0.000020	8480015
Dissolved Phosphorus (P)	mg/L	0.0026	8480015	0.0034	8480015	0.0025	0.0020	8480015
Dissolved Selenium (Se)	mg/L	0.00174	8480015	0.000934	8480015	0.00111	0.000040	8480015
Dissolved Silicon (Si)	mg/L	2.31	8480015	2.81	8480015	3.48	0.050	8480015
Dissolved Silver (Ag)	mg/L	<0.0000050	8480015	<0.0000050	8480015	<0.0000050	0.0000050	8480015
Dissolved Strontium (Sr)	mg/L	0.125	8480015	0.166	8480015	0.175	0.000050	8480015
Dissolved Thallium (Tl)	mg/L	0.0000040	8480015	0.0000020	8480015	0.0000030	0.0000020	8480015
Dissolved Tin (Sn)	mg/L	<0.00020	8480015	<0.00020	8480015	<0.00020	0.00020	8480015
Dissolved Titanium (Ti)	mg/L	<0.00050	8480015	<0.00050	8480015	<0.00050	0.00050	8480015
Dissolved Uranium (U)	mg/L	0.00302	8480015	0.00103	8480015	0.00129	0.0000020	8480015

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QC0159		QC0160		QC0161		
Sampling Date		2016/11/16 14:00		2016/11/16 11:30		2016/11/16 10:20		
COC Number		08431182		08431182		08431182		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	8480015	<0.00020	8480015	<0.00020	0.00020	8480015
Dissolved Zinc (Zn)	mg/L	0.0372	8480015	0.00082 (1)	8480015	0.0637	0.00010	8480015
Dissolved Zirconium (Zr)	mg/L	<0.00010	8480015	<0.00010	8480015	<0.00010	0.00010	8480015
Dissolved Calcium (Ca)	mg/L	39.4	8478694	53.3	8478694	56.3	0.050	8478694
Dissolved Magnesium (Mg)	mg/L	5.18	8478694	6.99	8478694	6.99	0.050	8478694
Dissolved Potassium (K)	mg/L	1.94	8478694	0.855	8478694	1.47	0.050	8478694
Dissolved Sodium (Na)	mg/L	0.807	8478694	0.727	8478694	1.01	0.050	8478694
Dissolved Sulphur (S)	mg/L	17.7	8478694	7.8	8478694	12.2	3.0	8478694

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QC0162	QC0163	QC0164		QC0166		
Sampling Date		2016/11/16 08:50	2016/11/16 12:30	2016/11/15 12:35		2016/11/15 13:30		
COC Number		08431182	08431182	08431182		08431182		
	UNITS	KZ-9	KZ-13	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	188	84.5	209	8478434	218	0.50	8478434
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8481384	<0.0000020	0.0000020	8481384
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00091	0.00446	0.00090	8480015	0.00065	0.00050	8480015
Dissolved Antimony (Sb)	mg/L	0.000039	0.000030	0.000030	8480015	<0.000020	0.000020	8480015
Dissolved Arsenic (As)	mg/L	0.000154	0.000120	0.000323	8480015	0.000202	0.000020	8480015
Dissolved Barium (Ba)	mg/L	0.0895	0.111	0.0826	8480015	0.0753	0.000020	8480015
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8480015	<0.000010	0.000010	8480015
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8480015	<0.0000050	0.0000050	8480015
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8480015	<0.010	0.010	8480015
Dissolved Cadmium (Cd)	mg/L	0.0000790	0.0000190	0.0000360	8480015	0.0000220	0.0000050	8480015
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8480015	<0.00010	0.00010	8480015
Dissolved Cobalt (Co)	mg/L	0.0000870	0.0000250	0.0000250	8480015	0.0000230	0.0000050	8480015
Dissolved Copper (Cu)	mg/L	0.000223	0.000420	0.000208	8480015	0.000220	0.000050	8480015
Dissolved Iron (Fe)	mg/L	0.0239	0.0312	0.0045	8480015	0.0042	0.0010	8480015
Dissolved Lead (Pb)	mg/L	0.0000050	0.0000160	<0.0000050	8480015	0.0000050	0.0000050	8480015
Dissolved Lithium (Li)	mg/L	0.00295	0.00138	0.00295	8480015	0.00241	0.00050	8480015
Dissolved Manganese (Mn)	mg/L	0.0761	0.0247	0.0277	8480015	0.00819	0.000050	8480015
Dissolved Molybdenum (Mo)	mg/L	0.000617	0.000663	0.00118	8480015	0.000460	0.000050	8480015
Dissolved Nickel (Ni)	mg/L	0.000409	0.000359	0.000584	8480015	0.000412	0.000020	8480015
Dissolved Phosphorus (P)	mg/L	0.0035	0.0025	0.0034	8480015	0.0026	0.0020	8480015
Dissolved Selenium (Se)	mg/L	0.00132	0.000246	0.00137	8480015	0.00146	0.000040	8480015
Dissolved Silicon (Si)	mg/L	3.50	3.39	3.44	8480015	3.17	0.050	8483493
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8480015	<0.0000050	0.0000050	8480015
Dissolved Strontium (Sr)	mg/L	0.202	0.0766	0.196	8480015	0.212	0.000050	8480015
Dissolved Thallium (Tl)	mg/L	0.0000020	0.0000020	<0.0000020	8480015	<0.0000020	0.0000020	8480015
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8480015	<0.00020	0.00020	8480015
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8480015	<0.00050	0.00050	8480015
Dissolved Uranium (U)	mg/L	0.00141	0.000827	0.00316	8480015	0.00214	0.0000020	8480015
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8480015	<0.00020	0.00020	8480015

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QC0162	QC0163	QC0164		QC0166		
Sampling Date		2016/11/16 08:50	2016/11/16 12:30	2016/11/15 12:35		2016/11/15 13:30		
COC Number		08431182	08431182	08431182		08431182		
	UNITS	KZ-9	KZ-13	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0231	0.00238	0.00502	8480015	0.00076	0.00010	8480015
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8480015	<0.00010	0.00010	8480015
Dissolved Calcium (Ca)	mg/L	62.4	29.0	63.0	8478694	66.9	0.050	8478694
Dissolved Magnesium (Mg)	mg/L	7.72	2.95	12.5	8478694	12.4	0.050	8478694
Dissolved Potassium (K)	mg/L	1.53	1.63	1.13	8478694	1.16	0.050	8478694
Dissolved Sodium (Na)	mg/L	1.19	0.964	1.06	8478694	1.21	0.050	8478694
Dissolved Sulphur (S)	mg/L	12.1	4.6	9.7	8478694	11.3	3.0	8478694
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QC0167	QC0168	QC0169		QC0170		
Sampling Date		2016/11/15 14:25	2016/11/15 12:42	2016/11/15 11:10		2016/11/15 10:29		
COC Number		08431182	08431182	08431181		08431181		
	UNITS	KZ-17	KZ-19	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	175	<0.50	279	8478434	256	0.50	8478434
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8481384	<0.0000020	0.0000020	8481384
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00069	<0.00050	0.00121	8480015	0.00281	0.00050	8480015
Dissolved Antimony (Sb)	mg/L	0.000027	<0.000020	0.000044	8480015	0.000044	0.000020	8480015
Dissolved Arsenic (As)	mg/L	0.000219	<0.000020	0.000707	8480015	0.000638	0.000020	8480015
Dissolved Barium (Ba)	mg/L	0.0649	<0.000020	0.0748	8480015	0.0766	0.000020	8480015
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8480015	<0.000010	0.000010	8480015
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8480015	<0.0000050	0.0000050	8480015
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8480015	<0.010	0.010	8480015
Dissolved Cadmium (Cd)	mg/L	0.0000150	<0.0000050	0.0000100	8480015	0.0000140	0.0000050	8480015
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8480015	<0.00010	0.00010	8480015
Dissolved Cobalt (Co)	mg/L	0.0000060	<0.0000050	0.000104	8480015	0.0000580	0.0000050	8480015
Dissolved Copper (Cu)	mg/L	0.000245	<0.000050	0.000397 (1)	8480015	0.000383 (1)	0.000050	8480015
Dissolved Iron (Fe)	mg/L	<0.0010	<0.0010	0.0235	8480015	0.0124	0.0010	8480015
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000050	8480015	0.0000080	0.0000050	8480015
Dissolved Lithium (Li)	mg/L	0.00213	<0.00050	0.00659	8480015	0.00435	0.00050	8480015
Dissolved Manganese (Mn)	mg/L	0.000110	<0.000050	0.124	8480015	0.0486	0.000050	8480015
Dissolved Molybdenum (Mo)	mg/L	0.000914	<0.000050	0.00150	8480015	0.00125	0.000050	8480015
Dissolved Nickel (Ni)	mg/L	0.000325	<0.000020	0.00208	8480015	0.00247	0.000020	8483493
Dissolved Phosphorus (P)	mg/L	0.0057	0.0033	0.0056	8480015	0.0066	0.0020	8480015
Dissolved Selenium (Se)	mg/L	0.00115	<0.000040	0.000700	8480015	0.00115	0.000040	8480015
Dissolved Silicon (Si)	mg/L	2.89	<0.050	5.32	8480015	4.32	0.050	8480015
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8480015	<0.0000050	0.0000050	8480015
Dissolved Strontium (Sr)	mg/L	0.174	<0.000050	0.219	8480015	0.214	0.000050	8480015
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000020	<0.0000020	8480015	<0.0000020	0.0000020	8480015
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8480015	<0.00020	0.00020	8480015
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8480015	<0.00050	0.00050	8480015
Dissolved Uranium (U)	mg/L	0.00242	<0.0000020	0.00286	8480015	0.00319	0.0000020	8480015

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QC0167	QC0168	QC0169		QC0170		
Sampling Date		2016/11/15 14:25	2016/11/15 12:42	2016/11/15 11:10		2016/11/15 10:29		
COC Number		08431182	08431182	08431181		08431181		
	UNITS	KZ-17	KZ-19	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8480015	<0.00020	0.00020	8480015
Dissolved Zinc (Zn)	mg/L	0.00087	<0.00010	0.00125	8480015	0.00179	0.00010	8480015
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00014	8480015	<0.00010	0.00010	8480015
Dissolved Calcium (Ca)	mg/L	52.4	<0.050	69.8	8478694	68.9	0.050	8478694
Dissolved Magnesium (Mg)	mg/L	10.6	<0.050	25.4	8478694	20.4	0.050	8478694
Dissolved Potassium (K)	mg/L	1.10	<0.050	1.97	8478694	1.57	0.050	8478694
Dissolved Sodium (Na)	mg/L	1.03	<0.050	1.82	8478694	1.57	0.050	8478694
Dissolved Sulphur (S)	mg/L	9.8	<3.0	13.3	8478694	13.6	3.0	8478694

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QC0171	QC0172	QC0173	QC0174		
Sampling Date		2016/11/15 08:45	2016/11/15 09:00	2016/11/18 10:00	2016/11/16 09:30		
COC Number		08431181	08431181	08431181	08431181		
	UNITS	KZ-26	KZ-28	TRIP BLANK	KZ-18	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	255	265	<0.50	208	0.50	8478434
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8481384
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00253	0.00093	<0.00050	0.00344	0.00050	8480015
Dissolved Antimony (Sb)	mg/L	0.000070	0.000068	<0.000020	0.000031	0.000020	8480015
Dissolved Arsenic (As)	mg/L	0.000390	0.000459	<0.000020	0.000562	0.000020	8480015
Dissolved Barium (Ba)	mg/L	0.0823	0.0804	<0.000020	0.0502	0.000020	8480015
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8480015
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8480015
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8480015
Dissolved Cadmium (Cd)	mg/L	0.0000100	0.0000090	<0.0000050	0.0000300	0.0000050	8480015
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8480015
Dissolved Cobalt (Co)	mg/L	0.0000130	0.0000110	<0.0000050	0.0000110	0.0000050	8480015
Dissolved Copper (Cu)	mg/L	0.000412	0.000417	<0.000050	0.000137	0.000050	8480015
Dissolved Iron (Fe)	mg/L	0.0051	0.0053	<0.0010	0.0082	0.0010	8480015
Dissolved Lead (Pb)	mg/L	0.0000070	0.0000060	<0.0000050	<0.0000050	0.0000050	8480015
Dissolved Lithium (Li)	mg/L	0.00527	0.00546	<0.00050	0.00164	0.00050	8480015
Dissolved Manganese (Mn)	mg/L	0.00236	0.00222	<0.000050	0.00483	0.000050	8480015
Dissolved Molybdenum (Mo)	mg/L	0.00110	0.00109	<0.000050	0.00130	0.000050	8480015
Dissolved Nickel (Ni)	mg/L	0.000791	0.000775	<0.000020	0.000298	0.000020	8480015
Dissolved Phosphorus (P)	mg/L	0.0080	0.0039	<0.0020	0.0338	0.0020	8480015
Dissolved Selenium (Se)	mg/L	0.00101	0.00106	<0.000040	0.00132	0.000040	8480015
Dissolved Silicon (Si)	mg/L	4.19	4.30	<0.050	3.23	0.050	8480015
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8480015
Dissolved Strontium (Sr)	mg/L	0.221	0.227	<0.000050	0.179	0.000050	8480015
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8480015
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8480015
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8480015
Dissolved Uranium (U)	mg/L	0.00301	0.00307	<0.0000020	0.00238	0.0000020	8480015
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8480015

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QC0171	QC0172	QC0173	QC0174		
Sampling Date		2016/11/15 08:45	2016/11/15 09:00	2016/11/18 10:00	2016/11/16 09:30		
COC Number		08431181	08431181	08431181	08431181		
	UNITS	KZ-26	KZ-28	TRIP BLANK	KZ-18	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00057	0.00063	<0.00010	0.00092	0.00010	8480015
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8480015
Dissolved Calcium (Ca)	mg/L	69.0	71.5	<0.050	53.7	0.050	8478694
Dissolved Magnesium (Mg)	mg/L	20.0	21.1	<0.050	17.9	0.050	8478694
Dissolved Potassium (K)	mg/L	1.44	1.48	<0.050	0.562	0.050	8478694
Dissolved Sodium (Na)	mg/L	1.63	1.69	<0.050	0.855	0.050	8478694
Dissolved Sulphur (S)	mg/L	13.0	14.0	<3.0	8.0	3.0	8478694
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QC0159	QC0160	QC0161	QC0162	QC0163		
Sampling Date		2016/11/16 14:00	2016/11/16 11:30	2016/11/16 10:20	2016/11/16 08:50	2016/11/16 12:30		
COC Number		08431182	08431182	08431182	08431182	08431182		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-9	KZ-13	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	124	179	177	198	80.2	0.50	8478433
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8481364
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00676	0.00129	0.00760	0.0147	0.0150	0.00050	8480609
Total Antimony (Sb)	mg/L	0.000023	<0.000020	0.000048	0.000042	0.000033	0.000020	8480609
Total Arsenic (As)	mg/L	0.000068	0.000062	0.000230	0.000381	0.000184	0.000020	8480609
Total Barium (Ba)	mg/L	0.0725	0.0495	0.0896	0.113	0.110	0.000020	8480609
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8480609
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8480609
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8480609
Total Cadmium (Cd)	mg/L	0.000277	0.0000090	0.000324	0.000129	0.0000310	0.0000050	8480609
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8480609
Total Cobalt (Co)	mg/L	0.0000100	0.0000060	0.0000990	0.000109	0.0000380	0.0000050	8480609
Total Copper (Cu)	mg/L	0.00154	0.000110	0.000436	0.000380	0.000474	0.000050	8480609
Total Iron (Fe)	mg/L	0.0104	0.0125	0.275	1.17	0.108	0.0010	8480609
Total Lead (Pb)	mg/L	0.0000240	<0.0000050	0.0000870	0.000115	0.0000770	0.0000050	8480609
Total Lithium (Li)	mg/L	0.00137	0.00079	0.00255	0.00348	0.00147	0.00050	8480609
Total Manganese (Mn)	mg/L	0.000235	0.000372	0.101	0.0850	0.0411	0.000050	8480609
Total Molybdenum (Mo)	mg/L	0.000637	0.000560	0.000599	0.000747	0.000656	0.000050	8480609
Total Nickel (Ni)	mg/L	0.00182	0.000122	0.000552	0.000465	0.000393	0.000020	8480609
Total Phosphorus (P)	mg/L	0.0030	<0.0020	0.0058	0.0041	0.0034	0.0020	8480609
Total Selenium (Se)	mg/L	0.00187	0.00110	0.00118	0.00141	0.000242	0.000040	8480609
Total Silicon (Si)	mg/L	2.40	3.33	3.54	3.69	3.61	0.050	8480609
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8480609
Total Strontium (Sr)	mg/L	0.135	0.179	0.183	0.205	0.0821	0.000050	8480609
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8480609
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8480609
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8480609
Total Uranium (U)	mg/L	0.00323	0.00116	0.00137	0.00173	0.000905	0.0000020	8480609
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8480609

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QC0159	QC0160	QC0161	QC0162	QC0163		
Sampling Date		2016/11/16 14:00	2016/11/16 11:30	2016/11/16 10:20	2016/11/16 08:50	2016/11/16 12:30		
COC Number		08431182	08431182	08431182	08431182	08431182		
	UNITS	**KZ-2**	**KZ-6**	**KZ-7**	**KZ-9**	**KZ-13**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.0396	0.00017	0.0758	0.0284	0.00349	0.00010	8480609
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8480609
Total Calcium (Ca)	mg/L	40.7	59.6	58.9	66.3	27.1	0.050	8479233
Total Magnesium (Mg)	mg/L	5.41	7.31	7.22	7.93	3.03	0.050	8479233
Total Potassium (K)	mg/L	2.01	0.869	1.49	1.49	1.67	0.050	8479233
Total Sodium (Na)	mg/L	0.829	0.739	1.05	1.15	1.00	0.050	8479233
Total Sulphur (S)	mg/L	19.2	8.3	13.5	11.8	5.4	3.0	8479233

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QC0164	QC0166	QC0167	QC0168	QC0169		
Sampling Date		2016/11/15 12:35	2016/11/15 13:30	2016/11/15 14:25	2016/11/15 12:42	2016/11/15 11:10		
COC Number		08431182	08431182	08431182	08431182	08431181		
	UNITS	**KZ-15**	**KZ-16**	**KZ-17**	**KZ-19**	**KZ-21**	**RDL**	**QC Batch**
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	207	270	195	<0.50	279	0.50	8478433
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8481364
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0546	0.00268	0.00272	<0.00050	0.00548	0.00050	8480609
Total Antimony (Sb)	mg/L	0.000036	0.000049	0.000025	<0.000020	0.000044	0.000020	8480609
Total Arsenic (As)	mg/L	0.00113	0.000203	0.000271	<0.000020	0.00217	0.000020	8480609
Total Barium (Ba)	mg/L	0.0895	0.0878	0.0641	<0.000020	0.0762	0.000020	8480609
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8480609
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8480609
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8480609
Total Cadmium (Cd)	mg/L	0.0000840	0.0000480	0.0000200	<0.0000050	0.0000180	0.0000050	8480609
Total Chromium (Cr)	mg/L	0.00013	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8480609
Total Cobalt (Co)	mg/L	0.000196	0.0000360	0.0000060	<0.0000050	0.000143	0.0000050	8480609
Total Copper (Cu)	mg/L	0.000631	0.000499	0.000337	<0.000050	0.000281	0.000050	8480609
Total Iron (Fe)	mg/L	0.357	0.0220	0.0200	<0.0010	0.573	0.0010	8480609
Total Lead (Pb)	mg/L	0.000312	0.000259	0.0000140	<0.0000050	0.0000170	0.0000050	8480609
Total Lithium (Li)	mg/L	0.00303	0.00273	0.00236	<0.00050	0.00689	0.00050	8480609
Total Manganese (Mn)	mg/L	0.0863	0.0110	0.00247	<0.000050	0.151	0.000050	8480609
Total Molybdenum (Mo)	mg/L	0.00115	0.000556	0.000904	<0.000050	0.00149	0.000050	8480609
Total Nickel (Ni)	mg/L	0.00119	0.000487	0.000372	<0.000020	0.00210	0.000020	8480609
Total Phosphorus (P)	mg/L	0.0276	0.0022	0.0034	<0.0020	0.0172	0.0020	8480609
Total Selenium (Se)	mg/L	0.00135	0.00171	0.00134	<0.000040	0.000733	0.000040	8480609
Total Silicon (Si)	mg/L	3.40	2.79	3.15	<0.050	5.97	0.050	8480609
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8480609
Total Strontium (Sr)	mg/L	0.214	0.213	0.189	<0.000050	0.218	0.000050	8480609
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8480609
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8480609
Total Titanium (Ti)	mg/L	0.00311	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8480609
Total Uranium (U)	mg/L	0.00348	0.00270	0.00246	<0.0000020	0.00308	0.0000020	8480609
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8480609

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QC0164	QC0166	QC0167	QC0168	QC0169		
Sampling Date		2016/11/15 12:35	2016/11/15 13:30	2016/11/15 14:25	2016/11/15 12:42	2016/11/15 11:10		
COC Number		08431182	08431182	08431182	08431182	08431181		
	UNITS	**KZ-15**	**KZ-16**	**KZ-17**	**KZ-19**	**KZ-21**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.0125	0.00215	0.00115	<0.00010	0.00146	0.00010	8480609
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00020	0.00010	8480609
Total Calcium (Ca)	mg/L	59.7	86.9	59.6	<0.050	70.2	0.050	8479233
Total Magnesium (Mg)	mg/L	14.0	12.9	11.3	<0.050	25.2	0.050	8479233
Total Potassium (K)	mg/L	1.25	1.18	1.16	<0.050	1.91	0.050	8479233
Total Sodium (Na)	mg/L	1.18	1.51	1.07	<0.050	1.78	0.050	8479233
Total Sulphur (S)	mg/L	11.2	11.7	11.1	<3.0	14.5	3.0	8479233

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QC0170	QC0171	QC0172	QC0173	QC0174		
Sampling Date		2016/11/15 10:29	2016/11/15 08:45	2016/11/15 09:00	2016/11/18 10:00	2016/11/16 09:30		
COC Number		08431181	08431181	08431181	08431181	08431181		
	UNITS	KZ-22	KZ-26	KZ-28	TRIP BLANK	KZ-18	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	244	245	256	<0.50	202	0.50	8478433
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8481364
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00519	0.00328	0.00567	<0.00050	0.0100	0.00050	8480609
Total Antimony (Sb)	mg/L	0.000039	0.000069	0.000070	<0.000020	0.000031	0.000020	8480609
Total Arsenic (As)	mg/L	0.00140	0.000506	0.000563	<0.000020	0.000530	0.000020	8480609
Total Barium (Ba)	mg/L	0.0803	0.0789	0.0831	<0.000020	0.0506	0.000020	8480609
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8480609
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8480609
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8480609
Total Cadmium (Cd)	mg/L	0.0000220	0.0000130	0.0000120	<0.0000050	0.0000340	0.0000050	8480609
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8480609
Total Cobalt (Co)	mg/L	0.0000810	0.0000140	0.0000280	<0.0000050	0.0000160	0.0000050	8480609
Total Copper (Cu)	mg/L	0.000284	0.000470	0.000473	<0.000050	0.000154	0.000050	8480609
Total Iron (Fe)	mg/L	0.289	0.0335	0.0580	<0.0010	0.0225	0.0010	8480609
Total Lead (Pb)	mg/L	0.0000240	0.0000410	0.0000500	<0.0000050	0.0000120	0.0000050	8480609
Total Lithium (Li)	mg/L	0.00431	0.00558	0.00539	<0.00050	0.00152	0.00050	8480609
Total Manganese (Mn)	mg/L	0.0662	0.00416	0.00771	<0.000050	0.00629	0.000050	8480609
Total Molybdenum (Mo)	mg/L	0.00124	0.00107	0.00110	<0.000050	0.00137	0.000050	8480609
Total Nickel (Ni)	mg/L	0.00113	0.000834	0.000810	<0.000020	0.000371	0.000020	8480609
Total Phosphorus (P)	mg/L	0.0075	0.0037	0.0046	<0.0020	0.0342	0.0020	8480609
Total Selenium (Se)	mg/L	0.00114	0.000962	0.00101	<0.000040	0.00134	0.000040	8480609
Total Silicon (Si)	mg/L	4.58	4.66	4.38	<0.050	3.32	0.050	8480609
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8480609
Total Strontium (Sr)	mg/L	0.212	0.244	0.230	<0.000050	0.173	0.000050	8480609
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8480609
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8480609
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8480609
Total Uranium (U)	mg/L	0.00341	0.00312	0.00317	<0.0000020	0.00254	0.0000020	8480609
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8480609

RDL = Reportable Detection Limit

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QC0170	QC0171	QC0172	QC0173	QC0174		
Sampling Date		2016/11/15 10:29	2016/11/15 08:45	2016/11/15 09:00	2016/11/18 10:00	2016/11/16 09:30		
COC Number		08431181	08431181	08431181	08431181	08431181		
	UNITS	KZ-22	KZ-26	KZ-28	TRIP BLANK	KZ-18	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00205	0.00069	0.00083	<0.00010	0.00115	0.00010	8480609
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8480609
Total Calcium (Ca)	mg/L	66.9	62.1	68.4	<0.050	53.0	0.050	8479233
Total Magnesium (Mg)	mg/L	18.6	21.8	20.7	<0.050	17.0	0.050	8479233
Total Potassium (K)	mg/L	1.46	1.55	1.50	<0.050	0.528	0.050	8479233
Total Sodium (Na)	mg/L	1.47	1.75	1.69	<0.050	0.805	0.050	8479233
Total Sulphur (S)	mg/L	13.1	15.8	13.5	<3.0	7.8	3.0	8479233

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QC0159
Sample ID: KZ-2
Matrix: Water

Collected: 2016/11/16
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8480155	N/A	2016/11/22	Name Redacted
Alkalinity - Water	AT/ALK	8480163	2016/11/22	2016/11/22	
Chloride by Automated Colourimetry	KONE/COL	8480682	N/A	2016/11/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8480432	N/A	2016/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8480441	N/A	2016/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8481791	N/A	2016/11/23	
Conductance - water	AT/ALK	8480173	N/A	2016/11/22	
Fluoride	ISE/ISE	8481748	N/A	2016/11/22	
Hardness Total (calculated as CaCO3)	CALC	8478433	N/A	2016/11/23	
Hardness (calculated as CaCO3)	CALC	8478434	N/A	2016/11/23	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8481384	N/A	2016/11/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8481364	2016/11/23	2016/11/23	
Ion Balance	CALC	8479231	N/A	2016/11/23	
Sum of cations, anions	CALC	8479232	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8478694	N/A	2016/11/23	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8480015	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8479233	N/A	2016/11/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8480609	N/A	2016/11/22	
Ammonia-N (Preserved)	KONE/COL	8480385	N/A	2016/11/22	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8481589	N/A	2016/11/22	
Nitrite (N) (low level)	TRAA/COL	8481599	N/A	2016/11/22	
Nitrogen - Nitrate (as N)	CALC	8478849	N/A	2016/11/23	
Filter and HNO3 Preserve for Metals	ICP	8479659	N/A	2016/11/22	
pH Water	AT/ALK	8480174	N/A	2016/11/22	
Sulphate by Automated Colourimetry	KONE/COL	8480684	N/A	2016/11/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8480247	2016/11/22	2016/11/22	
Total Phosphorus - unpreserved	KONE/COL	8480253	N/A	2016/11/22	
Total Suspended Solids-Low Level	BAL/BAL	8479539	2016/11/22	2016/11/23	

Maxxam ID: QC0159 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2016/11/16
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8480015	N/A	2016/11/23	Name Redacted

Maxxam ID: QC0160
Sample ID: KZ-6
Matrix: Water

Collected: 2016/11/16
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8480155	N/A	2016/11/22	Name Redacted
Alkalinity - Water	AT/ALK	8480163	2016/11/22	2016/11/22	
Chloride by Automated Colourimetry	KONE/COL	8480682	N/A	2016/11/22	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QC0160
Sample ID: KZ-6
Matrix: Water

Collected: 2016/11/16
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8480432	N/A	2016/11/22	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8480441	N/A	2016/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8481790	N/A	2016/11/23	
Conductance - water	AT/ALK	8480173	N/A	2016/11/22	
Fluoride	ISE/ISE	8481748	N/A	2016/11/22	
Hardness Total (calculated as CaCO3)	CALC	8478433	N/A	2016/11/23	
Hardness (calculated as CaCO3)	CALC	8478434	N/A	2016/11/23	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8481384	N/A	2016/11/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8481364	2016/11/23	2016/11/23	
Ion Balance	CALC	8479231	N/A	2016/11/23	
Sum of cations, anions	CALC	8479232	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8478694	N/A	2016/11/23	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8480015	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8479233	N/A	2016/11/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8480609	N/A	2016/11/22	
Ammonia-N (Preserved)	KONE/COL	8480385	N/A	2016/11/22	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8481548	N/A	2016/11/22	
Nitrite (N) (low level)	TRAA/COL	8481550	N/A	2016/11/22	
Nitrogen - Nitrate (as N)	CALC	8478849	N/A	2016/11/23	
Filter and HNO3 Preserve for Metals	ICP	8479659	N/A	2016/11/22	
pH Water	AT/ALK	8480174	N/A	2016/11/22	
Sulphate by Automated Colourimetry	KONE/COL	8480684	N/A	2016/11/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8480247	2016/11/22	2016/11/22	
Total Phosphorus - unpreserved	KONE/COL	8480253	N/A	2016/11/22	
Total Suspended Solids-Low Level	BAL/BAL	8479539	2016/11/22	2016/11/23	

Maxxam ID: QC0161
Sample ID: KZ-7
Matrix: Water

Collected: 2016/11/16
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8480155	N/A	2016/11/22	Name Redacted
Alkalinity - Water	AT/ALK	8480163	2016/11/22	2016/11/22	
Chloride by Automated Colourimetry	KONE/COL	8480682	N/A	2016/11/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8480432	N/A	2016/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8480441	N/A	2016/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8481790	N/A	2016/11/23	
Conductance - water	AT/ALK	8480173	N/A	2016/11/22	
Fluoride	ISE/ISE	8481748	N/A	2016/11/22	
Hardness Total (calculated as CaCO3)	CALC	8478433	N/A	2016/11/23	
Hardness (calculated as CaCO3)	CALC	8478434	N/A	2016/11/23	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8481384	N/A	2016/11/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8481364	2016/11/23	2016/11/23	
Ion Balance	CALC	8479231	N/A	2016/11/23	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QC0161
Sample ID: KZ-7
Matrix: Water

Collected: 2016/11/16
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sum of cations, anions	CALC	8479232	N/A	2016/11/23	Name Redacted
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8478694	N/A	2016/11/23	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8480015	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8479233	N/A	2016/11/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8480609	N/A	2016/11/22	
Ammonia-N (Preserved)	KONE/COL	8480385	N/A	2016/11/22	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8481548	N/A	2016/11/22	
Nitrite (N) (low level)	TRAA/COL	8481550	N/A	2016/11/22	
Nitrogen - Nitrate (as N)	CALC	8478849	N/A	2016/11/23	
Filter and HNO3 Preserve for Metals	ICP	8479659	N/A	2016/11/22	
pH Water	AT/ALK	8480174	N/A	2016/11/22	
Sulphate by Automated Colourimetry	KONE/COL	8480684	N/A	2016/11/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8480247	2016/11/22	2016/11/22	
Total Phosphorus - unpreserved	KONE/COL	8480253	N/A	2016/11/22	
Total Suspended Solids-Low Level	BAL/BAL	8479539	2016/11/22	2016/11/23	

Maxxam ID: QC0162
Sample ID: KZ-9
Matrix: Water

Collected: 2016/11/16
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8480155	N/A	2016/11/22	Name Redacted
Alkalinity - Water	AT/ALK	8480163	2016/11/22	2016/11/22	
Chloride by Automated Colourimetry	KONE/COL	8482348	N/A	2016/11/23	
Cyanide SAD (strong acid dissociable)	TECH/COL	8480432	N/A	2016/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8480441	N/A	2016/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8481790	N/A	2016/11/23	
Conductance - water	AT/ALK	8480173	N/A	2016/11/22	
Fluoride	ISE/ISE	8481748	N/A	2016/11/22	
Hardness Total (calculated as CaCO3)	CALC	8478433	N/A	2016/11/23	
Hardness (calculated as CaCO3)	CALC	8478434	N/A	2016/11/23	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8481384	N/A	2016/11/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8481364	2016/11/23	2016/11/23	
Ion Balance	CALC	8479231	N/A	2016/11/23	
Sum of cations, anions	CALC	8479232	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8478694	N/A	2016/11/23	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8480015	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8479233	N/A	2016/11/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8480609	N/A	2016/11/22	
Ammonia-N (Preserved)	KONE/COL	8480387	N/A	2016/11/22	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8481548	N/A	2016/11/22	
Nitrite (N) (low level)	TRAA/COL	8481550	N/A	2016/11/22	
Nitrogen - Nitrate (as N)	CALC	8478849	N/A	2016/11/23	
Filter and HNO3 Preserve for Metals	ICP	8479659	N/A	2016/11/22	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QC0162
Sample ID: KZ-9
Matrix: Water

Collected: 2016/11/16
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH Water	AT/ALK	8480174	N/A	2016/11/22	Name Redacted
Sulphate by Automated Colourimetry	KONE/COL	8480684	N/A	2016/11/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8480247	2016/11/22	2016/11/22	
Total Phosphorus - unpreserved	KONE/COL	8480253	N/A	2016/11/22	
Total Suspended Solids-Low Level	BAL/BAL	8479539	2016/11/22	2016/11/23	

Maxxam ID: QC0162 Dup
Sample ID: KZ-9
Matrix: Water

Collected: 2016/11/16
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8480387	N/A	2016/11/22	Name Redacted

Maxxam ID: QC0163
Sample ID: KZ-13
Matrix: Water

Collected: 2016/11/16
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8480155	N/A	2016/11/22	Name Redacted
Alkalinity - Water	AT/ALK	8480163	2016/11/22	2016/11/22	
Chloride by Automated Colourimetry	KONE/COL	8480682	N/A	2016/11/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8480432	N/A	2016/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8480441	N/A	2016/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8481790	N/A	2016/11/23	
Conductance - water	AT/ALK	8480173	N/A	2016/11/22	
Fluoride	ISE/ISE	8481748	N/A	2016/11/22	
Hardness Total (calculated as CaCO3)	CALC	8478433	N/A	2016/11/23	
Hardness (calculated as CaCO3)	CALC	8478434	N/A	2016/11/23	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8481384	N/A	2016/11/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8481364	2016/11/23	2016/11/23	
Ion Balance	CALC	8479231	N/A	2016/11/23	
Sum of cations, anions	CALC	8479232	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8478694	N/A	2016/11/23	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8480015	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8479233	N/A	2016/11/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8480609	N/A	2016/11/22	
Ammonia-N (Preserved)	KONE/COL	8480385	N/A	2016/11/22	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8481548	N/A	2016/11/22	
Nitrite (N) (low level)	TRAA/COL	8481550	N/A	2016/11/22	
Nitrogen - Nitrate (as N)	CALC	8478849	N/A	2016/11/23	
Filter and HNO3 Preserve for Metals	ICP	8479659	N/A	2016/11/22	
pH Water	AT/ALK	8480174	N/A	2016/11/22	
Sulphate by Automated Colourimetry	KONE/COL	8480684	N/A	2016/11/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8480247	2016/11/22	2016/11/22	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QC0163
Sample ID: KZ-13
Matrix: Water

Collected: 2016/11/16
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - unpreserved	KONE/COL	8480253	N/A	2016/11/22	Name Redacted
Total Suspended Solids-Low Level	BAL/BAL	8479539	2016/11/22	2016/11/23	

Maxxam ID: QC0164
Sample ID: KZ-15
Matrix: Water

Collected: 2016/11/15
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8480155	N/A	2016/11/22	Name Redacted
Alkalinity - Water	AT/ALK	8480163	2016/11/22	2016/11/22	
Chloride by Automated Colourimetry	KONE/COL	8480682	N/A	2016/11/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8480432	N/A	2016/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8480441	N/A	2016/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8481790	N/A	2016/11/23	
Conductance - water	AT/ALK	8480173	N/A	2016/11/22	
Fluoride	ISE/ISE	8481748	N/A	2016/11/22	
Hardness Total (calculated as CaCO3)	CALC	8478433	N/A	2016/11/23	
Hardness (calculated as CaCO3)	CALC	8478434	N/A	2016/11/23	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8481384	N/A	2016/11/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8481364	2016/11/23	2016/11/23	
Ion Balance	CALC	8479231	N/A	2016/11/23	
Sum of cations, anions	CALC	8479232	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8478694	N/A	2016/11/23	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8480015	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8479233	N/A	2016/11/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8480609	N/A	2016/11/22	
Ammonia-N (Preserved)	KONE/COL	8480385	N/A	2016/11/22	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8481548	N/A	2016/11/22	
Nitrite (N) (low level)	TRAA/COL	8481550	N/A	2016/11/22	
Nitrogen - Nitrate (as N)	CALC	8478849	N/A	2016/11/23	
Filter and HNO3 Preserve for Metals	ICP	8479659	N/A	2016/11/22	
pH Water	AT/ALK	8480174	N/A	2016/11/22	
Sulphate by Automated Colourimetry	KONE/COL	8480684	N/A	2016/11/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8480247	2016/11/22	2016/11/22	
Total Phosphorus - unpreserved	KONE/COL	8480253	N/A	2016/11/22	
Total Suspended Solids-Low Level	BAL/BAL	8479536	2016/11/22	2016/11/23	

Maxxam ID: QC0166
Sample ID: KZ-16
Matrix: Water

Collected: 2016/11/15
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8480155	N/A	2016/11/22	Name Redacted
Alkalinity - Water	AT/ALK	8480163	2016/11/22	2016/11/22	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QC0166
Sample ID: KZ-16
Matrix: Water

Collected: 2016/11/15
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8480682	N/A	2016/11/22	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8480432	N/A	2016/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8480441	N/A	2016/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8481791	N/A	2016/11/23	
Conductance - water	AT/ALK	8480173	N/A	2016/11/22	
Fluoride	ISE/ISE	8481748	N/A	2016/11/22	
Hardness Total (calculated as CaCO3)	CALC	8478433	N/A	2016/11/23	
Hardness (calculated as CaCO3)	CALC	8478434	N/A	2016/11/23	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8481384	N/A	2016/11/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8481364	2016/11/23	2016/11/23	
Ion Balance	CALC	8479231	N/A	2016/11/23	
Sum of cations, anions	CALC	8479232	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8478694	N/A	2016/11/23	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8480015	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8479233	N/A	2016/11/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8480609	N/A	2016/11/22	
Ammonia-N (Preserved)	KONE/COL	8480385	N/A	2016/11/22	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8481548	N/A	2016/11/22	
Nitrite (N) (low level)	TRAA/COL	8481550	N/A	2016/11/22	
Nitrogen - Nitrate (as N)	CALC	8478849	N/A	2016/11/23	
Filter and HNO3 Preserve for Metals	ICP	8479659	N/A	2016/11/22	
pH Water	AT/ALK	8480174	N/A	2016/11/22	
Sulphate by Automated Colourimetry	KONE/COL	8480684	N/A	2016/11/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8480247	2016/11/22	2016/11/22	
Total Phosphorus - unpreserved	KONE/COL	8480253	N/A	2016/11/22	
Total Suspended Solids-Low Level	BAL/BAL	8479536	2016/11/22	2016/11/23	

Maxxam ID: QC0167
Sample ID: KZ-17
Matrix: Water

Collected: 2016/11/15
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8480155	N/A	2016/11/22	Name Redacted
Alkalinity - Water	AT/ALK	8480163	2016/11/22	2016/11/22	
Chloride by Automated Colourimetry	KONE/COL	8480682	N/A	2016/11/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8480437	N/A	2016/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8480441	N/A	2016/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8481791	N/A	2016/11/23	
Conductance - water	AT/ALK	8480173	N/A	2016/11/22	
Fluoride	ISE/ISE	8481748	N/A	2016/11/22	
Hardness Total (calculated as CaCO3)	CALC	8478433	N/A	2016/11/23	
Hardness (calculated as CaCO3)	CALC	8478434	N/A	2016/11/23	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8481384	N/A	2016/11/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8481364	2016/11/23	2016/11/23	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QC0167
Sample ID: KZ-17
Matrix: Water

Collected: 2016/11/15
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance	CALC	8479231	N/A	2016/11/23	Name Redacted
Sum of cations, anions	CALC	8479232	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8478694	N/A	2016/11/23	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8480015	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8479233	N/A	2016/11/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8480609	N/A	2016/11/22	
Ammonia-N (Preserved)	KONE/COL	8480385	N/A	2016/11/22	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8481589	N/A	2016/11/22	
Nitrite (N) (low level)	TRAA/COL	8481599	N/A	2016/11/22	
Nitrogen - Nitrate (as N)	CALC	8478849	N/A	2016/11/23	
Filter and HNO3 Preserve for Metals	ICP	8479659	N/A	2016/11/22	
pH Water	AT/ALK	8480174	N/A	2016/11/22	
Sulphate by Automated Colourimetry	KONE/COL	8480684	N/A	2016/11/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8480247	2016/11/22	2016/11/22	
Total Phosphorus - unpreserved	KONE/COL	8480253	N/A	2016/11/22	
Total Suspended Solids-Low Level	BAL/BAL	8479536	2016/11/22	2016/11/23	

Maxxam ID: QC0167 Dup
Sample ID: KZ-17
Matrix: Water

Collected: 2016/11/15
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8480437	N/A	2016/11/22	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8480441	N/A	2016/11/22	

Maxxam ID: QC0168
Sample ID: KZ-19
Matrix: Water

Collected: 2016/11/15
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8480155	N/A	2016/11/22	Name Redacted
Alkalinity - Water	AT/ALK	8480163	2016/11/22	2016/11/22	
Chloride by Automated Colourimetry	KONE/COL	8480688	N/A	2016/11/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8480437	N/A	2016/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8480441	N/A	2016/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8481791	N/A	2016/11/23	
Conductance - water	AT/ALK	8480173	N/A	2016/11/22	
Fluoride	ISE/ISE	8481748	N/A	2016/11/22	
Hardness Total (calculated as CaCO3)	CALC	8478433	N/A	2016/11/23	
Hardness (calculated as CaCO3)	CALC	8478434	N/A	2016/11/23	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8481384	N/A	2016/11/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8481364	2016/11/23	2016/11/23	
Ion Balance	CALC	8479231	N/A	2016/11/23	
Sum of cations, anions	CALC	8479232	N/A	2016/11/23	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QC0168
Sample ID: KZ-19
Matrix: Water

Collected: 2016/11/15
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8478694	N/A	2016/11/23	Name Redacted
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8480015	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8479233	N/A	2016/11/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8480609	N/A	2016/11/22	
Ammonia-N (Preserved)	KONE/COL	8480385	N/A	2016/11/22	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8481589	N/A	2016/11/22	
Nitrite (N) (low level)	TRAA/COL	8481599	N/A	2016/11/22	
Nitrogen - Nitrate (as N)	CALC	8478849	N/A	2016/11/23	
Filter and HNO3 Preserve for Metals	ICP	8479659	N/A	2016/11/22	
pH Water	AT/ALK	8480174	N/A	2016/11/22	
Sulphate by Automated Colourimetry	KONE/COL	8480691	N/A	2016/11/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8480247	2016/11/22	2016/11/22	
Total Phosphorus - unpreserved	KONE/COL	8480253	N/A	2016/11/22	
Total Suspended Solids-Low Level	BAL/BAL	8479536	2016/11/22	2016/11/23	

Maxxam ID: QC0169
Sample ID: KZ-21
Matrix: Water

Collected: 2016/11/15
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8480155	N/A	2016/11/22	Name Redacted
Alkalinity - Water	AT/ALK	8480163	2016/11/22	2016/11/22	
Chloride by Automated Colourimetry	KONE/COL	8480682	N/A	2016/11/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8480437	N/A	2016/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8480441	N/A	2016/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8481791	N/A	2016/11/23	
Conductance - water	AT/ALK	8480173	N/A	2016/11/22	
Fluoride	ISE/ISE	8481748	N/A	2016/11/22	
Hardness Total (calculated as CaCO3)	CALC	8478433	N/A	2016/11/23	
Hardness (calculated as CaCO3)	CALC	8478434	N/A	2016/11/23	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8481384	N/A	2016/11/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8481364	2016/11/23	2016/11/23	
Ion Balance	CALC	8479231	N/A	2016/11/23	
Sum of cations, anions	CALC	8479232	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8478694	N/A	2016/11/23	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8480015	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8479233	N/A	2016/11/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8480609	N/A	2016/11/22	
Ammonia-N (Preserved)	KONE/COL	8480385	N/A	2016/11/22	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8481548	N/A	2016/11/22	
Nitrite (N) (low level)	TRAA/COL	8481550	N/A	2016/11/22	
Nitrogen - Nitrate (as N)	CALC	8478849	N/A	2016/11/23	
Filter and HNO3 Preserve for Metals	ICP	8479659	N/A	2016/11/22	
pH Water	AT/ALK	8480174	N/A	2016/11/22	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QC0169
Sample ID: KZ-21
Matrix: Water

Collected: 2016/11/15
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate by Automated Colourimetry	KONE/COL	8480684	N/A	2016/11/22	Name Redacted
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8480247	2016/11/22	2016/11/22	
Total Phosphorus - unpreserved	KONE/COL	8480253	N/A	2016/11/22	
Total Suspended Solids-Low Level	BAL/BAL	8479536	2016/11/22	2016/11/23	

Maxxam ID: QC0170
Sample ID: KZ-22
Matrix: Water

Collected: 2016/11/15
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8480155	N/A	2016/11/22	Name Redacted
Alkalinity - Water	AT/ALK	8480163	2016/11/22	2016/11/22	
Chloride by Automated Colourimetry	KONE/COL	8480688	N/A	2016/11/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8480437	N/A	2016/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8480441	N/A	2016/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8481790	N/A	2016/11/23	
Conductance - water	AT/ALK	8480173	N/A	2016/11/22	
Fluoride	ISE/ISE	8481748	N/A	2016/11/22	
Hardness Total (calculated as CaCO3)	CALC	8478433	N/A	2016/11/23	
Hardness (calculated as CaCO3)	CALC	8478434	N/A	2016/11/23	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8481384	N/A	2016/11/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8481364	2016/11/23	2016/11/23	
Ion Balance	CALC	8479231	N/A	2016/11/23	
Sum of cations, anions	CALC	8479232	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8478694	N/A	2016/11/23	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8480015	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8479233	N/A	2016/11/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8480609	N/A	2016/11/22	
Ammonia-N (Preserved)	KONE/COL	8480385	N/A	2016/11/22	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8481589	N/A	2016/11/22	
Nitrite (N) (low level)	TRAA/COL	8481599	N/A	2016/11/22	
Nitrogen - Nitrate (as N)	CALC	8478849	N/A	2016/11/23	
Filter and HNO3 Preserve for Metals	ICP	8479659	N/A	2016/11/22	
pH Water	AT/ALK	8480174	N/A	2016/11/22	
Sulphate by Automated Colourimetry	KONE/COL	8480691	N/A	2016/11/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8480247	2016/11/22	2016/11/22	
Total Phosphorus - unpreserved	KONE/COL	8480253	N/A	2016/11/22	
Total Suspended Solids-Low Level	BAL/BAL	8479536	2016/11/22	2016/11/23	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QC0171
Sample ID: KZ-26
Matrix: Water

Collected: 2016/11/15
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8480155	N/A	2016/11/22	Name Redacted
Alkalinity - Water	AT/ALK	8480163	2016/11/22	2016/11/22	
Chloride by Automated Colourimetry	KONE/COL	8480688	N/A	2016/11/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8480437	N/A	2016/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8480441	N/A	2016/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8481791	N/A	2016/11/23	
Conductance - water	AT/ALK	8480173	N/A	2016/11/22	
Fluoride	ISE/ISE	8481748	N/A	2016/11/22	
Hardness Total (calculated as CaCO3)	CALC	8478433	N/A	2016/11/23	
Hardness (calculated as CaCO3)	CALC	8478434	N/A	2016/11/23	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8481384	N/A	2016/11/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8481364	2016/11/23	2016/11/23	
Ion Balance	CALC	8479231	N/A	2016/11/23	
Sum of cations, anions	CALC	8479232	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8478694	N/A	2016/11/23	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8480015	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8479233	N/A	2016/11/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8480609	N/A	2016/11/22	
Ammonia-N (Preserved)	KONE/COL	8480385	N/A	2016/11/22	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8481589	N/A	2016/11/22	
Nitrite (N) (low level)	TRAA/COL	8481599	N/A	2016/11/22	
Nitrogen - Nitrate (as N)	CALC	8478849	N/A	2016/11/23	
Filter and HNO3 Preserve for Metals	ICP	8479659	N/A	2016/11/22	
pH Water	AT/ALK	8480174	N/A	2016/11/22	
Sulphate by Automated Colourimetry	KONE/COL	8480691	N/A	2016/11/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8480247	2016/11/22	2016/11/22	
Total Phosphorus - unpreserved	KONE/COL	8480253	N/A	2016/11/22	
Total Suspended Solids-Low Level	BAL/BAL	8479536	2016/11/22	2016/11/23	

Maxxam ID: QC0172
Sample ID: KZ-28
Matrix: Water

Collected: 2016/11/15
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8480155	N/A	2016/11/22	Name Redacted
Alkalinity - Water	AT/ALK	8480163	2016/11/22	2016/11/22	
Chloride by Automated Colourimetry	KONE/COL	8480688	N/A	2016/11/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8480437	N/A	2016/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8480441	N/A	2016/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8481791	N/A	2016/11/23	
Conductance - water	AT/ALK	8480173	N/A	2016/11/22	
Fluoride	ISE/ISE	8481748	N/A	2016/11/22	
Hardness Total (calculated as CaCO3)	CALC	8478433	N/A	2016/11/23	
Hardness (calculated as CaCO3)	CALC	8478434	N/A	2016/11/23	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QC0172
Sample ID: KZ-28
Matrix: Water

Collected: 2016/11/15
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8481384	N/A	2016/11/23	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8481364	2016/11/23	2016/11/23	
Ion Balance	CALC	8479231	N/A	2016/11/23	
Sum of cations, anions	CALC	8479232	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8478694	N/A	2016/11/23	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8480015	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8479233	N/A	2016/11/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8480609	N/A	2016/11/22	
Ammonia-N (Preserved)	KONE/COL	8480385	N/A	2016/11/22	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8481589	N/A	2016/11/22	
Nitrite (N) (low level)	TRAA/COL	8481599	N/A	2016/11/22	
Nitrogen - Nitrate (as N)	CALC	8478849	N/A	2016/11/23	
Filter and HNO3 Preserve for Metals	ICP	8479659	N/A	2016/11/22	
pH Water	AT/ALK	8480174	N/A	2016/11/22	
Sulphate by Automated Colourimetry	KONE/COL	8480691	N/A	2016/11/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8480247	2016/11/22	2016/11/22	
Total Phosphorus - unpreserved	KONE/COL	8480253	N/A	2016/11/22	
Total Suspended Solids-Low Level	BAL/BAL	8479536	2016/11/22	2016/11/23	

Maxxam ID: QC0172 Dup
Sample ID: KZ-28
Matrix: Water

Collected: 2016/11/15
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8481791	N/A	2016/11/23	Isabel Choi

Maxxam ID: QC0173
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/11/18
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8480155	N/A	2016/11/22	Name Redacted
Alkalinity - Water	AT/ALK	8480163	2016/11/22	2016/11/22	
Chloride by Automated Colourimetry	KONE/COL	8480688	N/A	2016/11/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8480437	N/A	2016/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8480441	N/A	2016/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8481790	N/A	2016/11/23	
Conductance - water	AT/ALK	8480173	N/A	2016/11/22	
Fluoride	ISE/ISE	8481748	N/A	2016/11/22	
Hardness Total (calculated as CaCO3)	CALC	8478433	N/A	2016/11/23	
Hardness (calculated as CaCO3)	CALC	8478434	N/A	2016/11/23	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8481384	N/A	2016/11/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8481364	2016/11/23	2016/11/23	
Ion Balance	CALC	8479231	N/A	2016/11/23	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QC0173
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/11/18
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sum of cations, anions	CALC	8479232	N/A	2016/11/23	Name Redacted
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8478694	N/A	2016/11/23	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8480015	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8479233	N/A	2016/11/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8480609	N/A	2016/11/22	
Ammonia-N (Preserved)	KONE/COL	8480385	N/A	2016/11/22	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8481589	N/A	2016/11/22	
Nitrite (N) (low level)	TRAA/COL	8481599	N/A	2016/11/22	
Nitrogen - Nitrate (as N)	CALC	8478849	N/A	2016/11/23	
pH Water	AT/ALK	8480174	N/A	2016/11/22	
Sulphate by Automated Colourimetry	KONE/COL	8480691	N/A	2016/11/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8480247	2016/11/22	2016/11/22	
Total Phosphorus - unpreserved	KONE/COL	8480253	N/A	2016/11/22	
Total Suspended Solids-Low Level	BAL/BAL	8479539	2016/11/22	2016/11/23	

Maxxam ID: QC0173 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/11/18
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8481384	N/A	2016/11/23	Name Redacted

Maxxam ID: QC0174
Sample ID: KZ-18
Matrix: Water

Collected: 2016/11/16
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8480155	N/A	2016/11/22	Name Redacted
Alkalinity - Water	AT/ALK	8480163	2016/11/22	2016/11/22	
Chloride by Automated Colourimetry	KONE/COL	8480688	N/A	2016/11/22	
Cyanide SAD (strong acid dissociable)	TECH/COL	8480437	N/A	2016/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8480441	N/A	2016/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8481791	N/A	2016/11/23	
Conductance - water	AT/ALK	8480173	N/A	2016/11/22	
Fluoride	ISE/ISE	8481748	N/A	2016/11/22	
Hardness Total (calculated as CaCO3)	CALC	8478433	N/A	2016/11/23	
Hardness (calculated as CaCO3)	CALC	8478434	N/A	2016/11/23	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8481384	N/A	2016/11/23	
Mercury (Total-LowLevel) by CVAF	CV/AF	8481364	2016/11/23	2016/11/23	
Ion Balance	CALC	8479231	N/A	2016/11/23	
Sum of cations, anions	CALC	8479232	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8478694	N/A	2016/11/23	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8480015	N/A	2016/11/23	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8479233	N/A	2016/11/23	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QC0174
Sample ID: KZ-18
Matrix: Water

Collected: 2016/11/16
Shipped:
Received: 2016/11/18

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8480609	N/A	2016/11/22	Name Redacted
Ammonia-N (Preserved)	KONE/COL	8480385	N/A	2016/11/22	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8481589	N/A	2016/11/22	
Nitrite (N) (low level)	TRAA/COL	8481599	N/A	2016/11/22	
Nitrogen - Nitrate (as N)	CALC	8478849	N/A	2016/11/23	
Filter and HNO3 Preserve for Metals	ICP	8479659	N/A	2016/11/22	
pH Water	AT/ALK	8480174	N/A	2016/11/22	
Sulphate by Automated Colourimetry	KONE/COL	8480691	N/A	2016/11/22	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8480247	2016/11/22	2016/11/22	
Total Phosphorus - unpreserved	KONE/COL	8480253	N/A	2016/11/22	
Total Suspended Solids-Low Level	BAL/BAL	8479539	2016/11/22	2016/11/23	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.0°C
Package 2	1.7°C
Package 3	1.3°C

All samples were received at analytical lab past recommended hold time for Nitrate, Nitrite, Total Phosphorus and Dissolved Phosphorus. (M_S)

Samples collected on October 3rd were received at analytical lab past hold time for Nitrate, Nitrite, Total Phosphorus, and Dissolved Phosphorus.

Sample QC0173 [TRIP BLANK] : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].
Sample QC0160, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample QC0166, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample QC0170, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8479536	Total Suspended Solids	2016/11/23			99	80 - 120	<1.0	mg/L		
8479539	Total Suspended Solids	2016/11/23			101	80 - 120	<1.0	mg/L		
8480015	Dissolved Aluminum (Al)	2016/11/23	94	80 - 120	116	80 - 120	<0.00050	mg/L	NC	20
8480015	Dissolved Antimony (Sb)	2016/11/23	96	80 - 120	117	80 - 120	<0.000020	mg/L	NC	20
8480015	Dissolved Arsenic (As)	2016/11/23	96	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8480015	Dissolved Barium (Ba)	2016/11/23	NC	80 - 120	117	80 - 120	<0.000020	mg/L	0.68	20
8480015	Dissolved Beryllium (Be)	2016/11/23	91	80 - 120	107	80 - 120	<0.000010	mg/L	NC	20
8480015	Dissolved Bismuth (Bi)	2016/11/23	90	80 - 120	111	80 - 120	<0.0000050	mg/L	NC	20
8480015	Dissolved Boron (B)	2016/11/23	91	80 - 120	112	80 - 120	<0.010	mg/L	NC	20
8480015	Dissolved Cadmium (Cd)	2016/11/23	91	80 - 120	93	80 - 120	<0.0000050	mg/L	3.8	20
8480015	Dissolved Chromium (Cr)	2016/11/23	92	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8480015	Dissolved Cobalt (Co)	2016/11/23	90	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8480015	Dissolved Copper (Cu)	2016/11/23	89	80 - 120	100	80 - 120	<0.000050	mg/L	8.1	20
8480015	Dissolved Iron (Fe)	2016/11/23	95	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
8480015	Dissolved Lead (Pb)	2016/11/23	89	80 - 120	109	80 - 120	<0.0000050	mg/L	NC	20
8480015	Dissolved Lithium (Li)	2016/11/23	83	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8480015	Dissolved Manganese (Mn)	2016/11/23	92	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8480015	Dissolved Molybdenum (Mo)	2016/11/23	NC	80 - 120	116	80 - 120	<0.000050	mg/L	4.5	20
8480015	Dissolved Nickel (Ni)	2016/11/23	91	80 - 120	101	80 - 120	<0.000020	mg/L	7.2	20
8480015	Dissolved Phosphorus (P)	2016/11/23					<0.0020	mg/L	NC	20
8480015	Dissolved Selenium (Se)	2016/11/23	100	80 - 120	103	80 - 120	<0.000040	mg/L	3.5	20
8480015	Dissolved Silicon (Si)	2016/11/23					<0.050	mg/L	0.85	20
8480015	Dissolved Silver (Ag)	2016/11/23	90	80 - 120	112	80 - 120	<0.0000050	mg/L	NC	20
8480015	Dissolved Strontium (Sr)	2016/11/23	NC	80 - 120	95	80 - 120	<0.000050	mg/L	7.3	20
8480015	Dissolved Thallium (Tl)	2016/11/23	85	80 - 120	112	80 - 120	<0.0000020	mg/L	NC	20
8480015	Dissolved Tin (Sn)	2016/11/23	94	80 - 120	118	80 - 120	<0.00020	mg/L	NC	20
8480015	Dissolved Titanium (Ti)	2016/11/23	94	80 - 120	113	80 - 120	<0.00050	mg/L	NC	20
8480015	Dissolved Uranium (U)	2016/11/23	91	80 - 120	111	80 - 120	<0.0000020	mg/L	0.30	20
8480015	Dissolved Vanadium (V)	2016/11/23	93	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8480015	Dissolved Zinc (Zn)	2016/11/23	NC	80 - 120	100	80 - 120	<0.00010	mg/L	4.4	20
8480015	Dissolved Zirconium (Zr)	2016/11/23					<0.00010	mg/L	NC	20

Maxxam Job #: B6A4199
Report Date: 2016/11/28

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8480155	Acidity (pH 4.5)	2016/11/22					<0.50	mg/L	NC	20
8480155	Acidity (pH 8.3)	2016/11/22			104	80 - 120	<0.50	mg/L	2.4	20
8480163	Alkalinity (PP as CaCO3)	2016/11/22					<0.50	mg/L	NC	20
8480163	Alkalinity (Total as CaCO3)	2016/11/22	NC	80 - 120	96	80 - 120	<0.50	mg/L	0.17	20
8480163	Bicarbonate (HCO3)	2016/11/22					<0.50	mg/L	0.17	20
8480163	Carbonate (CO3)	2016/11/22					<0.50	mg/L	NC	20
8480163	Hydroxide (OH)	2016/11/22					<0.50	mg/L	NC	20
8480173	Conductivity	2016/11/22			100	80 - 120	<1.0	uS/cm		
8480174	pH	2016/11/22			101	97 - 103			0.25	N/A
8480247	Dissolved Phosphorus (P)	2016/11/22	NC	80 - 120	91	80 - 120	<0.0020	mg/L	1.0	20
8480253	Total Phosphorus (P)	2016/11/22	NC	80 - 120	93	80 - 120	<0.0020	mg/L	0.34	20
8480385	Total Ammonia (N)	2016/11/22	NC	80 - 120	106	80 - 120	<0.0050	mg/L	0.20	20
8480387	Total Ammonia (N)	2016/11/22	100	80 - 120	104	80 - 120	<0.0050	mg/L	NC	20
8480432	Strong Acid Dissoc. Cyanide (CN)	2016/11/22	98	80 - 120	97	80 - 120	<0.00050	mg/L	1.1	20
8480437	Strong Acid Dissoc. Cyanide (CN)	2016/11/22	101	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8480441	Weak Acid Dissoc. Cyanide (CN)	2016/11/22	105	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8480609	Total Aluminum (Al)	2016/11/22	100	80 - 120	107	80 - 120	<0.00050	mg/L	NC	20
8480609	Total Antimony (Sb)	2016/11/22	97	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8480609	Total Arsenic (As)	2016/11/22	102	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8480609	Total Barium (Ba)	2016/11/22	97	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8480609	Total Beryllium (Be)	2016/11/22	100	80 - 120	106	80 - 120	<0.000010	mg/L	NC	20
8480609	Total Bismuth (Bi)	2016/11/22	96	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8480609	Total Boron (B)	2016/11/22	101	80 - 120	110	80 - 120	<0.010	mg/L	NC	20
8480609	Total Cadmium (Cd)	2016/11/22	99	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8480609	Total Chromium (Cr)	2016/11/22	97	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8480609	Total Cobalt (Co)	2016/11/22	98	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8480609	Total Copper (Cu)	2016/11/22	100	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8480609	Total Iron (Fe)	2016/11/22	101	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20
8480609	Total Lead (Pb)	2016/11/22	97	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8480609	Total Lithium (Li)	2016/11/22	99	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
8480609	Total Manganese (Mn)	2016/11/22	99	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8480609	Total Molybdenum (Mo)	2016/11/22	98	80 - 120	106	80 - 120	<0.000050	mg/L	NC	20
8480609	Total Nickel (Ni)	2016/11/22	102	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8480609	Total Phosphorus (P)	2016/11/22					<0.0020	mg/L	NC	20
8480609	Total Selenium (Se)	2016/11/22	104	80 - 120	106	80 - 120	<0.000040	mg/L	NC	20
8480609	Total Silicon (Si)	2016/11/22					<0.050	mg/L	NC	20
8480609	Total Silver (Ag)	2016/11/22	93	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8480609	Total Strontium (Sr)	2016/11/22	98	80 - 120	92	80 - 120	<0.000050	mg/L	NC	20
8480609	Total Thallium (Tl)	2016/11/22	97	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8480609	Total Tin (Sn)	2016/11/22	99	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20
8480609	Total Titanium (Ti)	2016/11/22	105	80 - 120	90	80 - 120	<0.00050	mg/L	NC	20
8480609	Total Uranium (U)	2016/11/22	97	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8480609	Total Vanadium (V)	2016/11/22	98	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8480609	Total Zinc (Zn)	2016/11/22	105	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8480609	Total Zirconium (Zr)	2016/11/22					<0.00010	mg/L	NC	20
8480682	Dissolved Chloride (Cl)	2016/11/22	101	80 - 120	107	80 - 120	<0.50	mg/L	NC	20
8480684	Dissolved Sulphate (SO4)	2016/11/22	96	80 - 120	101	80 - 120	0.83, RDL=0.50	mg/L	NC	20
8480688	Dissolved Chloride (Cl)	2016/11/22	NC	80 - 120	105	80 - 120	<0.50	mg/L	0.20	20
8480691	Dissolved Sulphate (SO4)	2016/11/22			92	80 - 120	0.64, RDL=0.50	mg/L		
8481364	Total Mercury (Hg)	2016/11/23	105	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
8481384	Dissolved Mercury (Hg)	2016/11/23	98	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8481548	Nitrate plus Nitrite (N)	2016/11/22	NC	80 - 120	109	80 - 120	<0.0020	mg/L	2.3	25
8481550	Nitrite (N)	2016/11/22	102	80 - 120	101	80 - 120	<0.0020	mg/L	NC	25
8481589	Nitrate plus Nitrite (N)	2016/11/22			108	80 - 120	<0.0020	mg/L		
8481599	Nitrite (N)	2016/11/22			100	80 - 120	<0.0020	mg/L		
8481748	Fluoride (F)	2016/11/22	108	80 - 120	104	80 - 120	0.014, RDL=0.010	mg/L	3.3	20
8481790	Dissolved Organic Carbon (C)	2016/11/23	104	80 - 120	108	80 - 120	<0.50	mg/L	NC	20
8481791	Dissolved Organic Carbon (C)	2016/11/23	97	80 - 120	102	80 - 120	<0.50	mg/L	NC	20
8482348	Dissolved Chloride (Cl)	2016/11/23			99	80 - 120	<0.50	mg/L		
8483493	Dissolved Nickel (Ni)	2016/11/24			98	80 - 120	<0.000020	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8483493	Dissolved Silicon (Si)	2016/11/24					<0.050	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6A4199
Report Date: 2016/11/28

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Name Redacted Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC # 08431182

BBY FCD-00077/05

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		16-Nov-16	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3	KZ-6		16-Nov-16	11:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
4	KZ-7		16-Nov-16	10:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	KZ-9		16-Nov-16	8:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6	KZ-13		16-Nov-16	12:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
7	KZ-15		15-Nov-16	12:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
8	KZ-16		15-Nov-16	13:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
9	KZ-17		15-Nov-16	14:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
10	KZ-19		15-Nov-16	12:42	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	

LABORATORY USE ONLY

CUSTODY SEAL Y / N Present	Intact	COOLER TEMPERATURES
NA		11
NA		12
NA		11

COOLING MEDIA PRESENT: Y / N

COMMENTS

RECEIVED IN WHITEHORSE BY: Signature Redacted

2016/11/18

TEMP: 0 2 1 / 2 1 2 / 1 2 1

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	Nov-18-2016	17:00	Signature Redacted	2016/11/21	10:00

B6A4199_COC

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08431181

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (wher		Turnaround Time (TAT) Required	
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	X	Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS	
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)	
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	☐ Same Day ☐ 2 Days ☐ 1 Day ☐ 3 Days	
Phone:		Phone:	(867) 668-6463	Site #:			
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature	Date Required:	

Regulatory Criteria	Special Instructions
☐ BC CSR Soil ☐ BC CSR Water	☐ Return Cooler
☐ CCME (Specify) ☐ Other (Specify)	☐ Ship Sample Bottles (Please Specify)
☐ Drinking Water ☐ BC Water Quality	USE SCENARIO # 12485

* SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL Y / N (Present / Intact)

COOLER TEMPERATURES

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COOLER TEMPERATURES
1	KZ-21		15-Nov-16	11:10	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		11
2	KZ-22		15-Nov-16	10:29	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		12
3	KZ-26		15-Nov-16	8:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		10
4	KZ-28		15-Nov-16	9:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		
5	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x	11		
6	KZ-18		16-Nov-16	9:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		
7																				
8																				
9																				
10																				

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE

Signature Redacted

2016 -11- 18

TEMP: 0 1 2 1 1
2 1 2
1 2 1

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	Nov-18-2016	17:00	Signature Redacted	2016/11/21	10:00

B6A4199_COC

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: B6B4410

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/01/04
Report #: R2327009
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B6B4410
Received: 2016/12/22, 12:30

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	15	N/A	2016/12/23	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	15	2016/12/24	2016/12/24	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	15	N/A	2016/12/28	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	15	N/A	2016/12/28	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	15	N/A	2016/12/28	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	15	N/A	2016/12/28	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	15	N/A	2016/12/24	BBY6SOP-00026	SM 22 2510 B m
Fluoride	15	N/A	2016/12/24	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	15	N/A	2016/12/29	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	15	N/A	2016/12/29	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	15	N/A	2016/12/29	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	15	2016/12/29	2016/12/29	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	15	N/A	2016/12/29	BBY WI-00033	Auto Calc
Sum of cations, anions	15	N/A	2016/12/29	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	15	N/A	2016/12/29	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	15	N/A	2016/12/29	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	15	N/A	2016/12/29	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	9	N/A	2016/12/29	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	6	N/A	2017/01/03	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	15	N/A	2016/12/29	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	15	N/A	2016/12/23	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	15	N/A	2016/12/23	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	15	N/A	2016/12/24	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	6	N/A	2016/12/23	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	8	N/A	2016/12/29	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	15	N/A	2016/12/24	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	14	N/A	2016/12/28	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	1	N/A	2016/12/30	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	15	2016/12/29	2016/12/29	BBY6SOP-00013	SM 22 4500-P E m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: B6B4410

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/01/04
Report #: R2327009
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B6B4410
Received: 2016/12/22, 12:30

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Phosphorus - unpreserved	15	N/A	2016/12/29	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	15	2016/12/24	2016/12/28	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods. Results relate to samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: B6B4410

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/01/04
Report #: R2327009
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B6B4410
Received: 2016/12/22, 12:30

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QI0739	QI0740	QI0741	QI0742	QI0743		
Sampling Date		2016/12/20 15:10	2016/12/20 13:55	2016/12/20 13:00	2016/12/20 11:15	2016/12/21 13:45		
COC Number		B6B4410	B6B4410	B6B4410	B6B4410	B6B4410		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-9	KZ-13	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.9	3.7	3.9	4.6	2.1	N/A	8512944
Cation Sum	meq/L	2.7	3.6	3.7	4.5	2.2	N/A	8512944
Filter and HNO3 Preservation	N/A	FIELD	FIELD	FIELD	FIELD	FIELD	N/A	ONSITE
Ion Balance	N/A	0.96	0.98	0.95	0.97	1.0	0.010	8512943
Nitrate (N)	mg/L	0.165	0.182	0.134	0.231	0.111	0.0020	8512457
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	0.00054	0.00077	0.00050	8514327
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8514347
Fluoride (F)	mg/L	0.047	0.068	0.067	0.085	0.049	0.010	8513254
Dissolved Organic Carbon (C)	mg/L	1.26	1.09	1.71	1.71	3.32	0.50	8514348
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8513074
Alkalinity (Total as CaCO3)	mg/L	76.5	155	150	188	87.1	0.50	8513206
Acidity (pH 8.3)	mg/L	0.53	<0.50	0.94	7.48	<0.50	0.50	8513074
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8513206
Bicarbonate (HCO3)	mg/L	93.3	189	182	229	106	0.50	8513206
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8513206
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8513206
Anions								
Dissolved Sulphate (SO4)	mg/L	63.0	27.9	43.7	39.4	18.1	0.50	8514418
Dissolved Chloride (Cl)	mg/L	<0.50	<0.50	0.75	0.75	0.58	0.50	8514414
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0023 (1)	0.0051 (1)	0.0033 (1)	0.0026 (1)	0.0047 (1)	0.0020	8517000
Total Ammonia (N)	mg/L	0.014	0.058	0.037	0.050	0.062	0.0050	8514634
Nitrate plus Nitrite (N)	mg/L	0.165	0.182	0.134	0.231	0.111	0.0020	8513287
Nitrite (N)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8513288
Total Phosphorus (P)	mg/L	<0.0020 (1)	0.0036 (1)	0.0025 (1)	0.0028 (1)	0.0044 (1)	0.0020	8517007
Physical Properties								
Conductivity	uS/cm	270	330	372	417	206	1.0	8513209
pH	pH	7.83	8.12	8.16	7.75	7.98		8513210

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QI0739	QI0740	QI0741	QI0742	QI0743		
Sampling Date		2016/12/20 15:10	2016/12/20 13:55	2016/12/20 13:00	2016/12/20 11:15	2016/12/21 13:45		
COC Number		B6B4410	B6B4410	B6B4410	B6B4410	B6B4410		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-9	KZ-13	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	1.1	1.3	1.8	<1.0	1.0	8513034
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QI0744			QI0745		QI0746		
Sampling Date		2016/12/20 11:50			2016/12/20 08:15		2016/12/20 09:15		
COC Number		B6B4410			B6B4410		B6B4410		
	UNITS	KZ-18	RDL	QC Batch	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	4.5	N/A	8512944	5.5	8512944	5.8	N/A	8512944
Cation Sum	meq/L	4.3	N/A	8512944	5.3	8512944	5.6	N/A	8512944
Filter and HNO3 Preservation	N/A	FIELD	N/A	ONSITE	FIELD	ONSITE	FIELD	N/A	ONSITE
Ion Balance	N/A	0.95	0.010	8512943	0.97	8512943	0.97	0.010	8512943
Nitrate (N)	mg/L	0.221	0.0020	8512457	0.244	8512457	0.301	0.0020	8512457
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00075	0.00050	8514327	0.00061	8514327	<0.00050	0.00050	8514327
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8514347	<0.00050	8514347	<0.00050	0.00050	8514347
Fluoride (F)	mg/L	0.070	0.010	8513254	0.100	8513254	0.073	0.010	8513254
Dissolved Organic Carbon (C)	mg/L	1.67	0.50	8514348	1.58	8514348	1.58	0.50	8514348
Acidity (pH 4.5)	mg/L	<0.50	0.50	8513074	<0.50	8513074	<0.50	0.50	8513074
Alkalinity (Total as CaCO3)	mg/L	198	0.50	8513206	230	8513206	243	0.50	8513206
Acidity (pH 8.3)	mg/L	3.08	0.50	8513074	3.67	8513074	10.1	0.50	8513074
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8513206	<0.50	8513206	<0.50	0.50	8513206
Bicarbonate (HCO3)	mg/L	241	0.50	8513206	280	8513206	296	0.50	8513206
Carbonate (CO3)	mg/L	<0.50	0.50	8513206	<0.50	8513206	<0.50	0.50	8513206
Hydroxide (OH)	mg/L	<0.50	0.50	8513206	<0.50	8513206	<0.50	0.50	8513206
Anions									
Dissolved Sulphate (SO4)	mg/L	23.9	0.50	8514418	40.6	8514428	42.9	0.50	8514418
Dissolved Chloride (Cl)	mg/L	0.61	0.50	8514414	0.74	8514420	<0.50	0.50	8514414
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0471 (1)	0.0020	8517000	0.0074 (1)	8517000	0.0030 (1)	0.0020	8517000
Total Ammonia (N)	mg/L	0.019	0.0050	8514634	0.016	8514634	0.039	0.0050	8514634
Nitrate plus Nitrite (N)	mg/L	0.221	0.0020	8513287	0.247	8513287	0.304	0.0020	8513287
Nitrite (N)	mg/L	<0.0020	0.0020	8513288	0.0025	8513288	0.0023	0.0020	8513288
Total Phosphorus (P)	mg/L	0.0484 (1)	0.0020	8517007	0.0056 (1)	8517007	<0.0020 (1)	0.0020	8517007
Physical Properties									
Conductivity	uS/cm	397	1.0	8513209	477	8513209	510	1.0	8513209
pH	pH	7.96		8513210	8.01	8513210	7.79		8513210

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QI0744			QI0745		QI0746		
Sampling Date		2016/12/20 11:50			2016/12/20 08:15		2016/12/20 09:15		
COC Number		B6B4410			B6B4410		B6B4410		
	UNITS	KZ-18	RDL	QC Batch	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	2.1	1.1	8513034	2.4	8513034	<1.0	1.0	8513034
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QI0747		QI0748	QI0749		QI0750		
Sampling Date		2016/12/20 09:55		2016/12/21 14:00	2016/12/19 14:45		2016/12/19 13:40		
COC Number		B6B4410		B6B4410	B6B4410		B6B4410		
	UNITS	KZ-17	RDL	KZ-19	KZ-21	RDL	KZ-22	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	5.4	N/A	0.018	7.0	N/A	6.4	N/A	8512944
Cation Sum	meq/L	5.1	N/A	0.0020	6.7	N/A	6.1	N/A	8512944
Filter and HNO3 Preservation	N/A	FIELD	N/A	FIELD	FIELD	N/A	FIELD	N/A	ONSITE
Ion Balance	N/A	0.95	0.010	0.11 (1)	0.96	0.010	0.95	0.010	8512943
Nitrate (N)	mg/L	0.300	0.0020	<0.0020	0.148	0.0020	0.209	0.0020	8512457
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00059	0.00050	0.00062	0.00083	0.00050	0.00068	0.00050	8514327
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	<0.00050	<0.00050	0.00050	<0.00050	0.00050	8514347
Fluoride (F)	mg/L	0.071	0.010	0.010	0.190	0.010	0.140	0.010	8513254
Dissolved Organic Carbon (C)	mg/L	2.29	0.50	0.60	3.17	0.50	2.31	0.50	8514348
Acidity (pH 4.5)	mg/L	<0.50	0.50	<0.50	<0.50	0.50	<0.50	0.50	8513074
Alkalinity (Total as CaCO3)	mg/L	226	0.50	0.88	301	0.50	270	0.50	8513206
Acidity (pH 8.3)	mg/L	5.23	0.50	0.76	14.0	0.50	9.32	0.50	8513074
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	<0.50	<0.50	0.50	<0.50	0.50	8513206
Bicarbonate (HCO3)	mg/L	275	0.50	1.07	367	0.50	330	0.50	8513206
Carbonate (CO3)	mg/L	<0.50	0.50	<0.50	<0.50	0.50	<0.50	0.50	8513206
Hydroxide (OH)	mg/L	<0.50	0.50	<0.50	<0.50	0.50	<0.50	0.50	8513206
Anions									
Dissolved Sulphate (SO4)	mg/L	41.1	0.50	<0.50	43.7	0.50	47.7	0.50	8514418
Dissolved Chloride (Cl)	mg/L	0.63	0.50	<0.50	1.7	0.50	0.90	0.50	8514414
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0034 (2)	0.0020	0.0041 (2)	0.0198 (3)	0.0020	0.0059 (3)	0.0020	8517000
Total Ammonia (N)	mg/L	0.023	0.0050	0.013	0.13	0.0050	0.076	0.0050	8514634
Nitrate plus Nitrite (N)	mg/L	0.300	0.0020	<0.0020	0.150 (3)	0.0020	0.209 (3)	0.0020	8513287
Nitrite (N)	mg/L	<0.0020	0.0020	<0.0020	0.0021 (3)	0.0020	<0.0020 (3)	0.0020	8513288
Total Phosphorus (P)	mg/L	0.0033 (2)	0.0020	0.0023 (2)	0.0185 (3)	0.0020	0.0066 (3)	0.0020	8517007

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

(2) Sample preserved to extend hold time.
(3) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QI0747		QI0748	QI0749		QI0750		
Sampling Date		2016/12/20 09:55		2016/12/21 14:00	2016/12/19 14:45		2016/12/19 13:40		
COC Number		B6B4410		B6B4410	B6B4410		B6B4410		
	UNITS	KZ-17	RDL	KZ-19	KZ-21	RDL	KZ-22	RDL	QC Batch
Physical Properties									
Conductivity	uS/cm	482	1.0	1.4	609	1.0	560	1.0	8513209
pH	pH	7.93		5.97	7.64		7.80		8513210
Physical Properties									
Total Suspended Solids	mg/L	<1.1	1.1	<1.0	2.3	1.0	1.4	1.1	8513034
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QI0759		QI0761			QI0762		
Sampling Date		2016/12/19 12:30		2016/12/20 15:45			2016/12/22 12:50		
COC Number		B6B4410		B6B4410			B6B4410		
	UNITS	KZ-26	RDL	KZ-28	RDL	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	6.2	N/A	2.9	N/A	8512944	0.016	N/A	8512944
Cation Sum	meq/L	5.9	N/A	2.7	N/A	8512944	0.0062	N/A	8512944
Filter and HNO3 Preservation	N/A	FIELD	N/A	FIELD	N/A	ONSITE		N/A	ONSITE
Ion Balance	N/A	0.96	0.010	0.95	0.010	8512943	0.38 (1)	0.010	8512943
Nitrate (N)	mg/L	0.224	0.0020	0.164	0.0020	8512457	<0.0020	0.0020	8512457
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00069	0.00050	0.00073	0.00050	8514327	<0.00050	0.00050	8514327
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	<0.00050	0.00050	8514347	<0.00050	0.00050	8514347
Fluoride (F)	mg/L	0.110	0.010	0.046	0.010	8513254	0.010	0.010	8513254
Dissolved Organic Carbon (C)	mg/L	3.07	0.50	0.95	0.50	8514348	<0.50	0.50	8514348
Acidity (pH 4.5)	mg/L	<0.50	0.50	<0.50	0.50	8513074	<0.50	0.50	8513074
Alkalinity (Total as CaCO3)	mg/L	257	0.50	77.9	0.50	8513206	<0.50	0.50	8513206
Acidity (pH 8.3)	mg/L	2.73	0.50	<0.50	0.50	8513074	<0.50	0.50	8513074
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	<0.50	0.50	8513206	<0.50	0.50	8513206
Bicarbonate (HCO3)	mg/L	313	0.50	95.0	0.50	8513206	<0.50	0.50	8513206
Carbonate (CO3)	mg/L	<0.50	0.50	<0.50	0.50	8513206	<0.50	0.50	8513206
Hydroxide (OH)	mg/L	<0.50	0.50	<0.50	0.50	8513206	<0.50	0.50	8513206
Anions									
Dissolved Sulphate (SO4)	mg/L	46.9	0.50	62.6	0.50	8514418	<0.50	0.50	8518322
Dissolved Chloride (Cl)	mg/L	0.69	0.50	<0.50	0.50	8514414	0.56	0.50	8514414
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0259 (2)	0.0020	0.0045 (3)	0.0020	8517000	<0.0020 (3)	0.0020	8517000
Total Ammonia (N)	mg/L	0.078	0.0050	0.048	0.0050	8514634	<0.0050	0.0050	8514634
Nitrate plus Nitrite (N)	mg/L	0.226 (2)	0.0020	0.164	0.0020	8513287	<0.0020	0.0020	8513287
Nitrite (N)	mg/L	0.0026 (2)	0.0020	<0.0020	0.0020	8513288	<0.0020	0.0020	8513288
Total Phosphorus (P)	mg/L	0.0271 (2)	0.0020	0.0025 (3)	0.0020	8517007	<0.0020 (3)	0.0020	8517007

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).
(2) Sample analysed past recommended hold time.
(3) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QI0759		QI0761			QI0762		
Sampling Date		2016/12/19 12:30		2016/12/20 15:45			2016/12/22 12:50		
COC Number		B6B4410		B6B4410			B6B4410		
	UNITS	KZ-26	RDL	KZ-28	RDL	QC Batch	TRIP BLANK	RDL	QC Batch
Physical Properties									
Conductivity	uS/cm	534	1.0	275	1.0	8513209	1.2	1.0	8513209
pH	pH	8.14		7.92		8513210	5.21		8513210
Physical Properties									
Total Suspended Solids	mg/L	32.1	1.0	<1.1	1.1	8513034	<1.0	1.0	8513034
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QI0739	QI0740	QI0741	QI0742	QI0743		
Sampling Date		2016/12/20 15:10	2016/12/20 13:55	2016/12/20 13:00	2016/12/20 11:15	2016/12/21 13:45		
COC Number		B6B4410	B6B4410	B6B4410	B6B4410	B6B4410		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-9	KZ-13	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	132	178	182	218	103	0.50	8512052
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8516941
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00152	0.00140	0.00100	0.00171	0.00423	0.00050	8514201
Dissolved Antimony (Sb)	mg/L	0.000025	<0.000020	0.000039	0.000031	0.000029	0.000020	8514201
Dissolved Arsenic (As)	mg/L	0.000048	0.000061	0.000118	0.000215	0.000179	0.000020	8514201
Dissolved Barium (Ba)	mg/L	0.0744	0.0481	0.0966	0.106	0.124	0.000020	8514201
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8514201
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8514201
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8514201
Dissolved Cadmium (Cd)	mg/L	0.000266	0.0000150	0.0000850	0.0000720	0.0000340	0.0000050	8514201
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8514201
Dissolved Cobalt (Co)	mg/L	<0.0000050	<0.0000050	0.000102	0.000124	0.0000320	0.0000050	8514201
Dissolved Copper (Cu)	mg/L	0.000430	0.000099	0.000178	0.000232	0.000401	0.000050	8514201
Dissolved Iron (Fe)	mg/L	<0.0010	0.0070	0.0346	0.268	0.0653	0.0010	8514201
Dissolved Lead (Pb)	mg/L	0.0000100	<0.0000050	<0.0000050	0.0000140	0.0000240	0.0000050	8514201
Dissolved Lithium (Li)	mg/L	0.00131	0.00080	0.00301	0.00386	0.00158	0.00050	8514201
Dissolved Manganese (Mn)	mg/L	<0.000050	0.000411	0.117	0.105	0.0545	0.000050	8514201
Dissolved Molybdenum (Mo)	mg/L	0.000647	0.000559	0.000626	0.000673	0.000697	0.000050	8514201
Dissolved Nickel (Ni)	mg/L	0.000323	0.000134	0.000499	0.000463	0.000398	0.000020	8514201
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0051	0.0027	0.0037	0.0038	0.0020	8514201
Dissolved Selenium (Se)	mg/L	0.00213	0.00106	0.000986	0.00128	0.000331	0.000040	8514201
Dissolved Silicon (Si)	mg/L	2.36	3.00	3.74	3.83	3.96	0.050	8514201
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8514201
Dissolved Strontium (Sr)	mg/L	0.140	0.174	0.198	0.240	0.102	0.000050	8514201
Dissolved Thallium (Tl)	mg/L	0.0000030	<0.0000020	0.0000020	<0.0000020	<0.0000020	0.0000020	8514201
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8514201
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8514201
Dissolved Uranium (U)	mg/L	0.00388	0.00117	0.00139	0.00168	0.00112	0.0000020	8514201
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8514201
RDL = Reportable Detection Limit								

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QI0739	QI0740	QI0741	QI0742	QI0743		
Sampling Date		2016/12/20 15:10	2016/12/20 13:55	2016/12/20 13:00	2016/12/20 11:15	2016/12/21 13:45		
COC Number		B6B4410	B6B4410	B6B4410	B6B4410	B6B4410		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-9	KZ-13	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0333	0.00047	0.0610	0.0201	0.00371	0.00010	8514201
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8514201
Dissolved Calcium (Ca)	mg/L	43.2	59.1	60.0	73.0	35.1	0.050	8512054
Dissolved Magnesium (Mg)	mg/L	5.97	7.38	7.76	8.74	3.68	0.050	8512054
Dissolved Potassium (K)	mg/L	1.90	0.881	1.60	1.65	2.03	0.050	8512054
Dissolved Sodium (Na)	mg/L	0.822	0.724	1.13	1.42	1.13	0.050	8512054
Dissolved Sulphur (S)	mg/L	19.0	8.3	13.4	12.3	6.3	3.0	8512054

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QI0744	QI0745	QI0746	QI0747	QI0748		
Sampling Date		2016/12/20 11:50	2016/12/20 08:15	2016/12/20 09:15	2016/12/20 09:55	2016/12/21 14:00		
COC Number		B6B4410	B6B4410	B6B4410	B6B4410	B6B4410		
	UNITS	KZ-18	KZ-15	KZ-16	KZ-17	KZ-19	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	211	261	276	252	<0.50	0.50	8512052
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8516941
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00269	0.00088	0.00113	0.00073	<0.00050	0.00050	8514201
Dissolved Antimony (Sb)	mg/L	0.000029	0.000026	0.000020	0.000026	<0.000020	0.000020	8514201
Dissolved Arsenic (As)	mg/L	0.000698	0.000354	0.000169	0.000218	<0.000020	0.000020	8514201
Dissolved Barium (Ba)	mg/L	0.0532	0.0918	0.0988	0.0940	<0.000020	0.000020	8514201
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8514201
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8514201
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8514201
Dissolved Cadmium (Cd)	mg/L	0.0000370	0.0000480	0.0000240	0.0000230	<0.0000050	0.0000050	8514201
Dissolved Chromium (Cr)	mg/L	0.00014	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8514201
Dissolved Cobalt (Co)	mg/L	0.0000170	0.0000300	0.0000390	<0.0000050	<0.0000050	0.0000050	8514201
Dissolved Copper (Cu)	mg/L	0.000101	0.000187	0.000221	0.000285	<0.000050	0.000050	8514201
Dissolved Iron (Fe)	mg/L	0.0213	0.0106	0.0117	<0.0010	0.0018	0.0010	8514201
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000170	<0.0000050	<0.0000050	0.0000050	8514201
Dissolved Lithium (Li)	mg/L	0.00177	0.00366	0.00359	0.00306	<0.00050	0.00050	8514201
Dissolved Manganese (Mn)	mg/L	0.00898	0.0440	0.0138	<0.000050	<0.000050	0.000050	8514201
Dissolved Molybdenum (Mo)	mg/L	0.00149	0.00128	0.000425	0.000686	<0.000050	0.000050	8514201
Dissolved Nickel (Ni)	mg/L	0.000318	0.000791	0.000669	0.000490	<0.000020	0.000020	8514201
Dissolved Phosphorus (P)	mg/L	0.0459	0.0034	0.0030	0.0042	0.0025	0.0020	8514201
Dissolved Selenium (Se)	mg/L	0.00129	0.00157	0.00152	0.00144	<0.000040	0.000040	8514201
Dissolved Silicon (Si)	mg/L	3.29	4.30	3.88	3.80	<0.050	0.050	8514201
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8514201
Dissolved Strontium (Sr)	mg/L	0.184	0.269	0.276	0.257	<0.000050	0.000050	8514201
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8514201
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8514201
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8514201
Dissolved Uranium (U)	mg/L	0.00275	0.00422	0.00289	0.00308	<0.0000020	0.0000020	8514201
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8514201
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QI0744	QI0745	QI0746	QI0747	QI0748		
Sampling Date		2016/12/20 11:50	2016/12/20 08:15	2016/12/20 09:15	2016/12/20 09:55	2016/12/21 14:00		
COC Number		B6B4410	B6B4410	B6B4410	B6B4410	B6B4410		
	UNITS	KZ-18	KZ-15	KZ-16	KZ-17	KZ-19	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00117	0.00766	0.00095	0.00121	0.00012	0.00010	8514201
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8514201
Dissolved Calcium (Ca)	mg/L	55.8	78.0	82.7	75.6	<0.050	0.050	8512054
Dissolved Magnesium (Mg)	mg/L	17.5	16.1	16.8	15.3	<0.050	0.050	8512054
Dissolved Potassium (K)	mg/L	0.572	1.28	1.28	1.24	<0.050	0.050	8512054
Dissolved Sodium (Na)	mg/L	0.834	1.27	1.43	1.28	<0.050	0.050	8512054
Dissolved Sulphur (S)	mg/L	7.1	12.8	13.2	12.6	<3.0	3.0	8512054

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QI0749	QI0750	QI0759	QI0761	QI0762		
Sampling Date		2016/12/19 14:45	2016/12/19 13:40	2016/12/19 12:30	2016/12/20 15:45	2016/12/22 12:50		
COC Number		B6B4410	B6B4410	B6B4410	B6B4410	B6B4410		
	UNITS	KZ-21	KZ-22	KZ-26	KZ-28	TRIP BLANK	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	328	301	290	132	<0.50	0.50	8512052
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8516941
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00119	0.00076	0.00089	0.00156	<0.00050	0.00050	8514201
Dissolved Antimony (Sb)	mg/L	0.000034	0.000034	0.000063	0.000025	<0.000020	0.000020	8514201
Dissolved Arsenic (As)	mg/L	0.000676	0.000665	0.000356	0.000062	<0.000020	0.000020	8514201
Dissolved Barium (Ba)	mg/L	0.0832	0.0868	0.0923	0.0741	<0.000020	0.000020	8514201
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8514201
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8514201
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8514201
Dissolved Cadmium (Cd)	mg/L	0.0000210	0.0000180	0.0000180	0.000253	<0.0000050	0.0000050	8514201
Dissolved Chromium (Cr)	mg/L	0.00012	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8514201
Dissolved Cobalt (Co)	mg/L	0.000206	0.000101	0.0000100	<0.0000050	<0.0000050	0.0000050	8514201
Dissolved Copper (Cu)	mg/L	0.000266 (1)	0.000225	0.000416	0.000436	<0.000050	0.000050	8514201
Dissolved Iron (Fe)	mg/L	0.0760	0.0386	0.0070	<0.0010	<0.0010	0.0010	8514201
Dissolved Lead (Pb)	mg/L	0.0000310	0.0000070	0.0000530	0.0000120	<0.0000050	0.0000050	8514201
Dissolved Lithium (Li)	mg/L	0.00893	0.00664	0.00653	0.00135	<0.00050	0.00050	8514201
Dissolved Manganese (Mn)	mg/L	0.232	0.0925	0.00432	<0.000050	<0.000050	0.000050	8514201
Dissolved Molybdenum (Mo)	mg/L	0.00148	0.00120	0.000883	0.000649	<0.000050	0.000050	8514201
Dissolved Nickel (Ni)	mg/L	0.00227	0.00126	0.000742	0.000339	<0.000020	0.000020	8514201
Dissolved Phosphorus (P)	mg/L	0.0062	0.0051	0.0050	<0.0020	<0.0020	0.0020	8514201
Dissolved Selenium (Se)	mg/L	0.000653	0.00113	0.00102	0.00202	<0.000040	0.000040	8514201
Dissolved Silicon (Si)	mg/L	6.80	5.21	5.50	2.49	<0.050	0.050	8514201
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8514201
Dissolved Strontium (Sr)	mg/L	0.268	0.271	0.279	0.146	<0.000050	0.000050	8514201
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000030	<0.0000020	0.0000020	8514201
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8514201
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8514201
Dissolved Uranium (U)	mg/L	0.00306	0.00368	0.00322	0.00398	<0.0000020	0.0000020	8514201

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QI0749	QI0750	QI0759	QI0761	QI0762		
Sampling Date		2016/12/19 14:45	2016/12/19 13:40	2016/12/19 12:30	2016/12/20 15:45	2016/12/22 12:50		
COC Number		B6B4410	B6B4410	B6B4410	B6B4410	B6B4410		
	UNITS	KZ-21	KZ-22	KZ-26	KZ-28	TRIP BLANK	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8514201
Dissolved Zinc (Zn)	mg/L	0.00197 (1)	0.00171	0.00336	0.0341	<0.00010	0.00010	8514201
Dissolved Zirconium (Zr)	mg/L	0.00020	0.00010	<0.00010	<0.00010	<0.00010	0.00010	8514201
Dissolved Calcium (Ca)	mg/L	82.4	79.8	78.7	42.8	<0.050	0.050	8512054
Dissolved Magnesium (Mg)	mg/L	29.7	24.6	22.8	6.06	<0.050	0.050	8512054
Dissolved Potassium (K)	mg/L	2.11	1.69	1.42	1.96	<0.050	0.050	8512054
Dissolved Sodium (Na)	mg/L	2.35	1.94	1.90	0.832	<0.050	0.050	8512054
Dissolved Sulphur (S)	mg/L	13.7	14.8	15.4	18.6	<3.0	3.0	8512054

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QI0739	QI0740		QI0741	QI0742		
Sampling Date		2016/12/20 15:10	2016/12/20 13:55		2016/12/20 13:00	2016/12/20 11:15		
COC Number		B6B4410	B6B4410		B6B4410	B6B4410		
	UNITS	KZ-2	KZ-6	QC Batch	KZ-7	KZ-9	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	134	177	8512347	184	218	0.50	8512347
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8516845	<0.0000020	<0.0000020	0.0000020	8516845
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00361	0.00511	8514193	0.0111	0.00831	0.00050	8519311
Total Antimony (Sb)	mg/L	0.000036	<0.000020	8514193	0.000044	0.000035	0.000020	8519311
Total Arsenic (As)	mg/L	0.000079	0.000077	8514193	0.000240	0.000235	0.000020	8519311
Total Barium (Ba)	mg/L	0.0784	0.0493	8514193	0.0967	0.107	0.000020	8519311
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	8514193	<0.000010	<0.000010	0.000010	8519311
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8514193	<0.0000050	<0.0000050	0.0000050	8519311
Total Boron (B)	mg/L	<0.010	<0.010	8514193	<0.010	<0.010	0.010	8519311
Total Cadmium (Cd)	mg/L	0.000274	0.0000210	8514193	0.000165	0.0000750	0.0000050	8519311
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	8514193	0.00012	<0.00010	0.00010	8519311
Total Cobalt (Co)	mg/L	0.0000060	0.0000100	8514193	0.000112	0.000122	0.0000050	8519311
Total Copper (Cu)	mg/L	0.00363	0.000107	8514193	0.000260	0.000280	0.000050	8519311
Total Iron (Fe)	mg/L	0.0043	0.0544	8514193	0.249	0.448	0.0010	8519311
Total Lead (Pb)	mg/L	0.000261	0.0000140	8514193	0.0000740	0.0000670	0.0000050	8519311
Total Lithium (Li)	mg/L	0.00140	0.00080	8514193	0.00308	0.00377	0.00050	8519311
Total Manganese (Mn)	mg/L	0.000380	0.00642	8514193	0.119	0.0989	0.000050	8519311
Total Molybdenum (Mo)	mg/L	0.000693	0.000583	8514193	0.000633	0.000707	0.000050	8519311
Total Nickel (Ni)	mg/L	0.000350	0.000157	8514193	0.000531	0.000434	0.000020	8519311
Total Phosphorus (P)	mg/L	0.0026	0.0036	8514193	0.0029	0.0061	0.0020	8519311
Total Selenium (Se)	mg/L	0.00217	0.00108	8514193	0.000978	0.00139	0.000040	8519311
Total Silicon (Si)	mg/L	2.43	3.10	8514193	3.57	3.92	0.050	8519311
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	8514193	<0.0000050	<0.0000050	0.0000050	8519311
Total Strontium (Sr)	mg/L	0.143	0.176	8514193	0.195	0.238	0.000050	8519311
Total Thallium (Tl)	mg/L	0.0000030	<0.0000020	8514193	0.0000020	<0.0000020	0.0000020	8519311
Total Tin (Sn)	mg/L	<0.00020	<0.00020	8514193	<0.00020	<0.00020	0.00020	8519311
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	8514193	0.00067	<0.00050	0.00050	8519311
Total Uranium (U)	mg/L	0.00411	0.00115	8514193	0.00138	0.00170	0.0000020	8519311
Total Vanadium (V)	mg/L	<0.00020	<0.00020	8514193	<0.00020	<0.00020	0.00020	8519311

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QI0739	QI0740		QI0741	QI0742		
Sampling Date		2016/12/20 15:10	2016/12/20 13:55		2016/12/20 13:00	2016/12/20 11:15		
COC Number		B6B4410	B6B4410		B6B4410	B6B4410		
	UNITS	KZ-2	KZ-6	QC Batch	KZ-7	KZ-9	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0361	0.00063	8514193	0.0645	0.0200	0.00010	8519311
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	8514193	<0.00010	<0.00010	0.00010	8519311
Total Calcium (Ca)	mg/L	43.4	59.0	8512456	60.7	72.7	0.050	8512456
Total Magnesium (Mg)	mg/L	6.13	7.21	8512456	7.76	8.77	0.050	8512456
Total Potassium (K)	mg/L	1.96	0.869	8512456	1.68	1.68	0.050	8512456
Total Sodium (Na)	mg/L	0.886	0.720	8512456	1.16	1.41	0.050	8512456
Total Sulphur (S)	mg/L	20.2	8.3	8512456	13.7	12.6	3.0	8512456
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QI0743	QI0744	QI0745		QI0746		
Sampling Date		2016/12/21 13:45	2016/12/20 11:50	2016/12/20 08:15		2016/12/20 09:15		
COC Number		B6B4410	B6B4410	B6B4410		B6B4410		
	UNITS	KZ-13	KZ-18	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	98.8	214	255	8512347	277	0.50	8512347
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8516845	<0.0000020	0.0000020	8516845
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0194	0.0169	0.0196	8519311	0.00180	0.00050	8514193
Total Antimony (Sb)	mg/L	0.000035	0.000034	0.000036	8519311	<0.000020	0.000020	8514193
Total Arsenic (As)	mg/L	0.000216	0.000792	0.000594	8519311	0.000178	0.000020	8514193
Total Barium (Ba)	mg/L	0.124	0.0515	0.0909	8519311	0.0981	0.000020	8514193
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8519311	<0.000010	0.000010	8514193
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8519311	<0.0000050	0.0000050	8514193
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	8519311	<0.010	0.010	8514193
Total Cadmium (Cd)	mg/L	0.0000410	0.0000480	0.0000630	8519311	0.0000250	0.0000050	8514193
Total Chromium (Cr)	mg/L	0.00011	0.00016	0.00017	8519311	<0.00010	0.00010	8514193
Total Cobalt (Co)	mg/L	0.0000450	0.0000300	0.0000740	8519311	0.0000390	0.0000050	8514193
Total Copper (Cu)	mg/L	0.000484	0.000172	0.000336	8519311	0.000210	0.000050	8514193
Total Iron (Fe)	mg/L	0.143	0.0436	0.118	8519311	0.0140	0.0010	8514193
Total Lead (Pb)	mg/L	0.0000500	0.0000560	0.0000520	8519311	0.0000070	0.0000050	8514193
Total Lithium (Li)	mg/L	0.00165	0.00186	0.00361	8519311	0.00361	0.00050	8514193
Total Manganese (Mn)	mg/L	0.0551	0.0109	0.0550	8519311	0.0149	0.000050	8514193
Total Molybdenum (Mo)	mg/L	0.000747	0.00153	0.00134	8519311	0.000431	0.000050	8514193
Total Nickel (Ni)	mg/L	0.000454	0.000349	0.00101	8519311	0.000675	0.000020	8514193
Total Phosphorus (P)	mg/L	0.0049	0.0430	0.0079	8519311	0.0034	0.0020	8514193
Total Selenium (Se)	mg/L	0.000327	0.00134	0.00155	8519311	0.00165	0.000040	8514193
Total Silicon (Si)	mg/L	4.16	3.40	4.11	8519311	4.01	0.050	8514193
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8519311	<0.0000050	0.0000050	8514193
Total Strontium (Sr)	mg/L	0.0968	0.186	0.243	8519311	0.271	0.000050	8514193
Total Thallium (Tl)	mg/L	0.0000030	0.0000040	0.0000020	8519311	<0.0000020	0.0000020	8514193
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8519311	<0.00020	0.00020	8514193
Total Titanium (Ti)	mg/L	0.00070	<0.00050	0.00125	8519311	<0.00050	0.00050	8514193
Total Uranium (U)	mg/L	0.00114	0.00274	0.00413	8519311	0.00286	0.0000020	8514193
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8519311	<0.00020	0.00020	8514193

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QI0743	QI0744	QI0745		QI0746		
Sampling Date		2016/12/21 13:45	2016/12/20 11:50	2016/12/20 08:15		2016/12/20 09:15		
COC Number		B6B4410	B6B4410	B6B4410		B6B4410		
	UNITS	KZ-13	KZ-18	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00399	0.00160	0.00856	8519311	0.00100	0.00010	8514193
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8519311	<0.00010	0.00010	8514193
Total Calcium (Ca)	mg/L	33.6	57.0	75.5	8512456	83.5	0.050	8512456
Total Magnesium (Mg)	mg/L	3.60	17.5	16.2	8512456	16.6	0.050	8512456
Total Potassium (K)	mg/L	2.03	0.604	1.34	8512456	1.26	0.050	8512456
Total Sodium (Na)	mg/L	1.15	0.886	1.38	8512456	1.40	0.050	8512456
Total Sulphur (S)	mg/L	6.0	8.1	13.3	8512456	13.5	3.0	8512456
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QI0747	QI0748	QI0749	QI0750		
Sampling Date		2016/12/20 09:55	2016/12/21 14:00	2016/12/19 14:45	2016/12/19 13:40		
COC Number		B6B4410	B6B4410	B6B4410	B6B4410		
	UNITS	KZ-17	KZ-19	KZ-21	KZ-22	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	264	<0.50	336	308	0.50	8512347
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	0.0000053	<0.0000020	<0.0000020	0.0000020	8516845
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00179	<0.00050	0.00736	0.00832	0.00050	8514193
Total Antimony (Sb)	mg/L	0.000024	<0.000020	0.000028	0.000035	0.000020	8514193
Total Arsenic (As)	mg/L	0.000218	<0.000020	0.00215	0.00128	0.000020	8514193
Total Barium (Ba)	mg/L	0.0930	<0.000020	0.0872	0.0892	0.000020	8514193
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8514193
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8514193
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8514193
Total Cadmium (Cd)	mg/L	0.0000220	<0.0000050	0.0000180	0.0000220	0.0000050	8514193
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00010	<0.00010	0.00010	8514193
Total Cobalt (Co)	mg/L	0.0000060	<0.0000050	0.000223	0.000111	0.0000050	8514193
Total Copper (Cu)	mg/L	0.000238	<0.000050	0.000205	0.000260	0.000050	8514193
Total Iron (Fe)	mg/L	0.0067	<0.0010	0.590	0.246	0.0010	8514193
Total Lead (Pb)	mg/L	0.0000060	<0.0000050	0.0000430	0.0000240	0.0000050	8514193
Total Lithium (Li)	mg/L	0.00313	<0.00050	0.00930	0.00686	0.00050	8514193
Total Manganese (Mn)	mg/L	0.000982	<0.000050	0.238	0.0970	0.000050	8514193
Total Molybdenum (Mo)	mg/L	0.000669	<0.000050	0.00149	0.00122	0.000050	8514193
Total Nickel (Ni)	mg/L	0.000523	<0.000020	0.00235	0.00139	0.000020	8514193
Total Phosphorus (P)	mg/L	0.0057	<0.0020	0.0161	0.0103	0.0020	8514193
Total Selenium (Se)	mg/L	0.00154	<0.000040	0.000697	0.00112	0.000040	8514193
Total Silicon (Si)	mg/L	3.66	<0.050	6.60	5.28	0.050	8514193
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8514193
Total Strontium (Sr)	mg/L	0.260	<0.000050	0.267	0.269	0.000050	8514193
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8514193
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8514193
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8514193
Total Uranium (U)	mg/L	0.00306	<0.0000020	0.00293	0.00362	0.0000020	8514193
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8514193

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QI0747	QI0748	QI0749	QI0750		
Sampling Date		2016/12/20 09:55	2016/12/21 14:00	2016/12/19 14:45	2016/12/19 13:40		
COC Number		B6B4410	B6B4410	B6B4410	B6B4410		
	UNITS	KZ-17	KZ-19	KZ-21	KZ-22	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00131	<0.00010	0.00145	0.00206	0.00010	8514193
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00019	0.00011	0.00010	8514193
Total Calcium (Ca)	mg/L	80.0	<0.050	85.0	82.7	0.050	8512456
Total Magnesium (Mg)	mg/L	15.6	<0.050	30.1	24.5	0.050	8512456
Total Potassium (K)	mg/L	1.25	<0.050	2.09	1.67	0.050	8512456
Total Sodium (Na)	mg/L	1.31	<0.050	2.31	2.00	0.050	8512456
Total Sulphur (S)	mg/L	12.5	<3.0	13.1	14.2	3.0	8512456
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QI0759		QI0761	QI0762		
Sampling Date		2016/12/19 12:30		2016/12/20 15:45	2016/12/22 12:50		
COC Number		B6B4410		B6B4410	B6B4410		
	UNITS	KZ-26	QC Batch	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	298	8512347	132	<0.50	0.50	8512347
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	8516845	<0.0000020	<0.0000020	0.0000020	8516845
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.293	8519311	0.00685	<0.00050	0.00050	8514193
Total Antimony (Sb)	mg/L	0.000151	8519311	0.000029	<0.000020	0.000020	8514193
Total Arsenic (As)	mg/L	0.00227	8519311	0.000079	<0.000020	0.000020	8514193
Total Barium (Ba)	mg/L	0.109	8519311	0.0755	0.000030	0.000020	8514193
Total Beryllium (Be)	mg/L	0.000024	8519311	<0.000010	<0.000010	0.000010	8514193
Total Bismuth (Bi)	mg/L	0.0000130	8519311	<0.0000050	<0.0000050	0.0000050	8514193
Total Boron (B)	mg/L	<0.010	8519311	<0.010	<0.010	0.010	8514193
Total Cadmium (Cd)	mg/L	0.000153	8519311	0.000263	<0.0000050	0.0000050	8514193
Total Chromium (Cr)	mg/L	0.00100	8519311	<0.00010	<0.00010	0.00010	8514193
Total Cobalt (Co)	mg/L	0.000552	8519311	0.0000110	<0.0000050	0.0000050	8514193
Total Copper (Cu)	mg/L	0.00295	8519311	0.000495	<0.000050	0.000050	8514193
Total Iron (Fe)	mg/L	1.32	8519311	0.0107	<0.0010	0.0010	8514193
Total Lead (Pb)	mg/L	0.00189	8519311	0.000170	<0.0000050	0.0000050	8514193
Total Lithium (Li)	mg/L	0.00684	8519311	0.00141	<0.00050	0.00050	8514193
Total Manganese (Mn)	mg/L	0.117	8519311	0.000411	<0.000050	0.000050	8514193
Total Molybdenum (Mo)	mg/L	0.000867	8519311	0.000664	<0.000050	0.000050	8514193
Total Nickel (Ni)	mg/L	0.00307	8519311	0.000323	<0.000020	0.000020	8514193
Total Phosphorus (P)	mg/L	0.0707	8519311	0.0034	<0.0020	0.0020	8514193
Total Selenium (Se)	mg/L	0.00108	8519311	0.00206	<0.000040	0.000040	8514193
Total Silicon (Si)	mg/L	5.47	8519311	2.44	<0.050	0.050	8514193
Total Silver (Ag)	mg/L	0.0000260	8519311	<0.0000050	<0.0000050	0.0000050	8514193
Total Strontium (Sr)	mg/L	0.263	8519311	0.145	<0.000050	0.000050	8514193
Total Thallium (Tl)	mg/L	0.0000070	8519311	0.0000030	<0.0000020	0.0000020	8514193
Total Tin (Sn)	mg/L	<0.00020	8519311	<0.00020	<0.00020	0.00020	8514193
Total Titanium (Ti)	mg/L	0.00861	8519311	0.00066	<0.00050	0.00050	8514193
Total Uranium (U)	mg/L	0.00330	8519311	0.00408	<0.0000020	0.0000020	8514193
Total Vanadium (V)	mg/L	0.00095	8519311	<0.00020	<0.00020	0.00020	8514193
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QI0759		QI0761	QI0762		
Sampling Date		2016/12/19 12:30		2016/12/20 15:45	2016/12/22 12:50		
COC Number		B6B4410		B6B4410	B6B4410		
	UNITS	KZ-26	QC Batch	KZ-28	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0447	8519311	0.0341	<0.00010	0.00010	8514193
Total Zirconium (Zr)	mg/L	0.00017	8519311	<0.00010	<0.00010	0.00010	8514193
Total Calcium (Ca)	mg/L	80.5	8512456	42.8	<0.050	0.050	8512456
Total Magnesium (Mg)	mg/L	23.6	8512456	6.07	<0.050	0.050	8512456
Total Potassium (K)	mg/L	1.58	8512456	1.99	<0.050	0.050	8512456
Total Sodium (Na)	mg/L	2.11	8512456	0.847	<0.050	0.050	8512456
Total Sulphur (S)	mg/L	15.9	8512456	19.5	<3.0	3.0	8512456
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QI0739
Sample ID: KZ-2
Matrix: Water

Collected: 2016/12/20
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8513074	N/A	2016/12/23	Name Redacted
Alkalinity - Water	AT/ALK	8513206	2016/12/24	2016/12/24	
Chloride by Automated Colourimetry	KONE/COL	8514414	N/A	2016/12/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8514327	N/A	2016/12/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8514347	N/A	2016/12/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8514348	N/A	2016/12/28	
Conductance - water	AT/ALK	8513209	N/A	2016/12/24	
Fluoride	ISE/ISE	8513254	N/A	2016/12/24	
Hardness Total (calculated as CaCO3)	CALC	8512347	N/A	2016/12/29	
Hardness (calculated as CaCO3)	CALC	8512052	N/A	2016/12/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8516941	N/A	2016/12/29	
Mercury (Total-LowLevel) by CVAF	CV/AF	8516845	2016/12/29	2016/12/29	
Ion Balance	CALC	8512943	N/A	2016/12/29	
Sum of cations, anions	CALC	8512944	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8512054	N/A	2016/12/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8514201	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8512456	N/A	2016/12/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8514193	N/A	2016/12/29	
Ammonia-N (Preserved)	KONE/COL	8514634	N/A	2016/12/29	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8513287	N/A	2016/12/23	
Nitrite (N) (low level)	TRAA/COL	8513288	N/A	2016/12/23	
Nitrogen - Nitrate (as N)	CALC	8512457	N/A	2016/12/24	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2016/12/23	
pH Water	AT/ALK	8513210	N/A	2016/12/24	
Sulphate by Automated Colourimetry	KONE/COL	8514418	N/A	2016/12/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8517000	2016/12/29	2016/12/29	
Total Phosphorus - unpreserved	KONE/COL	8517007	N/A	2016/12/29	
Total Suspended Solids-Low Level	BAL/BAL	8513034	2016/12/24	2016/12/28	

Maxxam ID: QI0739 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2016/12/20
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8513074	N/A	2016/12/23	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8514327	N/A	2016/12/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8514347	N/A	2016/12/28	
Fluoride	ISE/ISE	8513254	N/A	2016/12/24	
Mercury (Total-LowLevel) by CVAF	CV/AF	8516845	2016/12/29	2016/12/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8514201	N/A	2016/12/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8514193	N/A	2016/12/29	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QI0740
Sample ID: KZ-6
Matrix: Water

Collected: 2016/12/20
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8513074	N/A	2016/12/23	Name Redacted
Alkalinity - Water	AT/ALK	8513206	2016/12/24	2016/12/24	
Chloride by Automated Colourimetry	KONE/COL	8514414	N/A	2016/12/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8514327	N/A	2016/12/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8514347	N/A	2016/12/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8514348	N/A	2016/12/28	
Conductance - water	AT/ALK	8513209	N/A	2016/12/24	
Fluoride	ISE/ISE	8513254	N/A	2016/12/24	
Hardness Total (calculated as CaCO3)	CALC	8512347	N/A	2016/12/29	
Hardness (calculated as CaCO3)	CALC	8512052	N/A	2016/12/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8516941	N/A	2016/12/29	
Mercury (Total-LowLevel) by CVAF	CV/AF	8516845	2016/12/29	2016/12/29	
Ion Balance	CALC	8512943	N/A	2016/12/29	
Sum of cations, anions	CALC	8512944	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8512054	N/A	2016/12/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8514201	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8512456	N/A	2016/12/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8514193	N/A	2016/12/29	
Ammonia-N (Preserved)	KONE/COL	8514634	N/A	2016/12/29	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8513287	N/A	2016/12/23	
Nitrite (N) (low level)	TRAA/COL	8513288	N/A	2016/12/23	
Nitrogen - Nitrate (as N)	CALC	8512457	N/A	2016/12/24	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2016/12/23	
pH Water	AT/ALK	8513210	N/A	2016/12/24	
Sulphate by Automated Colourimetry	KONE/COL	8514418	N/A	2016/12/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8517000	2016/12/29	2016/12/29	
Total Phosphorus - unpreserved	KONE/COL	8517007	N/A	2016/12/29	
Total Suspended Solids-Low Level	BAL/BAL	8513034	2016/12/24	2016/12/28	

Maxxam ID: QI0741
Sample ID: KZ-7
Matrix: Water

Collected: 2016/12/20
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8513074	N/A	2016/12/23	Name Redacted
Alkalinity - Water	AT/ALK	8513206	2016/12/24	2016/12/24	
Chloride by Automated Colourimetry	KONE/COL	8514414	N/A	2016/12/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8514327	N/A	2016/12/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8514347	N/A	2016/12/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8514348	N/A	2016/12/28	
Conductance - water	AT/ALK	8513209	N/A	2016/12/24	
Fluoride	ISE/ISE	8513254	N/A	2016/12/24	
Hardness Total (calculated as CaCO3)	CALC	8512347	N/A	2016/12/29	
Hardness (calculated as CaCO3)	CALC	8512052	N/A	2016/12/29	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QI0741
Sample ID: KZ-7
Matrix: Water

Collected: 2016/12/20
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8516941	N/A	2016/12/29	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8516845	2016/12/29	2016/12/29	
Ion Balance	CALC	8512943	N/A	2016/12/29	
Sum of cations, anions	CALC	8512944	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8512054	N/A	2016/12/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8514201	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8512456	N/A	2016/12/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8519311	N/A	2017/01/03	
Ammonia-N (Preserved)	KONE/COL	8514634	N/A	2016/12/29	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8513287	N/A	2016/12/23	
Nitrite (N) (low level)	TRAA/COL	8513288	N/A	2016/12/23	
Nitrogen - Nitrate (as N)	CALC	8512457	N/A	2016/12/24	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2016/12/23	
pH Water	AT/ALK	8513210	N/A	2016/12/24	
Sulphate by Automated Colourimetry	KONE/COL	8514418	N/A	2016/12/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8517000	2016/12/29	2016/12/29	
Total Phosphorus - unpreserved	KONE/COL	8517007	N/A	2016/12/29	
Total Suspended Solids-Low Level	BAL/BAL	8513034	2016/12/24	2016/12/28	

Maxxam ID: QI0742
Sample ID: KZ-9
Matrix: Water

Collected: 2016/12/20
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8513074	N/A	2016/12/23	Name Redacted
Alkalinity - Water	AT/ALK	8513206	2016/12/24	2016/12/24	
Chloride by Automated Colourimetry	KONE/COL	8514414	N/A	2016/12/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8514327	N/A	2016/12/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8514347	N/A	2016/12/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8514348	N/A	2016/12/28	
Conductance - water	AT/ALK	8513209	N/A	2016/12/24	
Fluoride	ISE/ISE	8513254	N/A	2016/12/24	
Hardness Total (calculated as CaCO3)	CALC	8512347	N/A	2016/12/29	
Hardness (calculated as CaCO3)	CALC	8512052	N/A	2016/12/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8516941	N/A	2016/12/29	
Mercury (Total-LowLevel) by CVAF	CV/AF	8516845	2016/12/29	2016/12/29	
Ion Balance	CALC	8512943	N/A	2016/12/29	
Sum of cations, anions	CALC	8512944	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8512054	N/A	2016/12/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8514201	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8512456	N/A	2016/12/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8519311	N/A	2017/01/03	
Ammonia-N (Preserved)	KONE/COL	8514634	N/A	2016/12/29	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8513287	N/A	2016/12/23	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QI0742
Sample ID: KZ-9
Matrix: Water

Collected: 2016/12/20
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8513288	N/A	2016/12/23	Name Redacted
Nitrogen - Nitrate (as N)	CALC	8512457	N/A	2016/12/24	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2016/12/23	
pH Water	AT/ALK	8513210	N/A	2016/12/24	
Sulphate by Automated Colourimetry	KONE/COL	8514418	N/A	2016/12/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8517000	2016/12/29	2016/12/29	
Total Phosphorus - unpreserved	KONE/COL	8517007	N/A	2016/12/29	
Total Suspended Solids-Low Level	BAL/BAL	8513034	2016/12/24	2016/12/28	

Maxxam ID: QI0743
Sample ID: KZ-13
Matrix: Water

Collected: 2016/12/21
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8513074	N/A	2016/12/23	Name Redacted
Alkalinity - Water	AT/ALK	8513206	2016/12/24	2016/12/24	
Chloride by Automated Colourimetry	KONE/COL	8514414	N/A	2016/12/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8514327	N/A	2016/12/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8514347	N/A	2016/12/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8514348	N/A	2016/12/28	
Conductance - water	AT/ALK	8513209	N/A	2016/12/24	
Fluoride	ISE/ISE	8513254	N/A	2016/12/24	
Hardness Total (calculated as CaCO3)	CALC	8512347	N/A	2016/12/29	
Hardness (calculated as CaCO3)	CALC	8512052	N/A	2016/12/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8516941	N/A	2016/12/29	
Mercury (Total-LowLevel) by CVAF	CV/AF	8516845	2016/12/29	2016/12/29	
Ion Balance	CALC	8512943	N/A	2016/12/29	
Sum of cations, anions	CALC	8512944	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8512054	N/A	2016/12/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8514201	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8512456	N/A	2016/12/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8519311	N/A	2017/01/03	
Ammonia-N (Preserved)	KONE/COL	8514634	N/A	2016/12/29	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8513287	N/A	2016/12/23	
Nitrite (N) (low level)	TRAA/COL	8513288	N/A	2016/12/23	
Nitrogen - Nitrate (as N)	CALC	8512457	N/A	2016/12/24	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2016/12/23	
pH Water	AT/ALK	8513210	N/A	2016/12/24	
Sulphate by Automated Colourimetry	KONE/COL	8514418	N/A	2016/12/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8517000	2016/12/29	2016/12/29	
Total Phosphorus - unpreserved	KONE/COL	8517007	N/A	2016/12/29	
Total Suspended Solids-Low Level	BAL/BAL	8513034	2016/12/24	2016/12/28	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QI0744
Sample ID: KZ-18
Matrix: Water

Collected: 2016/12/20
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8513074	N/A	2016/12/23	Name Redacted
Alkalinity - Water	AT/ALK	8513206	2016/12/24	2016/12/24	
Chloride by Automated Colourimetry	KONE/COL	8514414	N/A	2016/12/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8514327	N/A	2016/12/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8514347	N/A	2016/12/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8514348	N/A	2016/12/28	
Conductance - water	AT/ALK	8513209	N/A	2016/12/24	
Fluoride	ISE/ISE	8513254	N/A	2016/12/24	
Hardness Total (calculated as CaCO3)	CALC	8512347	N/A	2016/12/29	
Hardness (calculated as CaCO3)	CALC	8512052	N/A	2016/12/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8516941	N/A	2016/12/29	
Mercury (Total-LowLevel) by CVAF	CV/AF	8516845	2016/12/29	2016/12/29	
Ion Balance	CALC	8512943	N/A	2016/12/29	
Sum of cations, anions	CALC	8512944	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8512054	N/A	2016/12/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8514201	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8512456	N/A	2016/12/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8519311	N/A	2017/01/03	
Ammonia-N (Preserved)	KONE/COL	8514634	N/A	2016/12/29	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8513287	N/A	2016/12/23	
Nitrite (N) (low level)	TRAA/COL	8513288	N/A	2016/12/23	
Nitrogen - Nitrate (as N)	CALC	8512457	N/A	2016/12/24	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2016/12/23	
pH Water	AT/ALK	8513210	N/A	2016/12/24	
Sulphate by Automated Colourimetry	KONE/COL	8514418	N/A	2016/12/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8517000	2016/12/29	2016/12/29	
Total Phosphorus - unpreserved	KONE/COL	8517007	N/A	2016/12/29	
Total Suspended Solids-Low Level	BAL/BAL	8513034	2016/12/24	2016/12/28	

Maxxam ID: QI0744 Dup
Sample ID: KZ-18
Matrix: Water

Collected: 2016/12/20
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8513206	2016/12/24	2016/12/24	Name Redacted
Conductance - water	AT/ALK	8513209	N/A	2016/12/24	
pH Water	AT/ALK	8513210	N/A	2016/12/24	

Maxxam ID: QI0745
Sample ID: KZ-15
Matrix: Water

Collected: 2016/12/20
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8513074	N/A	2016/12/23	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QI0745
Sample ID: KZ-15
Matrix: Water

Collected: 2016/12/20
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8513206	2016/12/24	2016/12/24	Name Redacted
Chloride by Automated Colourimetry	KONE/COL	8514420	N/A	2016/12/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8514327	N/A	2016/12/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8514347	N/A	2016/12/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8514348	N/A	2016/12/28	
Conductance - water	AT/ALK	8513209	N/A	2016/12/24	
Fluoride	ISE/ISE	8513254	N/A	2016/12/24	
Hardness Total (calculated as CaCO3)	CALC	8512347	N/A	2016/12/29	
Hardness (calculated as CaCO3)	CALC	8512052	N/A	2016/12/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8516941	N/A	2016/12/29	
Mercury (Total-LowLevel) by CVAF	CV/AF	8516845	2016/12/29	2016/12/29	
Ion Balance	CALC	8512943	N/A	2016/12/29	
Sum of cations, anions	CALC	8512944	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8512054	N/A	2016/12/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8514201	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8512456	N/A	2016/12/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8519311	N/A	2017/01/03	
Ammonia-N (Preserved)	KONE/COL	8514634	N/A	2016/12/29	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8513287	N/A	2016/12/23	
Nitrite (N) (low level)	TRAA/COL	8513288	N/A	2016/12/23	
Nitrogen - Nitrate (as N)	CALC	8512457	N/A	2016/12/24	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2016/12/23	
pH Water	AT/ALK	8513210	N/A	2016/12/24	
Sulphate by Automated Colourimetry	KONE/COL	8514428	N/A	2016/12/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8517000	2016/12/29	2016/12/29	
Total Phosphorus - unpreserved	KONE/COL	8517007	N/A	2016/12/29	
Total Suspended Solids-Low Level	BAL/BAL	8513034	2016/12/24	2016/12/28	

Maxxam ID: QI0746
Sample ID: KZ-16
Matrix: Water

Collected: 2016/12/20
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8513074	N/A	2016/12/23	Name Redacted
Alkalinity - Water	AT/ALK	8513206	2016/12/24	2016/12/24	
Chloride by Automated Colourimetry	KONE/COL	8514414	N/A	2016/12/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8514327	N/A	2016/12/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8514347	N/A	2016/12/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8514348	N/A	2016/12/28	
Conductance - water	AT/ALK	8513209	N/A	2016/12/24	
Fluoride	ISE/ISE	8513254	N/A	2016/12/24	
Hardness Total (calculated as CaCO3)	CALC	8512347	N/A	2016/12/29	
Hardness (calculated as CaCO3)	CALC	8512052	N/A	2016/12/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8516941	N/A	2016/12/29	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QI0746
Sample ID: KZ-16
Matrix: Water

Collected: 2016/12/20
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8516845	2016/12/29	2016/12/29	Name Redacted
Ion Balance	CALC	8512943	N/A	2016/12/29	
Sum of cations, anions	CALC	8512944	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8512054	N/A	2016/12/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8514201	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8512456	N/A	2016/12/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8514193	N/A	2016/12/29	
Ammonia-N (Preserved)	KONE/COL	8514634	N/A	2016/12/29	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8513287	N/A	2016/12/23	
Nitrite (N) (low level)	TRAA/COL	8513288	N/A	2016/12/23	
Nitrogen - Nitrate (as N)	CALC	8512457	N/A	2016/12/24	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2016/12/23	
pH Water	AT/ALK	8513210	N/A	2016/12/24	
Sulphate by Automated Colourimetry	KONE/COL	8514418	N/A	2016/12/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8517000	2016/12/29	2016/12/29	
Total Phosphorus - unpreserved	KONE/COL	8517007	N/A	2016/12/29	
Total Suspended Solids-Low Level	BAL/BAL	8513034	2016/12/24	2016/12/28	

Maxxam ID: QI0746 Dup
Sample ID: KZ-16
Matrix: Water

Collected: 2016/12/20
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8514414	N/A	2016/12/28	Name Redacted
Sulphate by Automated Colourimetry	KONE/COL	8514418	N/A	2016/12/28	

Maxxam ID: QI0747
Sample ID: KZ-17
Matrix: Water

Collected: 2016/12/20
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8513074	N/A	2016/12/23	Name Redacted
Alkalinity - Water	AT/ALK	8513206	2016/12/24	2016/12/24	
Chloride by Automated Colourimetry	KONE/COL	8514414	N/A	2016/12/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8514327	N/A	2016/12/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8514347	N/A	2016/12/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8514348	N/A	2016/12/28	
Conductance - water	AT/ALK	8513209	N/A	2016/12/24	
Fluoride	ISE/ISE	8513254	N/A	2016/12/24	
Hardness Total (calculated as CaCO3)	CALC	8512347	N/A	2016/12/29	
Hardness (calculated as CaCO3)	CALC	8512052	N/A	2016/12/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8516941	N/A	2016/12/29	
Mercury (Total-LowLevel) by CVAF	CV/AF	8516845	2016/12/29	2016/12/29	
Ion Balance	CALC	8512943	N/A	2016/12/29	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QI0747
Sample ID: KZ-17
Matrix: Water

Collected: 2016/12/20
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sum of cations, anions	CALC	8512944	N/A	2016/12/29	Name Redacted
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8512054	N/A	2016/12/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8514201	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8512456	N/A	2016/12/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8514193	N/A	2016/12/29	
Ammonia-N (Preserved)	KONE/COL	8514634	N/A	2016/12/29	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8513287	N/A	2016/12/23	
Nitrite (N) (low level)	TRAA/COL	8513288	N/A	2016/12/23	
Nitrogen - Nitrate (as N)	CALC	8512457	N/A	2016/12/24	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2016/12/23	
pH Water	AT/ALK	8513210	N/A	2016/12/24	
Sulphate by Automated Colourimetry	KONE/COL	8514418	N/A	2016/12/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8517000	2016/12/29	2016/12/29	
Total Phosphorus - unpreserved	KONE/COL	8517007	N/A	2016/12/29	
Total Suspended Solids-Low Level	BAL/BAL	8513034	2016/12/24	2016/12/28	

Maxxam ID: QI0747 Dup
Sample ID: KZ-17
Matrix: Water

Collected: 2016/12/20
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8514348	N/A	2016/12/28	Name Redacted
Ammonia-N (Preserved)	KONE/COL	8514634	N/A	2016/12/29	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8513287	N/A	2016/12/23	
Nitrite (N) (low level)	TRAA/COL	8513288	N/A	2016/12/23	
Total Phosphorus - unpreserved	KONE/COL	8517007	N/A	2016/12/29	

Maxxam ID: QI0748
Sample ID: KZ-19
Matrix: Water

Collected: 2016/12/21
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8513074	N/A	2016/12/23	Name Redacted
Alkalinity - Water	AT/ALK	8513206	2016/12/24	2016/12/24	
Chloride by Automated Colourimetry	KONE/COL	8514414	N/A	2016/12/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8514327	N/A	2016/12/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8514347	N/A	2016/12/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8514348	N/A	2016/12/28	
Conductance - water	AT/ALK	8513209	N/A	2016/12/24	
Fluoride	ISE/ISE	8513254	N/A	2016/12/24	
Hardness Total (calculated as CaCO3)	CALC	8512347	N/A	2016/12/29	
Hardness (calculated as CaCO3)	CALC	8512052	N/A	2016/12/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8516941	N/A	2016/12/29	
Mercury (Total-LowLevel) by CVAF	CV/AF	8516845	2016/12/29	2016/12/29	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QI0748
Sample ID: KZ-19
Matrix: Water

Collected: 2016/12/21
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance	CALC	8512943	N/A	2016/12/29	Name Redacted
Sum of cations, anions	CALC	8512944	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8512054	N/A	2016/12/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8514201	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8512456	N/A	2016/12/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8514193	N/A	2016/12/29	
Ammonia-N (Preserved)	KONE/COL	8514634	N/A	2016/12/29	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8513287	N/A	2016/12/23	
Nitrite (N) (low level)	TRAA/COL	8513288	N/A	2016/12/23	
Nitrogen - Nitrate (as N)	CALC	8512457	N/A	2016/12/24	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2016/12/23	
pH Water	AT/ALK	8513210	N/A	2016/12/24	
Sulphate by Automated Colourimetry	KONE/COL	8514418	N/A	2016/12/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8517000	2016/12/29	2016/12/29	
Total Phosphorus - unpreserved	KONE/COL	8517007	N/A	2016/12/29	
Total Suspended Solids-Low Level	BAL/BAL	8513034	2016/12/24	2016/12/28	

Maxxam ID: QI0749
Sample ID: KZ-21
Matrix: Water

Collected: 2016/12/19
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8513074	N/A	2016/12/23	Name Redacted
Alkalinity - Water	AT/ALK	8513206	2016/12/24	2016/12/24	
Chloride by Automated Colourimetry	KONE/COL	8514414	N/A	2016/12/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8514327	N/A	2016/12/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8514347	N/A	2016/12/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8514348	N/A	2016/12/28	
Conductance - water	AT/ALK	8513209	N/A	2016/12/24	
Fluoride	ISE/ISE	8513254	N/A	2016/12/24	
Hardness Total (calculated as CaCO3)	CALC	8512347	N/A	2016/12/29	
Hardness (calculated as CaCO3)	CALC	8512052	N/A	2016/12/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8516941	N/A	2016/12/29	
Mercury (Total-LowLevel) by CVAF	CV/AF	8516845	2016/12/29	2016/12/29	
Ion Balance	CALC	8512943	N/A	2016/12/29	
Sum of cations, anions	CALC	8512944	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8512054	N/A	2016/12/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8514201	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8512456	N/A	2016/12/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8514193	N/A	2016/12/29	
Ammonia-N (Preserved)	KONE/COL	8514634	N/A	2016/12/29	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8513287	N/A	2016/12/23	
Nitrite (N) (low level)	TRAA/COL	8513288	N/A	2016/12/23	
Nitrogen - Nitrate (as N)	CALC	8512457	N/A	2016/12/24	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QI0749
Sample ID: KZ-21
Matrix: Water

Collected: 2016/12/19
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2016/12/23	Name Redacted
pH Water	AT/ALK	8513210	N/A	2016/12/24	
Sulphate by Automated Colourimetry	KONE/COL	8514418	N/A	2016/12/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8517000	2016/12/29	2016/12/29	
Total Phosphorus - unpreserved	KONE/COL	8517007	N/A	2016/12/29	
Total Suspended Solids-Low Level	BAL/BAL	8513034	2016/12/24	2016/12/28	

Maxxam ID: QI0749 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2016/12/19
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8517000	2016/12/29	2016/12/29	Name Redacted

Maxxam ID: QI0750
Sample ID: KZ-22
Matrix: Water

Collected: 2016/12/19
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8513074	N/A	2016/12/23	Name Redacted
Alkalinity - Water	AT/ALK	8513206	2016/12/24	2016/12/24	
Chloride by Automated Colourimetry	KONE/COL	8514414	N/A	2016/12/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8514327	N/A	2016/12/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8514347	N/A	2016/12/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8514348	N/A	2016/12/28	
Conductance - water	AT/ALK	8513209	N/A	2016/12/24	
Fluoride	ISE/ISE	8513254	N/A	2016/12/24	
Hardness Total (calculated as CaCO3)	CALC	8512347	N/A	2016/12/29	
Hardness (calculated as CaCO3)	CALC	8512052	N/A	2016/12/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8516941	N/A	2016/12/29	
Mercury (Total-LowLevel) by CVAF	CV/AF	8516845	2016/12/29	2016/12/29	
Ion Balance	CALC	8512943	N/A	2016/12/29	
Sum of cations, anions	CALC	8512944	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8512054	N/A	2016/12/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8514201	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8512456	N/A	2016/12/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8514193	N/A	2016/12/29	
Ammonia-N (Preserved)	KONE/COL	8514634	N/A	2016/12/29	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8513287	N/A	2016/12/23	
Nitrite (N) (low level)	TRAA/COL	8513288	N/A	2016/12/23	
Nitrogen - Nitrate (as N)	CALC	8512457	N/A	2016/12/24	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2016/12/23	
pH Water	AT/ALK	8513210	N/A	2016/12/24	
Sulphate by Automated Colourimetry	KONE/COL	8514418	N/A	2016/12/28	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QI0750
Sample ID: KZ-22
Matrix: Water

Collected: 2016/12/19
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8517000	2016/12/29	2016/12/29	Name Redacted
Total Phosphorus - unpreserved	KONE/COL	8517007	N/A	2016/12/29	
Total Suspended Solids-Low Level	BAL/BAL	8513034	2016/12/24	2016/12/28	

Maxxam ID: QI0759
Sample ID: KZ-26
Matrix: Water

Collected: 2016/12/19
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8513074	N/A	2016/12/23	Name Redacted
Alkalinity - Water	AT/ALK	8513206	2016/12/24	2016/12/24	
Chloride by Automated Colourimetry	KONE/COL	8514414	N/A	2016/12/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8514327	N/A	2016/12/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8514347	N/A	2016/12/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8514348	N/A	2016/12/28	
Conductance - water	AT/ALK	8513209	N/A	2016/12/24	
Fluoride	ISE/ISE	8513254	N/A	2016/12/24	
Hardness Total (calculated as CaCO3)	CALC	8512347	N/A	2016/12/29	
Hardness (calculated as CaCO3)	CALC	8512052	N/A	2016/12/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8516941	N/A	2016/12/29	
Mercury (Total-LowLevel) by CVAF	CV/AF	8516845	2016/12/29	2016/12/29	
Ion Balance	CALC	8512943	N/A	2016/12/29	
Sum of cations, anions	CALC	8512944	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8512054	N/A	2016/12/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8514201	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8512456	N/A	2016/12/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8519311	N/A	2017/01/03	
Ammonia-N (Preserved)	KONE/COL	8514634	N/A	2016/12/29	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8513287	N/A	2016/12/23	
Nitrite (N) (low level)	TRAA/COL	8513288	N/A	2016/12/23	
Nitrogen - Nitrate (as N)	CALC	8512457	N/A	2016/12/24	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2016/12/23	
pH Water	AT/ALK	8513210	N/A	2016/12/24	
Sulphate by Automated Colourimetry	KONE/COL	8514418	N/A	2016/12/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8517000	2016/12/29	2016/12/29	
Total Phosphorus - unpreserved	KONE/COL	8517007	N/A	2016/12/29	
Total Suspended Solids-Low Level	BAL/BAL	8513034	2016/12/24	2016/12/28	

Maxxam ID: QI0761
Sample ID: KZ-28
Matrix: Water

Collected: 2016/12/20
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8513074	N/A	2016/12/23	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QI0761
Sample ID: KZ-28
Matrix: Water

Collected: 2016/12/20
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8513206	2016/12/24	2016/12/24	Name Redacted
Chloride by Automated Colourimetry	KONE/COL	8514414	N/A	2016/12/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8514327	N/A	2016/12/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8514347	N/A	2016/12/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8514348	N/A	2016/12/28	
Conductance - water	AT/ALK	8513209	N/A	2016/12/24	
Fluoride	ISE/ISE	8513254	N/A	2016/12/24	
Hardness Total (calculated as CaCO3)	CALC	8512347	N/A	2016/12/29	
Hardness (calculated as CaCO3)	CALC	8512052	N/A	2016/12/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8516941	N/A	2016/12/29	
Mercury (Total-LowLevel) by CVAF	CV/AF	8516845	2016/12/29	2016/12/29	
Ion Balance	CALC	8512943	N/A	2016/12/29	
Sum of cations, anions	CALC	8512944	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8512054	N/A	2016/12/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8514201	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8512456	N/A	2016/12/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8514193	N/A	2016/12/29	
Ammonia-N (Preserved)	KONE/COL	8514634	N/A	2016/12/29	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8513287	N/A	2016/12/23	
Nitrite (N) (low level)	TRAA/COL	8513288	N/A	2016/12/23	
Nitrogen - Nitrate (as N)	CALC	8512457	N/A	2016/12/24	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2016/12/23	
pH Water	AT/ALK	8513210	N/A	2016/12/24	
Sulphate by Automated Colourimetry	KONE/COL	8514418	N/A	2016/12/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8517000	2016/12/29	2016/12/29	
Total Phosphorus - unpreserved	KONE/COL	8517007	N/A	2016/12/29	
Total Suspended Solids-Low Level	BAL/BAL	8513034	2016/12/24	2016/12/28	

Maxxam ID: QI0762
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/12/22
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8513074	N/A	2016/12/23	Name Redacted
Alkalinity - Water	AT/ALK	8513206	2016/12/24	2016/12/24	
Chloride by Automated Colourimetry	KONE/COL	8514414	N/A	2016/12/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8514327	N/A	2016/12/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8514347	N/A	2016/12/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8514348	N/A	2016/12/28	
Conductance - water	AT/ALK	8513209	N/A	2016/12/24	
Fluoride	ISE/ISE	8513254	N/A	2016/12/24	
Hardness Total (calculated as CaCO3)	CALC	8512347	N/A	2016/12/29	
Hardness (calculated as CaCO3)	CALC	8512052	N/A	2016/12/29	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8516941	N/A	2016/12/29	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QI0762
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/12/22
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8516845	2016/12/29	2016/12/29	Name Redacted
Ion Balance	CALC	8512943	N/A	2016/12/29	
Sum of cations, anions	CALC	8512944	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8512054	N/A	2016/12/29	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8514201	N/A	2016/12/29	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8512456	N/A	2016/12/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8514193	N/A	2016/12/29	
Ammonia-N (Preserved)	KONE/COL	8514634	N/A	2016/12/29	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8513287	N/A	2016/12/23	
Nitrite (N) (low level)	TRAA/COL	8513288	N/A	2016/12/23	
Nitrogen - Nitrate (as N)	CALC	8512457	N/A	2016/12/24	
pH Water	AT/ALK	8513210	N/A	2016/12/24	
Sulphate by Automated Colourimetry	KONE/COL	8518322	N/A	2016/12/30	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8517000	2016/12/29	2016/12/29	
Total Phosphorus - unpreserved	KONE/COL	8517007	N/A	2016/12/29	
Total Suspended Solids-Low Level	BAL/BAL	8513034	2016/12/24	2016/12/28	

Maxxam ID: QI0762 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2016/12/22
Shipped:
Received: 2016/12/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8516941	N/A	2016/12/29	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

GENERAL COMMENTS

Samples collected on December 19th were received at the analytical lab past recommended hold time for Nitrate, Nitrite, Total Phosphorus and Dissolved Phosphorus. (M_S)

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8513034	Total Suspended Solids	2016/12/28			103	80 - 120	<1.0	mg/L		
8513074	Acidity (pH 4.5)	2016/12/23					<0.50	mg/L	NC	20
8513074	Acidity (pH 8.3)	2016/12/23			99	80 - 120	0.53, RDL=0.50	mg/L	NC	20
8513206	Alkalinity (PP as CaCO3)	2016/12/24					<0.50	mg/L	NC	20
8513206	Alkalinity (Total as CaCO3)	2016/12/24	NC	80 - 120	96	80 - 120	<0.50	mg/L	0.72	20
8513206	Bicarbonate (HCO3)	2016/12/24					<0.50	mg/L	0.72	20
8513206	Carbonate (CO3)	2016/12/24					<0.50	mg/L	NC	20
8513206	Hydroxide (OH)	2016/12/24					<0.50	mg/L	NC	20
8513209	Conductivity	2016/12/24			98	80 - 120	<1.0	uS/cm	0.51	20
8513210	pH	2016/12/24			101	97 - 103			0.50	N/A
8513254	Fluoride (F)	2016/12/24	95	80 - 120	96	80 - 120	0.012, RDL=0.010	mg/L	NC	20
8513287	Nitrate plus Nitrite (N)	2016/12/23	NC	80 - 120	105	80 - 120	<0.0020	mg/L	0.27	25
8513288	Nitrite (N)	2016/12/23	99	80 - 120	99	80 - 120	<0.0020	mg/L	NC	25
8514193	Total Aluminum (Al)	2016/12/29	100	80 - 120	107	80 - 120	<0.00050	mg/L	0.36	20
8514193	Total Antimony (Sb)	2016/12/29	98	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8514193	Total Arsenic (As)	2016/12/29	101	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8514193	Total Barium (Ba)	2016/12/29	NC	80 - 120	105	80 - 120	<0.000020	mg/L	3.4	20
8514193	Total Beryllium (Be)	2016/12/29	97	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20
8514193	Total Bismuth (Bi)	2016/12/29	95	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8514193	Total Boron (B)	2016/12/29	96	80 - 120	105	80 - 120	<0.010	mg/L	NC	20
8514193	Total Cadmium (Cd)	2016/12/29	96	80 - 120	102	80 - 120	<0.0000050	mg/L	0	20
8514193	Total Chromium (Cr)	2016/12/29	100	80 - 120	105	80 - 120	<0.00010	mg/L	NC	20
8514193	Total Cobalt (Co)	2016/12/29	98	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8514193	Total Copper (Cu)	2016/12/29	94	80 - 120	104	80 - 120	<0.000050	mg/L	1.3	20
8514193	Total Iron (Fe)	2016/12/29	106	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20
8514193	Total Lead (Pb)	2016/12/29	97	80 - 120	104	80 - 120	<0.0000050	mg/L	1.1	20
8514193	Total Lithium (Li)	2016/12/29	96	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8514193	Total Manganese (Mn)	2016/12/29	99	80 - 120	105	80 - 120	<0.000050	mg/L	6.2	20
8514193	Total Molybdenum (Mo)	2016/12/29	NC	80 - 120	105	80 - 120	<0.000050	mg/L	3.5	20
8514193	Total Nickel (Ni)	2016/12/29	95	80 - 120	105	80 - 120	<0.000020	mg/L	0.85	20

Maxxam Job #: B6B4410
Report Date: 2017/01/04

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8514193	Total Phosphorus (P)	2016/12/29					<0.0020	mg/L	NC	20
8514193	Total Selenium (Se)	2016/12/29	101	80 - 120	105	80 - 120	<0.000040	mg/L	1.1	20
8514193	Total Silicon (Si)	2016/12/29					<0.050	mg/L	1.8	20
8514193	Total Silver (Ag)	2016/12/29	99	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8514193	Total Strontium (Sr)	2016/12/29	NC	80 - 120	104	80 - 120	<0.000050	mg/L	2.6	20
8514193	Total Thallium (Tl)	2016/12/29	92	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8514193	Total Tin (Sn)	2016/12/29	98	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8514193	Total Titanium (Ti)	2016/12/29	95	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8514193	Total Uranium (U)	2016/12/29	101	80 - 120	106	80 - 120	<0.0000020	mg/L	1.0	20
8514193	Total Vanadium (V)	2016/12/29	102	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8514193	Total Zinc (Zn)	2016/12/29	NC	80 - 120	105	80 - 120	<0.00010	mg/L	0.35	20
8514193	Total Zirconium (Zr)	2016/12/29					<0.00010	mg/L	NC	20
8514201	Dissolved Aluminum (Al)	2016/12/29	105	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8514201	Dissolved Antimony (Sb)	2016/12/29	103	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8514201	Dissolved Arsenic (As)	2016/12/29	105	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8514201	Dissolved Barium (Ba)	2016/12/29	NC	80 - 120	101	80 - 120	<0.000020	mg/L	0.77	20
8514201	Dissolved Beryllium (Be)	2016/12/29	99	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8514201	Dissolved Bismuth (Bi)	2016/12/29	96	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8514201	Dissolved Boron (B)	2016/12/29	96	80 - 120	95	80 - 120	<0.010	mg/L	NC	20
8514201	Dissolved Cadmium (Cd)	2016/12/29	100	80 - 120	100	80 - 120	<0.0000050	mg/L	1.1	20
8514201	Dissolved Chromium (Cr)	2016/12/29	102	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8514201	Dissolved Cobalt (Co)	2016/12/29	100	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8514201	Dissolved Copper (Cu)	2016/12/29	99	80 - 120	99	80 - 120	<0.000050	mg/L	3.6	20
8514201	Dissolved Iron (Fe)	2016/12/29	108	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20
8514201	Dissolved Lead (Pb)	2016/12/29	98	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8514201	Dissolved Lithium (Li)	2016/12/29	99	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8514201	Dissolved Manganese (Mn)	2016/12/29	101	80 - 120	96	80 - 120	<0.000050	mg/L	NC	20
8514201	Dissolved Molybdenum (Mo)	2016/12/29	NC	80 - 120	100	80 - 120	<0.000050	mg/L	0.46	20
8514201	Dissolved Nickel (Ni)	2016/12/29	97	80 - 120	99	80 - 120	<0.000020	mg/L	2.8	20
8514201	Dissolved Phosphorus (P)	2016/12/29					<0.0020	mg/L	NC	20
8514201	Dissolved Selenium (Se)	2016/12/29	101	80 - 120	98	80 - 120	<0.000040	mg/L	5.3	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8514201	Dissolved Silicon (Si)	2016/12/29					<0.050	mg/L	4.9	20
8514201	Dissolved Silver (Ag)	2016/12/29	102	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8514201	Dissolved Strontium (Sr)	2016/12/29	NC	80 - 120	99	80 - 120	<0.000050	mg/L	3.0	20
8514201	Dissolved Thallium (Tl)	2016/12/29	97	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	20
8514201	Dissolved Tin (Sn)	2016/12/29	103	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8514201	Dissolved Titanium (Ti)	2016/12/29	114	80 - 120	95	80 - 120	<0.00050	mg/L	NC	20
8514201	Dissolved Uranium (U)	2016/12/29	106	80 - 120	103	80 - 120	<0.0000020	mg/L	1.1	20
8514201	Dissolved Vanadium (V)	2016/12/29	102	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8514201	Dissolved Zinc (Zn)	2016/12/29	NC	80 - 120	98	80 - 120	<0.00010	mg/L	4.3	20
8514201	Dissolved Zirconium (Zr)	2016/12/29					<0.00010	mg/L	NC	20
8514327	Strong Acid Dissoc. Cyanide (CN)	2016/12/28	103	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8514347	Weak Acid Dissoc. Cyanide (CN)	2016/12/28	105	80 - 120	95	80 - 120	<0.00050	mg/L	NC	20
8514348	Dissolved Organic Carbon (C)	2016/12/28	94	80 - 120	102	80 - 120	<0.50	mg/L	NC	20
8514414	Dissolved Chloride (Cl)	2016/12/28	NC	80 - 120	103	80 - 120	0.72, RDL=0.50	mg/L	NC	20
8514418	Dissolved Sulphate (SO4)	2016/12/28	NC	80 - 120	99	80 - 120	0.82, RDL=0.50	mg/L	0.42	20
8514420	Dissolved Chloride (Cl)	2016/12/28			103	80 - 120	0.86, RDL=0.50	mg/L	NC	20
8514428	Dissolved Sulphate (SO4)	2016/12/28			96	80 - 120	<0.50	mg/L	2.0	20
8514634	Total Ammonia (N)	2016/12/29	98	80 - 120	99	80 - 120	<0.0050	mg/L	NC	20
8516845	Total Mercury (Hg)	2016/12/29	103	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8516941	Dissolved Mercury (Hg)	2016/12/29	100	80 - 120	105	80 - 120	<0.0000020	mg/L	NC	20
8517000	Dissolved Phosphorus (P)	2016/12/29	88	80 - 120	106	80 - 120	<0.0020	mg/L	0.17	20
8517007	Total Phosphorus (P)	2016/12/29	94	80 - 120	106	80 - 120	<0.0020	mg/L	NC	20
8518322	Dissolved Sulphate (SO4)	2016/12/30			96	80 - 120	0.61, RDL=0.50	mg/L		
8519311	Total Aluminum (Al)	2017/01/03			110	80 - 120	<0.00050	mg/L		
8519311	Total Antimony (Sb)	2017/01/03			103	80 - 120	<0.000020	mg/L		
8519311	Total Arsenic (As)	2017/01/03			102	80 - 120	<0.000020	mg/L		
8519311	Total Barium (Ba)	2017/01/03			102	80 - 120	<0.000020	mg/L		
8519311	Total Beryllium (Be)	2017/01/03			104	80 - 120	<0.000010	mg/L		
8519311	Total Bismuth (Bi)	2017/01/03			100	80 - 120	<0.0000050	mg/L		
8519311	Total Boron (B)	2017/01/03			102	80 - 120	<0.010	mg/L		
8519311	Total Cadmium (Cd)	2017/01/03			100	80 - 120	<0.0000050	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8519311	Total Chromium (Cr)	2017/01/03			102	80 - 120	<0.00010	mg/L		
8519311	Total Cobalt (Co)	2017/01/03			102	80 - 120	<0.0000050	mg/L		
8519311	Total Copper (Cu)	2017/01/03			102	80 - 120	<0.000050	mg/L		
8519311	Total Iron (Fe)	2017/01/03			106	80 - 120	<0.0010	mg/L		
8519311	Total Lead (Pb)	2017/01/03			103	80 - 120	<0.0000050	mg/L		
8519311	Total Lithium (Li)	2017/01/03			104	80 - 120	<0.00050	mg/L		
8519311	Total Manganese (Mn)	2017/01/03			100	80 - 120	<0.000050	mg/L		
8519311	Total Molybdenum (Mo)	2017/01/03			105	80 - 120	<0.000050	mg/L		
8519311	Total Nickel (Ni)	2017/01/03			103	80 - 120	<0.000020	mg/L		
8519311	Total Phosphorus (P)	2017/01/03					<0.0020	mg/L		
8519311	Total Selenium (Se)	2017/01/03			107	80 - 120	<0.000040	mg/L		
8519311	Total Silicon (Si)	2017/01/03					<0.050	mg/L		
8519311	Total Silver (Ag)	2017/01/03			102	80 - 120	<0.0000050	mg/L		
8519311	Total Strontium (Sr)	2017/01/03			103	80 - 120	<0.000050	mg/L		
8519311	Total Thallium (Tl)	2017/01/03			100	80 - 120	<0.0000020	mg/L		
8519311	Total Tin (Sn)	2017/01/03			105	80 - 120	<0.00020	mg/L		
8519311	Total Titanium (Ti)	2017/01/03			91	80 - 120	<0.00050	mg/L		
8519311	Total Uranium (U)	2017/01/03			106	80 - 120	<0.0000020	mg/L		
8519311	Total Vanadium (V)	2017/01/03			102	80 - 120	<0.00020	mg/L		
8519311	Total Zinc (Zn)	2017/01/03			104	80 - 120	<0.00010	mg/L		
8519311	Total Zirconium (Zr)	2017/01/03					<0.00010	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B6B4410
Report Date: 2017/01/04

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Name Redacted Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

RECEIVED IN WHITEHORSE
BY: Signature Redacted 21230

Maxxam
A Bureau Veritas Group Company

2016 -12- 22

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC 08434444

BBY FCD-00077/05

Page 1 2

TEMP: 1 1.6 1.8

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[X] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

Rush Confirmation #:

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (CAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	Comments
1	KZ-2		20-Dec-16	15:10	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
2	KZ-6		20-Dec-16	13:55	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
3	KZ-7		20-Dec-16	13:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
4	KZ-9		20-Dec-16	11:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
5	KZ-13		21-Dec-16	13:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
6	KZ-18		20-Dec-16	11:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
7	KZ-15		20-Dec-16	8:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
8	KZ-16		20-Dec-16	9:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
9	KZ-17		20-Dec-16	9:55	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
10	KZ-19		21-Dec-16	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP

B6B4410_COC

LABORATORY USE ONLY		
CUSTODY SEAL Y (N)		COOLER TEMPERATURES
Present	Intact	
LA		2.3.3
LA		2.1.2
LA		2.2.2
COOLING MEDIA PRESENT		Y N

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	22/12/2016	13:30	Signature Redacted	2016/12/23	13:35	B6B4410

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC 08434445

BBY FCD-00077/05

Page 2 2

Invoice Information	Report Information (if differs from invoice)	Project Information (wh
Company Name: BMC MINERALS LTD.	Company Name: ALEXCO ENVIRONMENTAL	Quotation #: B50743
Contact Name:	Contact Name: KAI WOLOSHYN	P.O. #/ AFE#:
Address: 530-1130 WEST PENDER ST	Address: UNIT 3 151 INDUSTRIAL RD	Project #: BMC-15-01
Vancouver, BC PC: V6E 4A4	Whitehorse, YK PC: V1A 2V3	Site Location: Kudz Ze Kayah
Phone:	Phone: (867) 668-6483	Site #:
Email:	Email: kwoloshyn@alexcoresource.com	Sampled By: Signature Redacted

Jund Time (TAT) Required

[x] Regular TAT 5 days (Most analyses)

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Rush TAT (Surcharges will be applied)

[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days

Date Required:

Rush Confirmation #:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Drip Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12185

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

LABORATORY USE ONLY

CUSTODY SEAL Y / N — Present / Intact

COOLER TEMPERATURES

	Present	Intact	
	LA		2.2.3
	LA		2.1.2
	LA		2.2.2

COOLING MEDIA PRESENT Y / N

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	Analysis Requested	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-21	B6B4410_COC	19-Dec-16	14:45	Water	x x x x x x x x x x x x x	11		Dissolved metals FF/FP, Total Metals FP
2	KZ-22		19-Dec-16	13:40	Water	x x x x x x x x x x x x x	11		Dissolved metals FF/FP, Total Metals FP
3	KZ-26		19-Dec-16	12:30	Water	x x x x x x x x x x x x x	11		Dissolved metals FF/FP, Total Metals FP
4	KZ-28		20-Dec-16	15:45	Water	x x x x x x x x x x x x x	11		Dissolved metals FF/FP, Total Metals FP
5	Trip Blank		22-Dec-16		Water	x x x x x x x x x x x x x	11		Dissolved metals FF/FP, Total Metals FP
6									
7									
8									
9									
10									

RECEIVED IN WHITEHORSE

BY: Signature Redacted @ 1230

2016-12-21

TEMP: 1 1 2 / 2 1 2 / 2 1 2

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	22/12/2016	12:30	Signature Redacted	2016/12/23	13:35.	B6B4410

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08434896, 08434897

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/02/09
Report #: R2343515
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B703771
Received: 2017/01/17, 15:00

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	15	N/A	2017/01/19	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	15	2017/01/19	2017/01/19	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	15	N/A	2017/01/19	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	15	N/A	2017/01/19	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	15	N/A	2017/01/19	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	14	N/A	2017/01/19	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2017/01/19	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	15	N/A	2017/01/19	BBY6SOP-00026	SM 22 2510 B m
Fluoride	15	N/A	2017/01/19	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	15	N/A	2017/01/20	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	14	N/A	2017/01/20	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	1	N/A	2017/02/08	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	15	N/A	2017/01/19	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	15	2017/01/19	2017/01/19	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	15	N/A	2017/01/20	BBY WI-00033	Auto Calc
Sum of cations, anions	15	N/A	2017/01/20	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	14	N/A	2017/01/20	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2017/02/08	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	13	N/A	2017/01/19	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	1	N/A	2017/01/20	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	1	N/A	2017/01/30	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	3	2017/01/19	2017/01/20	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	15	N/A	2017/01/20	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	4	N/A	2017/01/19	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	8	N/A	2017/01/20	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	15	N/A	2017/01/19	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	15	N/A	2017/01/19	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	15	N/A	2017/01/19	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	15	N/A	2017/01/20	BBY6SOP-00010	SM 22 4500-NO3- I m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08434896, 08434897

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/02/09
Report #: R2343515
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B703771
Received: 2017/01/17, 15:00

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Filter and HNO3 Preserve for Metals	1	N/A	2017/01/19	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	13	N/A	2017/01/20	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	15	N/A	2017/01/19	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	12	N/A	2017/01/19	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	3	N/A	2017/01/20	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	15	2017/01/19	2017/01/19	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	15	N/A	2017/01/19	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	15	2017/01/19	2017/01/19	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods. Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08434896, 08434897

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/02/09
Report #: R2343515
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B703771
Received: 2017/01/17, 15:00

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QK3127		QK3132		QK3135		
Sampling Date		2017/01/16 17:30		2017/01/16 15:50		2017/01/16 14:40		
COC Number		08434896		08434896		08434896		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	3.0	8530723	3.5	8530723	3.8	N/A	8530723
Cation Sum	meq/L	2.8	8530723	3.5	8530723	3.7	N/A	8530723
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.93	8530722	1.0	8530722	0.97	0.010	8530722
Nitrate (N)	mg/L	0.164	8530364	0.178	8530364	0.133	0.0020	8530364
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8531631	<0.00050	8531631	<0.00050	0.00050	8531631
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8531633	<0.00050	8531633	<0.00050	0.00050	8531633
Fluoride (F)	mg/L	0.050	8532987	0.065	8532987	0.067	0.010	8532987
Dissolved Organic Carbon (C)	mg/L	<0.50	8531594	0.84	8531595	<0.50	0.50	8531594
Acidity (pH 4.5)	mg/L	<0.50	8531419	<0.50	8531419	<0.50	0.50	8531419
Alkalinity (Total as CaCO3)	mg/L	83.5	8531708	150	8531708	147	0.50	8531721
Acidity (pH 8.3)	mg/L	<0.50	8531419	<0.50	8531419	<0.50	0.50	8531419
Alkalinity (PP as CaCO3)	mg/L	<0.50	8531708	<0.50	8531708	<0.50	0.50	8531721
Bicarbonate (HCO3)	mg/L	102	8531708	182	8531708	179	0.50	8531721
Carbonate (CO3)	mg/L	<0.50	8531708	<0.50	8531708	<0.50	0.50	8531721
Hydroxide (OH)	mg/L	<0.50	8531708	<0.50	8531708	<0.50	0.50	8531721
Anions								
Dissolved Sulphate (SO4)	mg/L	64.7	8533227	23.9	8532324	39.8	0.50	8533227
Dissolved Chloride (Cl)	mg/L	0.56	8532306	<0.50	8532306	0.55	0.50	8532306
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020	8531568	0.0043	8531568	0.0246	0.0020	8531568
Total Ammonia (N)	mg/L	0.029	8531357	0.026	8531357	0.035	0.0050	8531357
Nitrate plus Nitrite (N)	mg/L	0.164	8532407	0.178	8532407	0.133	0.0020	8532407
Nitrite (N)	mg/L	<0.0020	8532411	<0.0020	8532411	<0.0020	0.0020	8532411
Total Phosphorus (P)	mg/L	<0.0020	8531567	0.0043	8531567	0.0280	0.0020	8531567
Physical Properties								
Conductivity	uS/cm	287	8531707	322	8531707	348	1.0	8531720
pH	pH	8.00	8531705	8.20	8531705	8.09		8531714

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QK3127		QK3132		QK3135		
Sampling Date		2017/01/16 17:30		2017/01/16 15:50		2017/01/16 14:40		
COC Number		08434896		08434896		08434896		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	1.1	8531319	1.8	8531319	21.3	1.0	8531319
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QK3137			QK3139			QK3141		
Sampling Date		2017/01/16 12:55			2017/01/17 09:40			2017/01/16 13:25		
COC Number		08434896			08434896			08434896		
	UNITS	KZ-9	RDL	QC Batch	KZ-13	RDL	QC Batch	KZ-18	RDL	QC Batch
Calculated Parameters										
Anion Sum	meq/L	4.3	N/A	8533239	2.3	N/A	8533239	4.5	N/A	8530723
Cation Sum	meq/L	4.4	N/A	8533239	2.3	N/A	8533239	4.3	N/A	8530723
Filter and HNO3 Preservation	N/A	FIELD		ONSITE	FIELD		ONSITE	FIELD		ONSITE
Ion Balance	N/A	1.0	0.010	8533238	0.99	0.010	8533238	0.96	0.010	8530722
Nitrate (N)	mg/L	0.211	0.0020	8530364	0.109	0.0020	8530364	0.232	0.0020	8530364
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8531631	<0.00050	0.00050	8531631	<0.00050	0.00050	8531631
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8531633	<0.00050	0.00050	8531633	<0.00050	0.00050	8531633
Fluoride (F)	mg/L	0.086	0.010	8532985	0.051	0.010	8532987	0.070	0.010	8532985
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8531594	2.32	0.50	8531594	0.70	0.50	8531882
Acidity (pH 4.5)	mg/L	<0.50	0.50	8531419	<0.50	0.50	8531419	<0.50	0.50	8531419
Alkalinity (Total as CaCO3)	mg/L	181	0.50	8531708	95.1	0.50	8531721	201	0.50	8531708
Acidity (pH 8.3)	mg/L	3.42	0.50	8531419	<0.50	0.50	8531419	1.09	0.50	8531419
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8531708	<0.50	0.50	8531721	<0.50	0.50	8531708
Bicarbonate (HCO3)	mg/L	221	0.50	8531708	116	0.50	8531721	245	0.50	8531708
Carbonate (CO3)	mg/L	<0.50	0.50	8531708	<0.50	0.50	8531721	<0.50	0.50	8531708
Hydroxide (OH)	mg/L	<0.50	0.50	8531708	<0.50	0.50	8531721	<0.50	0.50	8531708
Anions										
Dissolved Sulphate (SO4)	mg/L	32.6	0.50	8532324	17.0	0.50	8532324	22.0	0.50	8532324
Dissolved Chloride (Cl)	mg/L	0.82	0.50	8532306	0.88	0.50	8532306	0.74	0.50	8532306
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0037	0.0020	8531568	0.0033	0.0020	8531570	0.0544	0.0020	8531568
Total Ammonia (N)	mg/L	0.035	0.0050	8531357	0.044	0.0050	8531357	0.017	0.0050	8531357
Nitrate plus Nitrite (N)	mg/L	0.211	0.0020	8532407	0.109	0.0020	8532407	0.232	0.0020	8532407
Nitrite (N)	mg/L	<0.0020	0.0020	8532411	<0.0020	0.0020	8532411	<0.0020	0.0020	8532411
Total Phosphorus (P)	mg/L	0.0048	0.0020	8531567	0.0035	0.0020	8531571	0.0597	0.0020	8531567
Physical Properties										
Conductivity	uS/cm	400	1.0	8531707	220	1.0	8531720	402	1.0	8531707
pH	pH	7.93		8531705	8.11		8531714	8.12		8531705

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QK3137			QK3139			QK3141		
Sampling Date		2017/01/16 12:55			2017/01/17 09:40			2017/01/16 13:25		
COC Number		08434896			08434896			08434896		
	UNITS	KZ-9	RDL	QC Batch	KZ-13	RDL	QC Batch	KZ-18	RDL	QC Batch
Physical Properties										
Total Suspended Solids	mg/L	2.2	1.0	8531319	<1.3 (1)	1.3	8531319	4.9	1.0	8531319

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QK3144			QK3146		QK3147		
Sampling Date		2017/01/16 10:15			2017/01/16 11:00		2017/01/16 11:50		
COC Number		08434896			08434896		08434896		
	UNITS	KZ-15	RDL	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	5.4	N/A	8530723	5.5	8530723	5.5	N/A	8530723
Cation Sum	meq/L	5.2	N/A	8530723	5.5	8530723	5.3	N/A	8530723
Filter and HNO3 Preservation	N/A	FIELD		ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.97	0.010	8530722	0.99	8530722	0.97	0.010	8530722
Nitrate (N)	mg/L	0.236	0.0020	8530364	0.283	8530364	0.274	0.0020	8530364
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8531631	<0.00050	8531631	<0.00050	0.00050	8531631
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8531633	<0.00050	8531633	<0.00050	0.00050	8531633
Fluoride (F)	mg/L	0.100	0.010	8532987	0.078	8532987	0.069	0.010	8532987
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8531594	<0.50	8531595	0.62	0.50	8531595
Acidity (pH 4.5)	mg/L	<0.50	0.50	8531419	<0.50	8531419	<0.50	0.50	8531421
Alkalinity (Total as CaCO3)	mg/L	230	0.50	8531721	232	8531721	232	0.50	8531721
Acidity (pH 8.3)	mg/L	1.74	0.50	8531419	3.65	8531419	3.15	0.50	8531421
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8531721	<0.50	8531721	<0.50	0.50	8531721
Bicarbonate (HCO3)	mg/L	280	0.50	8531721	283	8531721	283	0.50	8531721
Carbonate (CO3)	mg/L	<0.50	0.50	8531721	<0.50	8531721	<0.50	0.50	8531721
Hydroxide (OH)	mg/L	<0.50	0.50	8531721	<0.50	8531721	<0.50	0.50	8531721
Anions									
Dissolved Sulphate (SO4)	mg/L	36.3	0.50	8532324	40.8	8533227	37.8	0.50	8532324
Dissolved Chloride (Cl)	mg/L	0.78	0.50	8532306	0.73	8532306	0.93	0.50	8532306
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0052	0.0020	8531570	<0.0020	8531570	<0.0020	0.0020	8531570
Total Ammonia (N)	mg/L	0.030	0.0050	8531357	0.028	8531356	0.016	0.0050	8531356
Nitrate plus Nitrite (N)	mg/L	0.236	0.0020	8532407	0.283	8532407	0.274	0.0020	8532407
Nitrite (N)	mg/L	<0.0020	0.0020	8532411	<0.0020	8532411	<0.0020	0.0020	8532411
Total Phosphorus (P)	mg/L	0.0037	0.0020	8531571	0.0026	8531571	<0.0020	0.0020	8531571
Physical Properties									
Conductivity	uS/cm	476	1.0	8531720	494	8531720	488	1.0	8531720
pH	pH	8.16		8531714	8.03	8531714	8.14		8531714

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QK3144			QK3146		QK3147		
Sampling Date		2017/01/16 10:15			2017/01/16 11:00		2017/01/16 11:50		
COC Number		08434896			08434896		08434896		
	UNITS	KZ-15	RDL	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	1.9	1.0	8531319	<1.1 (1)	8531319	<1.1 (1)	1.1	8531319

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QK3149		QK3156		QK3157		
Sampling Date		2017/01/17 10:00		2017/01/16 09:00		2017/01/16 08:10		
COC Number		08434896		08434897		08434897		
	UNITS	KZ-19	QC Batch	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	0.012	8530723	7.0	8530723	6.4	N/A	8530723
Cation Sum	meq/L	0.0034	8530723	6.8	8530723	6.2	N/A	8530723
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.42 (1)	8530722	0.98	8530722	0.98	0.010	8530722
Nitrate (N)	mg/L	<0.0020	8530364	0.197	8530364	0.215	0.0020	8530364
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8531631	<0.00050	8531631	<0.00050	0.00050	8531631
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8531633	<0.00050	8531633	<0.00050	0.00050	8531633
Fluoride (F)	mg/L	<0.010	8532987	0.200	8532987	0.150	0.010	8532987
Dissolved Organic Carbon (C)	mg/L	<0.50	8531594	1.78	8531594	1.05	0.50	8531594
Acidity (pH 4.5)	mg/L	<0.50	8531419	<0.50	8531419	<0.50	0.50	8531419
Alkalinity (Total as CaCO3)	mg/L	0.59	8531708	305	8531721	271	0.50	8531708
Acidity (pH 8.3)	mg/L	<0.50	8531419	11.5	8531419	3.41	0.50	8531419
Alkalinity (PP as CaCO3)	mg/L	<0.50	8531708	<0.50	8531721	<0.50	0.50	8531708
Bicarbonate (HCO3)	mg/L	0.72	8531708	372	8531721	331	0.50	8531708
Carbonate (CO3)	mg/L	<0.50	8531708	<0.50	8531721	<0.50	0.50	8531708
Hydroxide (OH)	mg/L	<0.50	8531708	<0.50	8531721	<0.50	0.50	8531708
Anions								
Dissolved Sulphate (SO4)	mg/L	<0.50	8532324	39.0	8532324	42.3	0.50	8532324
Dissolved Chloride (Cl)	mg/L	<0.50	8532306	1.8	8532306	0.95	0.50	8532306
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020	8531568	0.0323	8531570	0.0089	0.0020	8531568
Total Ammonia (N)	mg/L	0.033	8531357	0.15	8531356	0.069	0.0050	8531357
Nitrate plus Nitrite (N)	mg/L	<0.0020	8532407	0.197	8532407	0.215	0.0020	8532407
Nitrite (N)	mg/L	<0.0020	8532411	<0.0020	8532411	<0.0020	0.0020	8532411
Total Phosphorus (P)	mg/L	<0.0020	8531567	0.0320	8531571	0.0101	0.0020	8531567
Physical Properties								
Conductivity	uS/cm	1.5	8531707	618	8531720	560	1.0	8531707
pH	pH	6.03	8531705	7.92	8531714	8.19		8531705

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QK3149		QK3156		QK3157		
Sampling Date		2017/01/17 10:00		2017/01/16 09:00		2017/01/16 08:10		
COC Number		08434896		08434897		08434897		
	UNITS	KZ-19	QC Batch	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8531319	9.4	8531319	2.1	1.0	8531319
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QK3158		QK3161		QK3164		
Sampling Date		2017/01/15 14:40		2017/01/15 15:00		2017/01/17 15:00		
COC Number		08434897		08434897		08434897		
	UNITS	KZ-26	QC Batch	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	6.1	8530723	6.1	8530723	0.0000	N/A	8530723
Cation Sum	meq/L	6.2	8530723	6.1	8530723	0.0030	N/A	8530723
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE			ONSITE
Ion Balance	N/A	1.0	8530722	1.0	8530722	NC (1)	0.010	8530722
Nitrate (N)	mg/L	0.235	8530364	0.311	8530364	<0.0020	0.0020	8530364
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8531631	<0.00050	8531631	<0.00050	0.00050	8531631
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8531633	<0.00050	8531633	<0.00050	0.00050	8531633
Fluoride (F)	mg/L	0.120	8532987	0.120	8532987	<0.010	0.010	8532987
Dissolved Organic Carbon (C)	mg/L	0.88	8531594	1.34	8531594	<0.50	0.50	8531594
Acidity (pH 4.5)	mg/L	<0.50	8531419	<0.50	8531419	<0.50	0.50	8531419
Alkalinity (Total as CaCO3)	mg/L	260	8531708	260	8531708	<0.50	0.50	8531721
Acidity (pH 8.3)	mg/L	<0.50	8531419	<0.50	8531419	<0.50	0.50	8531419
Alkalinity (PP as CaCO3)	mg/L	2.06	8531708	3.92	8531708	<0.50	0.50	8531721
Bicarbonate (HCO3)	mg/L	312	8531708	307	8531708	<0.50	0.50	8531721
Carbonate (CO3)	mg/L	2.47	8531708	4.70	8531708	<0.50	0.50	8531721
Hydroxide (OH)	mg/L	<0.50	8531708	<0.50	8531708	<0.50	0.50	8531721
Anions								
Dissolved Sulphate (SO4)	mg/L	42.1	8532324	42.5	8532324	<0.50	0.50	8532324
Dissolved Chloride (Cl)	mg/L	1.0	8532306	1.4	8532306	<0.50	0.50	8532306
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0108 (2)	8531568	0.0126 (2)	8531568	<0.0020	0.0020	8531570
Total Ammonia (N)	mg/L	0.043	8531356	0.032	8531357	<0.0050	0.0050	8531357
Nitrate plus Nitrite (N)	mg/L	0.235 (3)	8532407	0.311 (3)	8532407	<0.0020	0.0020	8532407
Nitrite (N)	mg/L	<0.0020 (3)	8532411	<0.0020 (3)	8532411	<0.0020	0.0020	8532411
Total Phosphorus (P)	mg/L	0.0117 (2)	8531567	0.0134 (2)	8531567	<0.0020	0.0020	8531571
Physical Properties								
Conductivity	uS/cm	530	8531707	541	8531707	<1.0	1.0	8531720

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion Balance: NC = Not Calculable due to non-detectable anions.
(2) Sample preserved to extend hold time.
(3) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QK3158		QK3161		QK3164		
Sampling Date		2017/01/15 14:40		2017/01/15 15:00		2017/01/17 15:00		
COC Number		08434897		08434897		08434897		
	UNITS	KZ-26	QC Batch	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
pH	pH	8.31	8531705	8.37	8531705	5.52		8531714
Physical Properties								
Total Suspended Solids	mg/L	2.7	8531319	1.3	8531319	<1.0	1.0	8531319
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QK3127	QK3132	QK3135		QK3137		
Sampling Date		2017/01/16 17:30	2017/01/16 15:50	2017/01/16 14:40		2017/01/16 12:55		
COC Number		08434896	08434896	08434896		08434896		
	UNITS	KZ-2	KZ-6	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	138	174	178	8530203	214	0.50	8532262
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8531242	<0.0000020	0.0000020	8531242
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00220	0.00335	0.00132	8531404	0.00223	0.00050	8531404
Dissolved Antimony (Sb)	mg/L	0.000037	0.000035	0.000044	8531404	0.000040	0.000020	8531404
Dissolved Arsenic (As)	mg/L	0.000073	0.000096	0.000110	8531404	0.000166	0.000020	8531404
Dissolved Barium (Ba)	mg/L	0.0729	0.0483	0.0960	8531404	0.0967	0.000020	8531404
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8531404	<0.000010	0.000010	8531404
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8531404	<0.0000050	0.0000050	8531404
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8531404	<0.010	0.010	8531404
Dissolved Cadmium (Cd)	mg/L	0.000255	0.0000230	0.0000800	8531404	0.0000710	0.0000050	8531404
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8531404	<0.00010	0.00010	8531404
Dissolved Cobalt (Co)	mg/L	0.0000100	0.0000070	0.0000760	8531404	0.000127	0.0000050	8531404
Dissolved Copper (Cu)	mg/L	0.000467	0.000205	0.000174	8531404	0.000254	0.000050	8531404
Dissolved Iron (Fe)	mg/L	0.0017	0.0099	0.0349	8531404	0.284	0.0010	8531404
Dissolved Lead (Pb)	mg/L	0.0000420	0.000430	0.0000290	8531404	0.000196	0.0000050	8530581
Dissolved Lithium (Li)	mg/L	0.00133	0.00079	0.00355	8531404	0.00449	0.00050	8531404
Dissolved Manganese (Mn)	mg/L	0.000293	0.00111	0.0869	8531404	0.106	0.000050	8531404
Dissolved Molybdenum (Mo)	mg/L	0.000638	0.000628	0.000613	8531404	0.000685	0.000050	8531404
Dissolved Nickel (Ni)	mg/L	0.000384	0.000198	0.000467	8531404	0.000498	0.000020	8531404
Dissolved Phosphorus (P)	mg/L	0.0036	0.0054	0.0037	8531404	<0.0020	0.0020	8531404
Dissolved Selenium (Se)	mg/L	0.00229	0.00116	0.000981	8531404	0.00123	0.000040	8531404
Dissolved Silicon (Si)	mg/L	2.30	2.96	3.49	8531404	3.68	0.050	8531404
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8531404	<0.0000050	0.0000050	8531404
Dissolved Strontium (Sr)	mg/L	0.144	0.161	0.185	8531404	0.220	0.000050	8531404
Dissolved Thallium (Tl)	mg/L	0.0000030	<0.0000020	<0.0000020	8531404	<0.0000020	0.0000020	8531404
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8531404	<0.00020	0.00020	8531404
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8531404	<0.00050	0.00050	8531404
Dissolved Uranium (U)	mg/L	0.00457	0.00124	0.00142	8531404	0.00166	0.0000020	8531404
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8531404	<0.00020	0.00020	8531404

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QK3127	QK3132	QK3135		QK3137		
Sampling Date		2017/01/16 17:30	2017/01/16 15:50	2017/01/16 14:40		2017/01/16 12:55		
COC Number		08434896	08434896	08434896		08434896		
	UNITS	KZ-2	KZ-6	KZ-7	QC Batch	KZ-9	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0325	0.00270	0.0506	8531404	0.0187	0.00010	8531404
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8531404	<0.00010	0.00010	8531404
Dissolved Calcium (Ca)	mg/L	44.3	57.2	58.5	8530362	71.2	0.050	8532263
Dissolved Magnesium (Mg)	mg/L	6.55	7.67	7.80	8530362	8.75	0.050	8532263
Dissolved Potassium (K)	mg/L	2.11	0.930	1.66	8530362	1.69	0.050	8532263
Dissolved Sodium (Na)	mg/L	0.866	0.741	1.19	8530362	1.46	0.050	8532263
Dissolved Sulphur (S)	mg/L	19.0	7.6	11.5	8530362	10.7	3.0	8532263
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QK3139		QK3141	QK3144	QK3146		
Sampling Date		2017/01/17 09:40		2017/01/16 13:25	2017/01/16 10:15	2017/01/16 11:00		
COC Number		08434896		08434896	08434896	08434896		
	UNITS	KZ-13	QC Batch	KZ-18	KZ-15	KZ-16	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	107	8532262	214	256	270	0.50	8530203
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8531242	<0.0000020	<0.0000020	<0.0000020	0.0000020	8531242
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00399	8531404	0.00371	0.00127	0.00132	0.00050	8531404
Dissolved Antimony (Sb)	mg/L	0.000035	8531404	0.000045	0.000032	0.000022	0.000020	8531404
Dissolved Arsenic (As)	mg/L	0.000187	8531404	0.000796	0.000326	0.000176	0.000020	8531404
Dissolved Barium (Ba)	mg/L	0.129	8531404	0.0527	0.0913	0.0913	0.000020	8531404
Dissolved Beryllium (Be)	mg/L	<0.000010	8531404	<0.000010	<0.000010	<0.000010	0.000010	8531404
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8531404	<0.0000050	<0.0000050	<0.0000050	0.0000050	8531404
Dissolved Boron (B)	mg/L	<0.010	8531404	<0.010	<0.010	<0.010	0.010	8531404
Dissolved Cadmium (Cd)	mg/L	0.0000400	8531404	0.0000430	0.0000430	0.0000270	0.0000050	8531404
Dissolved Chromium (Cr)	mg/L	<0.00010	8531404	0.00016	<0.00010	<0.00010	0.00010	8531404
Dissolved Cobalt (Co)	mg/L	0.0000430	8531404	0.0000220	0.0000340	0.0000530	0.0000050	8531404
Dissolved Copper (Cu)	mg/L	0.000337	8531404	0.000164	0.000234	0.000239	0.000050	8531404
Dissolved Iron (Fe)	mg/L	0.0594	8531404	0.0256	0.0103	0.0070	0.0010	8531404
Dissolved Lead (Pb)	mg/L	0.0000080	8531404	0.000378	0.0000330	0.0000330	0.0000050	8531404
Dissolved Lithium (Li)	mg/L	0.00191	8531404	0.00199	0.00386	0.00359	0.00050	8531404
Dissolved Manganese (Mn)	mg/L	0.108	8531404	0.0116	0.0424	0.0174	0.000050	8531404
Dissolved Molybdenum (Mo)	mg/L	0.000738	8531404	0.00157	0.00129	0.000462	0.000050	8531404
Dissolved Nickel (Ni)	mg/L	0.000440	8530581	0.000355	0.000880	0.000718	0.000020	8531404
Dissolved Phosphorus (P)	mg/L	0.0042	8531404	0.0478	0.0050	0.0061	0.0020	8531404
Dissolved Selenium (Se)	mg/L	0.000313	8531404	0.00137	0.00149	0.00159	0.000040	8531404
Dissolved Silicon (Si)	mg/L	3.95	8531404	3.20	3.80	4.01	0.050	8531404
Dissolved Silver (Ag)	mg/L	<0.0000050	8531404	<0.0000050	<0.0000050	<0.0000050	0.0000050	8531404
Dissolved Strontium (Sr)	mg/L	0.103	8531404	0.177	0.238	0.269	0.000050	8531404
Dissolved Thallium (Tl)	mg/L	<0.0000020	8531404	<0.0000020	<0.0000020	<0.0000020	0.0000020	8531404
Dissolved Tin (Sn)	mg/L	<0.00020	8531404	<0.00020	<0.00020	<0.00020	0.00020	8531404
Dissolved Titanium (Ti)	mg/L	<0.00050	8531404	<0.00050	<0.00050	<0.00050	0.00050	8531404
Dissolved Uranium (U)	mg/L	0.00146	8531404	0.00294	0.00436	0.00276	0.0000020	8531404
Dissolved Vanadium (V)	mg/L	<0.00020	8531404	<0.00020	<0.00020	<0.00020	0.00020	8531404

RDL = Reportable Detection Limit

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QK3139		QK3141	QK3144	QK3146		
Sampling Date		2017/01/17 09:40		2017/01/16 13:25	2017/01/16 10:15	2017/01/16 11:00		
COC Number		08434896		08434896	08434896	08434896		
	UNITS	KZ-13	QC Batch	KZ-18	KZ-15	KZ-16	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00379	8531404	0.00207	0.00737	0.00159	0.00010	8531404
Dissolved Zirconium (Zr)	mg/L	<0.00010	8531404	<0.00010	<0.00010	<0.00010	0.00010	8531404
Dissolved Calcium (Ca)	mg/L	36.3	8530362	54.9	75.0	81.3	0.050	8530362
Dissolved Magnesium (Mg)	mg/L	4.05	8530362	18.6	16.8	16.3	0.050	8530362
Dissolved Potassium (K)	mg/L	2.30	8530362	0.619	1.35	1.30	0.050	8530362
Dissolved Sodium (Na)	mg/L	1.21	8530362	0.885	1.35	1.39	0.050	8530362
Dissolved Sulphur (S)	mg/L	5.0	8530362	7.0	11.2	12.4	3.0	8530362
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QK3147	QK3149	QK3156	QK3157	QK3158		
Sampling Date		2017/01/16 11:50	2017/01/17 10:00	2017/01/16 09:00	2017/01/16 08:10	2017/01/15 14:40		
COC Number		08434896	08434896	08434897	08434897	08434897		
	UNITS	KZ-17	KZ-19	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	262	<0.50	333	305	303	0.50	8530203
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8531242
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00126	0.00081	0.00137	0.00110	0.00144	0.00050	8531404
Dissolved Antimony (Sb)	mg/L	0.000029	<0.000020	0.000045	0.000044	0.000063	0.000020	8531404
Dissolved Arsenic (As)	mg/L	0.000207	<0.000020	0.000651	0.000691	0.000323	0.000020	8531404
Dissolved Barium (Ba)	mg/L	0.0895	<0.000020	0.0810	0.0857	0.0877	0.000020	8531404
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8531404
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8531404
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8531404
Dissolved Cadmium (Cd)	mg/L	0.0000240	<0.0000050	0.0000160	0.0000130	0.0000130	0.0000050	8531404
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00014	<0.00010	0.00010	8531404
Dissolved Cobalt (Co)	mg/L	0.0000060	<0.0000050	0.000205	0.000102	0.0000100	0.0000050	8531404
Dissolved Copper (Cu)	mg/L	0.000309	<0.000050	0.000419	0.000281	0.000401	0.000050	8531404
Dissolved Iron (Fe)	mg/L	<0.0010	<0.0010	0.0785	0.0358	0.0085	0.0010	8531404
Dissolved Lead (Pb)	mg/L	0.0000050	<0.0000050	0.0000440	0.0000080	0.000101	0.0000050	8531404
Dissolved Lithium (Li)	mg/L	0.00317	<0.00050	0.00983	0.00706	0.00712	0.00050	8531404
Dissolved Manganese (Mn)	mg/L	0.000269	<0.000050	0.223	0.0915	0.00580	0.000050	8531404
Dissolved Molybdenum (Mo)	mg/L	0.000570	<0.000050	0.00155	0.00132	0.000955	0.000050	8531404
Dissolved Nickel (Ni)	mg/L	0.000508	<0.000020	0.00228	0.00136	0.000699	0.000020	8531404
Dissolved Phosphorus (P)	mg/L	0.0032	<0.0020	0.0055	0.0040	0.0055	0.0020	8531404
Dissolved Selenium (Se)	mg/L	0.00152	<0.000040	0.000585	0.00114	0.00105	0.000040	8531404
Dissolved Silicon (Si)	mg/L	3.64	<0.050	6.44	5.06	5.03	0.050	8531404
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8531404
Dissolved Strontium (Sr)	mg/L	0.246	<0.000050	0.250	0.248	0.256	0.000050	8531404
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8531404
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8531404
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8531404
Dissolved Uranium (U)	mg/L	0.00305	<0.0000020	0.00311	0.00391	0.00347	0.0000020	8531404
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8531404

RDL = Reportable Detection Limit

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QK3147	QK3149	QK3156	QK3157	QK3158		
Sampling Date		2017/01/16 11:50	2017/01/17 10:00	2017/01/16 09:00	2017/01/16 08:10	2017/01/15 14:40		
COC Number		08434896	08434896	08434897	08434897	08434897		
	UNITS	KZ-17	KZ-19	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00199	0.00021	0.00252	0.00203	0.00126	0.00010	8531404
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00026	0.00017	<0.00010	0.00010	8531404
Dissolved Calcium (Ca)	mg/L	78.8	<0.050	82.2	80.3	80.7	0.050	8530362
Dissolved Magnesium (Mg)	mg/L	15.9	<0.050	31.1	25.3	24.6	0.050	8530362
Dissolved Potassium (K)	mg/L	1.28	<0.050	2.22	1.73	1.51	0.050	8530362
Dissolved Sodium (Na)	mg/L	1.35	<0.050	2.50	1.96	1.98	0.050	8530362
Dissolved Sulphur (S)	mg/L	11.9	<3.0	12.6	13.8	14.2	3.0	8530362

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QK3161		QK3164		
Sampling Date		2017/01/15 15:00		2017/01/17 15:00		
COC Number		08434897		08434897		
	UNITS	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Misc. Inorganics						
Dissolved Hardness (CaCO3)	mg/L	307	8547944	<0.50	0.50	8530203
Elements						
Dissolved Mercury (Hg)	mg/L	<0.0000020	8531242	<0.0000020	0.0000020	8531242
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	0.00147	8537914	<0.00050	0.00050	8531404
Dissolved Antimony (Sb)	mg/L	0.000052	8537914	<0.000020	0.000020	8531404
Dissolved Arsenic (As)	mg/L	0.000386	8537914	<0.000020	0.000020	8531404
Dissolved Barium (Ba)	mg/L	0.0928	8537914	<0.000020	0.000020	8531404
Dissolved Beryllium (Be)	mg/L	<0.000010	8537914	<0.000010	0.000010	8531404
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8537914	<0.0000050	0.0000050	8531404
Dissolved Boron (B)	mg/L	<0.010	8537914	<0.010	0.010	8531404
Dissolved Cadmium (Cd)	mg/L	0.0000130	8537914	<0.0000050	0.0000050	8531404
Dissolved Chromium (Cr)	mg/L	<0.00010	8537914	<0.00010	0.00010	8531404
Dissolved Cobalt (Co)	mg/L	0.0000150	8537914	<0.0000050	0.0000050	8531404
Dissolved Copper (Cu)	mg/L	0.000458	8537914	<0.000050	0.000050	8531404
Dissolved Iron (Fe)	mg/L	0.0079	8537914	<0.0010	0.0010	8531404
Dissolved Lead (Pb)	mg/L	0.000135	8537914	<0.0000050	0.0000050	8531404
Dissolved Lithium (Li)	mg/L	0.00779	8537914	<0.00050	0.00050	8531404
Dissolved Manganese (Mn)	mg/L	0.00610	8537914	<0.000050	0.000050	8531404
Dissolved Molybdenum (Mo)	mg/L	0.00103	8537914	<0.000050	0.000050	8531404
Dissolved Nickel (Ni)	mg/L	0.000747	8537914	<0.000020	0.000020	8531404
Dissolved Phosphorus (P)	mg/L	0.0022	8537914	<0.0020	0.0020	8531404
Dissolved Selenium (Se)	mg/L	0.00112	8537914	<0.000040	0.000040	8531404
Dissolved Silicon (Si)	mg/L	4.98	8537914	<0.050	0.050	8531404
Dissolved Silver (Ag)	mg/L	<0.0000050	8537914	<0.0000050	0.0000050	8531404
Dissolved Strontium (Sr)	mg/L	0.270	8537914	<0.000050	0.000050	8531404
Dissolved Thallium (Tl)	mg/L	<0.0000020	8537914	<0.0000020	0.0000020	8531404
Dissolved Tin (Sn)	mg/L	<0.00020	8537914	<0.00020	0.00020	8531404
Dissolved Titanium (Ti)	mg/L	<0.00050	8537914	<0.00050	0.00050	8531404
Dissolved Uranium (U)	mg/L	0.00361	8537914	<0.0000020	0.0000020	8531404
Dissolved Vanadium (V)	mg/L	<0.00020	8537914	<0.00020	0.00020	8531404
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QK3161		QK3164		
Sampling Date		2017/01/15 15:00		2017/01/17 15:00		
COC Number		08434897		08434897		
	UNITS	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00249	8537914	<0.00010	0.00010	8531404
Dissolved Zirconium (Zr)	mg/L	<0.00010	8537914	<0.00010	0.00010	8531404
Dissolved Calcium (Ca)	mg/L	81.5	8547945	<0.050	0.050	8530362
Dissolved Magnesium (Mg)	mg/L	25.1	8547945	<0.050	0.050	8530362
Dissolved Potassium (K)	mg/L	1.55	8547945	<0.050	0.050	8530362
Dissolved Sodium (Na)	mg/L	2.11	8547945	<0.050	0.050	8530362
Dissolved Sulphur (S)	mg/L	16.0	8547945	<3.0	3.0	8530362
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QK3127	QK3132	QK3137	QK3139	QK3146		
Sampling Date		2017/01/16 17:30	2017/01/16 15:50	2017/01/16 12:55	2017/01/17 09:40	2017/01/16 11:00		
COC Number		08434896	08434896	08434896	08434896	08434896		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-13	KZ-16	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	138	182	211	105	265	0.50	8530202
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8531203
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00587	0.00869	0.0127	0.00958	0.00962	0.00050	8531496
Total Antimony (Sb)	mg/L	0.000038	0.000046	0.000047	0.000035	0.000105	0.000020	8531496
Total Arsenic (As)	mg/L	0.000078	0.000078	0.000242	0.000242	0.000224	0.000020	8531496
Total Barium (Ba)	mg/L	0.0750	0.0492	0.0984	0.124	0.0943	0.000020	8531496
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8531496
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8531496
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8531496
Total Cadmium (Cd)	mg/L	0.000254	0.0000390	0.0000750	0.0000490	0.0000570	0.0000050	8531496
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00012	<0.00010	0.00022	0.00010	8531496
Total Cobalt (Co)	mg/L	0.0000130	0.0000140	0.000127	0.0000470	0.0000650	0.0000050	8531496
Total Copper (Cu)	mg/L	0.000507	0.000359	0.000287	0.000364	0.000883	0.000050	8531496
Total Iron (Fe)	mg/L	0.0097	0.0611	0.538	0.150	0.0378	0.0010	8531496
Total Lead (Pb)	mg/L	0.000175	0.000698	0.000346	0.0000280	0.00191	0.0000050	8531496
Total Lithium (Li)	mg/L	0.00147	0.00080	0.00458	0.00197	0.00374	0.00050	8531496
Total Manganese (Mn)	mg/L	0.000353	0.00921	0.111	0.109	0.0213	0.000050	8531496
Total Molybdenum (Mo)	mg/L	0.000665	0.000606	0.000681	0.000747	0.000491	0.000050	8531496
Total Nickel (Ni)	mg/L	0.000352	0.000199	0.000508	0.000373	0.00108	0.000020	8531496
Total Phosphorus (P)	mg/L	0.0034	0.0068	0.0046	0.0044	0.0048	0.0020	8531496
Total Selenium (Se)	mg/L	0.00243	0.00121	0.00114	0.000291	0.00152	0.000040	8531496
Total Silicon (Si)	mg/L	2.45	3.17	3.95	4.13	3.98	0.050	8531496
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000100	0.0000050	8531496
Total Strontium (Sr)	mg/L	0.144	0.173	0.217	0.103	0.248	0.000050	8531496
Total Thallium (Tl)	mg/L	0.0000040	<0.0000020	<0.0000020	0.0000020	<0.0000020	0.0000020	8531496
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8531496
Total Titanium (Ti)	mg/L	0.00051	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8531496
Total Uranium (U)	mg/L	0.00478	0.00131	0.00171	0.00139	0.00282	0.0000020	8531496
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8531496

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QK3127	QK3132	QK3137	QK3139	QK3146		
Sampling Date		2017/01/16 17:30	2017/01/16 15:50	2017/01/16 12:55	2017/01/17 09:40	2017/01/16 11:00		
COC Number		08434896	08434896	08434896	08434896	08434896		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-13	KZ-16	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0333	0.00288	0.0267	0.00449	0.00552	0.00010	8531496
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8531496
Total Calcium (Ca)	mg/L	44.3	60.2	70.0	35.6	78.6	0.050	8530363
Total Magnesium (Mg)	mg/L	6.53	7.69	8.78	3.87	16.8	0.050	8530363
Total Potassium (K)	mg/L	2.06	0.927	1.68	2.16	1.27	0.050	8530363
Total Sodium (Na)	mg/L	0.867	0.740	1.43	1.17	1.46	0.050	8530363
Total Sulphur (S)	mg/L	19.1	8.5	11.9	5.6	12.2	3.0	8530363

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QK3147	QK3149	QK3156	QK3157	QK3158		
Sampling Date		2017/01/16 11:50	2017/01/17 10:00	2017/01/16 09:00	2017/01/16 08:10	2017/01/15 14:40		
COC Number		08434896	08434896	08434897	08434897	08434897		
	UNITS	KZ-17	KZ-19	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	266	<0.50	336	308	301	0.50	8530202
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8531203
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00217	0.00087	0.0258	0.00846	0.00958	0.00050	8531496
Total Antimony (Sb)	mg/L	0.000029	<0.000020	0.000252	0.000032	0.000104	0.000020	8531496
Total Arsenic (As)	mg/L	0.000221	<0.000020	0.00258	0.00163	0.000534	0.000020	8531496
Total Barium (Ba)	mg/L	0.0897	<0.000020	0.0848	0.0860	0.0878	0.000020	8531496
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8531496
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	0.0000060	<0.0000050	<0.0000050	0.0000050	8531496
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8531496
Total Cadmium (Cd)	mg/L	0.0000350	<0.0000050	0.000187	0.0000210	0.0000340	0.0000050	8531496
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00041	<0.00010	0.00014	0.00010	8531496
Total Cobalt (Co)	mg/L	0.0000070	<0.0000050	0.000248	0.000127	0.0000260	0.0000050	8531496
Total Copper (Cu)	mg/L	0.000321	<0.000050	0.00335	0.000246	0.000880	0.000050	8531496
Total Iron (Fe)	mg/L	0.0047	<0.0010	0.804	0.355	0.0712	0.0010	8531496
Total Lead (Pb)	mg/L	0.000103	0.0000120	0.00487	0.0000240	0.00146	0.0000050	8531496
Total Lithium (Li)	mg/L	0.00324	<0.00050	0.00979	0.00710	0.00705	0.00050	8531496
Total Manganese (Mn)	mg/L	0.00103	<0.000050	0.238	0.103	0.0110	0.000050	8531496
Total Molybdenum (Mo)	mg/L	0.000551	<0.000050	0.00160	0.00134	0.000953	0.000050	8531496
Total Nickel (Ni)	mg/L	0.000505	<0.000020	0.00273	0.00139	0.000898	0.000020	8531496
Total Phosphorus (P)	mg/L	0.0046	0.0039	0.0346	0.0121	0.0103	0.0020	8531496
Total Selenium (Se)	mg/L	0.00157	<0.000040	0.000593	0.00114	0.00104	0.000040	8531496
Total Silicon (Si)	mg/L	3.84	<0.050	6.93	5.24	4.83	0.050	8531496
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	0.0000250	<0.0000050	0.0000060	0.0000050	8531496
Total Strontium (Sr)	mg/L	0.246	<0.000050	0.257	0.256	0.251	0.000050	8531496
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8531496
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8531496
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00085	<0.00050	0.00071	0.00050	8531496
Total Uranium (U)	mg/L	0.00293	<0.0000020	0.00302	0.00396	0.00355	0.0000020	8531496
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8531496

RDL = Reportable Detection Limit

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QK3147	QK3149	QK3156	QK3157	QK3158		
Sampling Date		2017/01/16 11:50	2017/01/17 10:00	2017/01/16 09:00	2017/01/16 08:10	2017/01/15 14:40		
COC Number		08434896	08434896	08434897	08434897	08434897		
	UNITS	**KZ-17**	**KZ-19**	**KZ-21**	**KZ-22**	**KZ-26**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.00262	0.00019	0.0153	0.00243	0.00612	0.00010	8531496
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00031	0.00013	0.00010	0.00010	8531496
Total Calcium (Ca)	mg/L	79.3	<0.050	82.5	82.1	79.7	0.050	8530363
Total Magnesium (Mg)	mg/L	16.5	<0.050	31.6	25.1	24.9	0.050	8530363
Total Potassium (K)	mg/L	1.27	<0.050	2.27	1.72	1.52	0.050	8530363
Total Sodium (Na)	mg/L	1.39	<0.050	2.76	1.91	2.07	0.050	8530363
Total Sulphur (S)	mg/L	12.8	<3.0	13.4	14.2	14.7	3.0	8530363

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QK3161	QK3164		
Sampling Date		2017/01/15 15:00	2017/01/17 15:00		
COC Number		08434897	08434897		
	UNITS	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters					
Total Hardness (CaCO3)	mg/L	301	<0.50	0.50	8530202
Elements					
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8531203
Total Metals by ICPMS					
Total Aluminum (Al)	mg/L	0.0199	<0.00050	0.00050	8531496
Total Antimony (Sb)	mg/L	0.000235	<0.000020	0.000020	8531496
Total Arsenic (As)	mg/L	0.000623	<0.000020	0.000020	8531496
Total Barium (Ba)	mg/L	0.0892	<0.000020	0.000020	8531496
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	8531496
Total Bismuth (Bi)	mg/L	0.0000050	<0.0000050	0.0000050	8531496
Total Boron (B)	mg/L	<0.010	<0.010	0.010	8531496
Total Cadmium (Cd)	mg/L	0.0000950	<0.0000050	0.0000050	8531496
Total Chromium (Cr)	mg/L	0.00043	<0.00010	0.00010	8531496
Total Cobalt (Co)	mg/L	0.0000490	<0.0000050	0.0000050	8531496
Total Copper (Cu)	mg/L	0.00266	0.000088	0.000050	8531496
Total Iron (Fe)	mg/L	0.112	<0.0010	0.0010	8531496
Total Lead (Pb)	mg/L	0.00522	<0.0000050	0.0000050	8531496
Total Lithium (Li)	mg/L	0.00729	<0.00050	0.00050	8531496
Total Manganese (Mn)	mg/L	0.0173	<0.000050	0.000050	8531496
Total Molybdenum (Mo)	mg/L	0.000989	<0.000050	0.000050	8531496
Total Nickel (Ni)	mg/L	0.00121	<0.000020	0.000020	8531496
Total Phosphorus (P)	mg/L	0.0144	<0.0020	0.0020	8531496
Total Selenium (Se)	mg/L	0.000985	<0.000040	0.000040	8531496
Total Silicon (Si)	mg/L	4.90	<0.050	0.050	8531496
Total Silver (Ag)	mg/L	0.0000250	<0.0000050	0.0000050	8531496
Total Strontium (Sr)	mg/L	0.251	<0.000050	0.000050	8531496
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	8531496
Total Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8531496
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00050	8531496
Total Uranium (U)	mg/L	0.00354	<0.0000020	0.0000020	8531496
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00020	8531496
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QK3161	QK3164		
Sampling Date		2017/01/15 15:00	2017/01/17 15:00		
COC Number		08434897	08434897		
	UNITS	KZ-28	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0196	<0.00010	0.00010	8531496
Total Zirconium (Zr)	mg/L	0.00015	<0.00010	0.00010	8531496
Total Calcium (Ca)	mg/L	79.2	<0.050	0.050	8530363
Total Magnesium (Mg)	mg/L	24.9	<0.050	0.050	8530363
Total Potassium (K)	mg/L	1.59	<0.050	0.050	8530363
Total Sodium (Na)	mg/L	2.40	<0.050	0.050	8530363
Total Sulphur (S)	mg/L	14.7	<3.0	3.0	8530363
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		QK3135	QK3141	QK3144		
Sampling Date		2017/01/16 14:40	2017/01/16 13:25	2017/01/16 10:15		
COC Number		08434896	08434896	08434896		
	UNITS	KZ-7	KZ-18	KZ-15	RDL	QC Batch
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	181	212	256	0.50	8530202
Elements						
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8531203
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.128	0.0297	0.0145	0.0030	8531698
Total Antimony (Sb)	mg/L	0.000055	0.000055	0.000037	0.000020	8531698
Total Arsenic (As)	mg/L	0.00108	0.000732	0.000526	0.000020	8531698
Total Barium (Ba)	mg/L	0.105	0.0547	0.0896	0.000050	8531698
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8531698
Total Bismuth (Bi)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8531698
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	8531698
Total Cadmium (Cd)	mg/L	0.000390	0.0000620	0.0000600	0.0000050	8531698
Total Chromium (Cr)	mg/L	0.00033	0.00020	0.00013	0.00010	8531698
Total Cobalt (Co)	mg/L	0.000306	0.000046	0.000059	0.000010	8531698
Total Copper (Cu)	mg/L	0.00122	0.00033	0.00039	0.00010	8531698
Total Iron (Fe)	mg/L	1.72	0.114	0.117	0.0050	8531698
Total Lead (Pb)	mg/L	0.000897	0.000488	0.000040	0.000020	8531698
Total Lithium (Li)	mg/L	0.00384	0.00210	0.00390	0.00050	8531698
Total Manganese (Mn)	mg/L	0.196	0.0197	0.0543	0.00010	8531698
Total Molybdenum (Mo)	mg/L	0.000650	0.00158	0.00127	0.000050	8531698
Total Nickel (Ni)	mg/L	0.00101	0.00040	0.00093	0.00010	8531698
Total Phosphorus (P)	mg/L	0.0187	0.0620	0.0083	0.0050	8531698
Total Selenium (Se)	mg/L	0.00103	0.00131	0.00142	0.000040	8531698
Total Silicon (Si)	mg/L	3.96	3.37	3.90	0.050	8531698
Total Silver (Ag)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8531698
Total Strontium (Sr)	mg/L	0.190	0.179	0.236	0.000050	8531698
Total Thallium (Tl)	mg/L	0.0000060	<0.0000020	<0.0000020	0.0000020	8531698
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8531698
Total Titanium (Ti)	mg/L	0.0069	<0.0020	<0.0020	0.0020	8531698
Total Uranium (U)	mg/L	0.00151	0.00294	0.00422	0.0000050	8531698
Total Vanadium (V)	mg/L	0.00038	<0.00020	<0.00020	0.00020	8531698
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		QK3135	QK3141	QK3144		
Sampling Date		2017/01/16 14:40	2017/01/16 13:25	2017/01/16 10:15		
COC Number		08434896	08434896	08434896		
	UNITS	KZ-7	KZ-18	KZ-15	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0919	0.0029	0.0099	0.0010	8531698
Total Zirconium (Zr)	mg/L	0.00020	<0.00010	<0.00010	0.00010	8531698
Total Calcium (Ca)	mg/L	59.5	55.1	74.7	0.25	8530363
Total Magnesium (Mg)	mg/L	7.75	18.1	16.9	0.25	8530363
Total Potassium (K)	mg/L	1.68	0.60	1.31	0.25	8530363
Total Sodium (Na)	mg/L	1.17	0.86	1.34	0.25	8530363
Total Sulphur (S)	mg/L	12.7	6.7	12.1	3.0	8530363
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QK3127
Sample ID: KZ-2
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8531419	N/A	2017/01/19	Name Redacted
Alkalinity - Water	AT/ALK	8531708	2017/01/19	2017/01/19	
Chloride by Automated Colourimetry	KONE/COL	8532306	N/A	2017/01/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8531631	N/A	2017/01/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8531633	N/A	2017/01/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8531594	N/A	2017/01/19	
Conductance - water	AT/ALK	8531707	N/A	2017/01/19	
Fluoride	ISE/ISE	8532987	N/A	2017/01/19	
Hardness Total (calculated as CaCO3)	CALC	8530202	N/A	2017/01/20	
Hardness (calculated as CaCO3)	CALC	8530203	N/A	2017/01/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8531242	N/A	2017/01/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8531203	2017/01/19	2017/01/19	
Ion Balance	CALC	8530722	N/A	2017/01/20	
Sum of cations, anions	CALC	8530723	N/A	2017/01/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8530362	N/A	2017/01/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8531404	N/A	2017/01/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8530363	N/A	2017/01/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8531496	N/A	2017/01/19	
Ammonia-N (Preserved)	KONE/COL	8531357	N/A	2017/01/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8532407	N/A	2017/01/19	
Nitrite (N) (low level)	TRAA/COL	8532411	N/A	2017/01/19	
Nitrogen - Nitrate (as N)	CALC	8530364	N/A	2017/01/20	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/01/19	
pH Water	AT/ALK	8531705	N/A	2017/01/19	
Sulphate by Automated Colourimetry	KONE/COL	8533227	N/A	2017/01/20	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8531568	2017/01/19	2017/01/19	
Total Phosphorus - unpreserved	KONE/COL	8531567	N/A	2017/01/19	
Total Suspended Solids-Low Level	BAL/BAL	8531319	2017/01/19	2017/01/19	

Maxxam ID: QK3127 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8531631	N/A	2017/01/19	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8531633	N/A	2017/01/19	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8531404	N/A	2017/01/19	
Elements by ICPMS Low Level (total)	ICP/CRCM	8531496	N/A	2017/01/19	
Ammonia-N (Preserved)	KONE/COL	8531357	N/A	2017/01/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QK3132
Sample ID: KZ-6
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8531419	N/A	2017/01/19	Name Redacted
Alkalinity - Water	AT/ALK	8531708	2017/01/19	2017/01/19	
Chloride by Automated Colourimetry	KONE/COL	8532306	N/A	2017/01/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8531631	N/A	2017/01/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8531633	N/A	2017/01/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8531595	N/A	2017/01/19	
Conductance - water	AT/ALK	8531707	N/A	2017/01/19	
Fluoride	ISE/ISE	8532987	N/A	2017/01/19	
Hardness Total (calculated as CaCO3)	CALC	8530202	N/A	2017/01/20	
Hardness (calculated as CaCO3)	CALC	8530203	N/A	2017/01/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8531242	N/A	2017/01/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8531203	2017/01/19	2017/01/19	
Ion Balance	CALC	8530722	N/A	2017/01/20	
Sum of cations, anions	CALC	8530723	N/A	2017/01/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8530362	N/A	2017/01/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8531404	N/A	2017/01/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8530363	N/A	2017/01/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8531496	N/A	2017/01/19	
Ammonia-N (Preserved)	KONE/COL	8531357	N/A	2017/01/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8532407	N/A	2017/01/19	
Nitrite (N) (low level)	TRAA/COL	8532411	N/A	2017/01/19	
Nitrogen - Nitrate (as N)	CALC	8530364	N/A	2017/01/20	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/01/19	
pH Water	AT/ALK	8531705	N/A	2017/01/19	
Sulphate by Automated Colourimetry	KONE/COL	8532324	N/A	2017/01/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8531568	2017/01/19	2017/01/19	
Total Phosphorus - unpreserved	KONE/COL	8531567	N/A	2017/01/19	
Total Suspended Solids-Low Level	BAL/BAL	8531319	2017/01/19	2017/01/19	

Maxxam ID: QK3135
Sample ID: KZ-7
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8531419	N/A	2017/01/19	Name Redacted
Alkalinity - Water	AT/ALK	8531721	2017/01/19	2017/01/19	
Chloride by Automated Colourimetry	KONE/COL	8532306	N/A	2017/01/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8531631	N/A	2017/01/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8531633	N/A	2017/01/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8531594	N/A	2017/01/19	
Conductance - water	AT/ALK	8531720	N/A	2017/01/19	
Fluoride	ISE/ISE	8532987	N/A	2017/01/19	
Hardness Total (calculated as CaCO3)	CALC	8530202	N/A	2017/01/20	
Hardness (calculated as CaCO3)	CALC	8530203	N/A	2017/01/20	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QK3135
Sample ID: KZ-7
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8531242	N/A	2017/01/19	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8531203	2017/01/19	2017/01/19	
Ion Balance	CALC	8530722	N/A	2017/01/20	
Sum of cations, anions	CALC	8530723	N/A	2017/01/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8530362	N/A	2017/01/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8531404	N/A	2017/01/19	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8531698	2017/01/19	2017/01/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8530363	N/A	2017/01/20	
Ammonia-N (Preserved)	KONE/COL	8531357	N/A	2017/01/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8532407	N/A	2017/01/19	
Nitrite (N) (low level)	TRAA/COL	8532411	N/A	2017/01/19	
Nitrogen - Nitrate (as N)	CALC	8530364	N/A	2017/01/20	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/01/19	
pH Water	AT/ALK	8531714	N/A	2017/01/19	
Sulphate by Automated Colourimetry	KONE/COL	8533227	N/A	2017/01/20	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8531568	2017/01/19	2017/01/19	
Total Phosphorus - unpreserved	KONE/COL	8531567	N/A	2017/01/19	
Total Suspended Solids-Low Level	BAL/BAL	8531319	2017/01/19	2017/01/19	

Maxxam ID: QK3137
Sample ID: KZ-9
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8531419	N/A	2017/01/19	Name Redacted
Alkalinity - Water	AT/ALK	8531708	2017/01/19	2017/01/19	
Chloride by Automated Colourimetry	KONE/COL	8532306	N/A	2017/01/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8531631	N/A	2017/01/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8531633	N/A	2017/01/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8531594	N/A	2017/01/19	
Conductance - water	AT/ALK	8531707	N/A	2017/01/19	
Fluoride	ISE/ISE	8532985	N/A	2017/01/19	
Hardness Total (calculated as CaCO3)	CALC	8530202	N/A	2017/01/20	
Hardness (calculated as CaCO3)	CALC	8532262	N/A	2017/01/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8531242	N/A	2017/01/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8531203	2017/01/19	2017/01/19	
Ion Balance	CALC	8533238	N/A	2017/01/20	
Sum of cations, anions	CALC	8533239	N/A	2017/01/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8532263	N/A	2017/01/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8531404	N/A	2017/01/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8530363	N/A	2017/01/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8531496	N/A	2017/01/19	
Ammonia-N (Preserved)	KONE/COL	8531357	N/A	2017/01/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8532407	N/A	2017/01/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QK3137
Sample ID: KZ-9
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8532411	N/A	2017/01/19	Name Redacted
Nitrogen - Nitrate (as N)	CALC	8530364	N/A	2017/01/20	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/01/19	
pH Water	AT/ALK	8531705	N/A	2017/01/19	
Sulphate by Automated Colourimetry	KONE/COL	8532324	N/A	2017/01/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8531568	2017/01/19	2017/01/19	
Total Phosphorus - unpreserved	KONE/COL	8531567	N/A	2017/01/19	
Total Suspended Solids-Low Level	BAL/BAL	8531319	2017/01/19	2017/01/19	

Maxxam ID: QK3139
Sample ID: KZ-13
Matrix: Water

Collected: 2017/01/17
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8531419	N/A	2017/01/19	Name Redacted
Alkalinity - Water	AT/ALK	8531721	2017/01/19	2017/01/19	
Chloride by Automated Colourimetry	KONE/COL	8532306	N/A	2017/01/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8531631	N/A	2017/01/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8531633	N/A	2017/01/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8531594	N/A	2017/01/19	
Conductance - water	AT/ALK	8531720	N/A	2017/01/19	
Fluoride	ISE/ISE	8532987	N/A	2017/01/19	
Hardness Total (calculated as CaCO3)	CALC	8530202	N/A	2017/01/20	
Hardness (calculated as CaCO3)	CALC	8532262	N/A	2017/01/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8531242	N/A	2017/01/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8531203	2017/01/19	2017/01/19	
Ion Balance	CALC	8533238	N/A	2017/01/20	
Sum of cations, anions	CALC	8533239	N/A	2017/01/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8530362	N/A	2017/01/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8531404	N/A	2017/01/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8530363	N/A	2017/01/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8531496	N/A	2017/01/20	
Ammonia-N (Preserved)	KONE/COL	8531357	N/A	2017/01/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8532407	N/A	2017/01/19	
Nitrite (N) (low level)	TRAA/COL	8532411	N/A	2017/01/19	
Nitrogen - Nitrate (as N)	CALC	8530364	N/A	2017/01/20	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/01/19	
pH Water	AT/ALK	8531714	N/A	2017/01/19	
Sulphate by Automated Colourimetry	KONE/COL	8532324	N/A	2017/01/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8531570	2017/01/19	2017/01/19	
Total Phosphorus - unpreserved	KONE/COL	8531571	N/A	2017/01/19	
Total Suspended Solids-Low Level	BAL/BAL	8531319	2017/01/19	2017/01/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QK3141
Sample ID: KZ-18
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8531419	N/A	2017/01/19	Name Redacted
Alkalinity - Water	AT/ALK	8531708	2017/01/19	2017/01/19	
Chloride by Automated Colourimetry	KONE/COL	8532306	N/A	2017/01/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8531631	N/A	2017/01/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8531633	N/A	2017/01/19	
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8531882	N/A	2017/01/19	
Conductance - water	AT/ALK	8531707	N/A	2017/01/19	
Fluoride	ISE/ISE	8532985	N/A	2017/01/19	
Hardness Total (calculated as CaCO3)	CALC	8530202	N/A	2017/01/20	
Hardness (calculated as CaCO3)	CALC	8530203	N/A	2017/01/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8531242	N/A	2017/01/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8531203	2017/01/19	2017/01/19	
Ion Balance	CALC	8530722	N/A	2017/01/20	
Sum of cations, anions	CALC	8530723	N/A	2017/01/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8530362	N/A	2017/01/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8531404	N/A	2017/01/19	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8531698	2017/01/19	2017/01/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8530363	N/A	2017/01/20	
Ammonia-N (Preserved)	KONE/COL	8531357	N/A	2017/01/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8532407	N/A	2017/01/19	
Nitrite (N) (low level)	TRAA/COL	8532411	N/A	2017/01/19	
Nitrogen - Nitrate (as N)	CALC	8530364	N/A	2017/01/20	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/01/19	
pH Water	AT/ALK	8531705	N/A	2017/01/19	
Sulphate by Automated Colourimetry	KONE/COL	8532324	N/A	2017/01/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8531568	2017/01/19	2017/01/19	
Total Phosphorus - unpreserved	KONE/COL	8531567	N/A	2017/01/19	
Total Suspended Solids-Low Level	BAL/BAL	8531319	2017/01/19	2017/01/19	

Maxxam ID: QK3141 Dup
Sample ID: KZ-18
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8531882	N/A	2017/01/19	Name Redacted
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8531568	2017/01/19	2017/01/19	

Maxxam ID: QK3144
Sample ID: KZ-15
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8531419	N/A	2017/01/19	Name Redacted
Alkalinity - Water	AT/ALK	8531721	2017/01/19	2017/01/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QK3144
Sample ID: KZ-15
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8532306	N/A	2017/01/19	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8531631	N/A	2017/01/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8531633	N/A	2017/01/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8531594	N/A	2017/01/19	
Conductance - water	AT/ALK	8531720	N/A	2017/01/19	
Fluoride	ISE/ISE	8532987	N/A	2017/01/19	
Hardness Total (calculated as CaCO3)	CALC	8530202	N/A	2017/01/20	
Hardness (calculated as CaCO3)	CALC	8530203	N/A	2017/01/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8531242	N/A	2017/01/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8531203	2017/01/19	2017/01/19	
Ion Balance	CALC	8530722	N/A	2017/01/20	
Sum of cations, anions	CALC	8530723	N/A	2017/01/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8530362	N/A	2017/01/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8531404	N/A	2017/01/19	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8531698	2017/01/19	2017/01/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8530363	N/A	2017/01/20	
Ammonia-N (Preserved)	KONE/COL	8531357	N/A	2017/01/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8532407	N/A	2017/01/19	
Nitrite (N) (low level)	TRAA/COL	8532411	N/A	2017/01/19	
Nitrogen - Nitrate (as N)	CALC	8530364	N/A	2017/01/20	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/01/19	
pH Water	AT/ALK	8531714	N/A	2017/01/19	
Sulphate by Automated Colourimetry	KONE/COL	8532324	N/A	2017/01/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8531570	2017/01/19	2017/01/19	
Total Phosphorus - unpreserved	KONE/COL	8531571	N/A	2017/01/19	
Total Suspended Solids-Low Level	BAL/BAL	8531319	2017/01/19	2017/01/19	

Maxxam ID: QK3144 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8531721	2017/01/19	2017/01/19	Name Redacted
Conductance - water	AT/ALK	8531720	N/A	2017/01/19	
pH Water	AT/ALK	8531714	N/A	2017/01/19	

Maxxam ID: QK3146
Sample ID: KZ-16
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8531419	N/A	2017/01/19	Name Redacted
Alkalinity - Water	AT/ALK	8531721	2017/01/19	2017/01/19	
Chloride by Automated Colourimetry	KONE/COL	8532306	N/A	2017/01/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QK3146
Sample ID: KZ-16
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8531631	N/A	2017/01/19	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8531633	N/A	2017/01/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8531595	N/A	2017/01/19	
Conductance - water	AT/ALK	8531720	N/A	2017/01/19	
Fluoride	ISE/ISE	8532987	N/A	2017/01/19	
Hardness Total (calculated as CaCO3)	CALC	8530202	N/A	2017/01/20	
Hardness (calculated as CaCO3)	CALC	8530203	N/A	2017/01/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8531242	N/A	2017/01/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8531203	2017/01/19	2017/01/19	
Ion Balance	CALC	8530722	N/A	2017/01/20	
Sum of cations, anions	CALC	8530723	N/A	2017/01/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8530362	N/A	2017/01/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8531404	N/A	2017/01/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8530363	N/A	2017/01/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8531496	N/A	2017/01/20	
Ammonia-N (Preserved)	KONE/COL	8531356	N/A	2017/01/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8532407	N/A	2017/01/19	
Nitrite (N) (low level)	TRAA/COL	8532411	N/A	2017/01/19	
Nitrogen - Nitrate (as N)	CALC	8530364	N/A	2017/01/20	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/01/19	
pH Water	AT/ALK	8531714	N/A	2017/01/19	
Sulphate by Automated Colourimetry	KONE/COL	8533227	N/A	2017/01/20	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8531570	2017/01/19	2017/01/19	
Total Phosphorus - unpreserved	KONE/COL	8531571	N/A	2017/01/19	
Total Suspended Solids-Low Level	BAL/BAL	8531319	2017/01/19	2017/01/19	

Maxxam ID: QK3146 Dup
Sample ID: KZ-16
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8532306	N/A	2017/01/19	Name Redacted
Sulphate by Automated Colourimetry	KONE/COL	8533227	N/A	2017/01/20	
Total Phosphorus - unpreserved	KONE/COL	8531571	N/A	2017/01/19	

Maxxam ID: QK3147
Sample ID: KZ-17
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8531421	N/A	2017/01/19	Name Redacted
Alkalinity - Water	AT/ALK	8531721	2017/01/19	2017/01/19	
Chloride by Automated Colourimetry	KONE/COL	8532306	N/A	2017/01/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8531631	N/A	2017/01/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QK3147
Sample ID: KZ-17
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide WAD (weak acid dissociable)	TECH/COL	8531633	N/A	2017/01/19	Name Redacted
Carbon (DOC) - field filtered/preserved	TRAA/COL	8531595	N/A	2017/01/19	
Conductance - water	AT/ALK	8531720	N/A	2017/01/19	
Fluoride	ISE/ISE	8532987	N/A	2017/01/19	
Hardness Total (calculated as CaCO3)	CALC	8530202	N/A	2017/01/20	
Hardness (calculated as CaCO3)	CALC	8530203	N/A	2017/01/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8531242	N/A	2017/01/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8531203	2017/01/19	2017/01/19	
Ion Balance	CALC	8530722	N/A	2017/01/20	
Sum of cations, anions	CALC	8530723	N/A	2017/01/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8530362	N/A	2017/01/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8531404	N/A	2017/01/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8530363	N/A	2017/01/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8531496	N/A	2017/01/20	
Ammonia-N (Preserved)	KONE/COL	8531356	N/A	2017/01/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8532407	N/A	2017/01/19	
Nitrite (N) (low level)	TRAA/COL	8532411	N/A	2017/01/19	
Nitrogen - Nitrate (as N)	CALC	8530364	N/A	2017/01/20	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/01/19	
pH Water	AT/ALK	8531714	N/A	2017/01/19	
Sulphate by Automated Colourimetry	KONE/COL	8532324	N/A	2017/01/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8531570	2017/01/19	2017/01/19	
Total Phosphorus - unpreserved	KONE/COL	8531571	N/A	2017/01/19	
Total Suspended Solids-Low Level	BAL/BAL	8531319	2017/01/19	2017/01/19	

Maxxam ID: QK3147 Dup
Sample ID: KZ-17
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8531595	N/A	2017/01/19	Name Redacted

Maxxam ID: QK3149
Sample ID: KZ-19
Matrix: Water

Collected: 2017/01/17
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8531419	N/A	2017/01/19	Name Redacted
Alkalinity - Water	AT/ALK	8531708	2017/01/19	2017/01/19	
Chloride by Automated Colourimetry	KONE/COL	8532306	N/A	2017/01/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8531631	N/A	2017/01/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8531633	N/A	2017/01/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8531594	N/A	2017/01/19	
Conductance - water	AT/ALK	8531707	N/A	2017/01/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QK3149
Sample ID: KZ-19
Matrix: Water

Collected: 2017/01/17
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8532987	N/A	2017/01/19	Name Redacted
Hardness Total (calculated as CaCO3)	CALC	8530202	N/A	2017/01/20	
Hardness (calculated as CaCO3)	CALC	8530203	N/A	2017/01/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8531242	N/A	2017/01/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8531203	2017/01/19	2017/01/19	
Ion Balance	CALC	8530722	N/A	2017/01/20	
Sum of cations, anions	CALC	8530723	N/A	2017/01/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8530362	N/A	2017/01/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8531404	N/A	2017/01/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8530363	N/A	2017/01/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8531496	N/A	2017/01/20	
Ammonia-N (Preserved)	KONE/COL	8531357	N/A	2017/01/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8532407	N/A	2017/01/19	
Nitrite (N) (low level)	TRAA/COL	8532411	N/A	2017/01/19	
Nitrogen - Nitrate (as N)	CALC	8530364	N/A	2017/01/20	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/01/19	
pH Water	AT/ALK	8531705	N/A	2017/01/19	
Sulphate by Automated Colourimetry	KONE/COL	8532324	N/A	2017/01/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8531568	2017/01/19	2017/01/19	
Total Phosphorus - unpreserved	KONE/COL	8531567	N/A	2017/01/19	
Total Suspended Solids-Low Level	BAL/BAL	8531319	2017/01/19	2017/01/19	

Maxxam ID: QK3149 Dup
Sample ID: KZ-19
Matrix: Water

Collected: 2017/01/17
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8531594	N/A	2017/01/19	Name Redacted
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8531404	N/A	2017/01/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8531496	N/A	2017/01/20	

Maxxam ID: QK3156
Sample ID: KZ-21
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8531419	N/A	2017/01/19	Name Redacted
Alkalinity - Water	AT/ALK	8531721	2017/01/19	2017/01/19	
Chloride by Automated Colourimetry	KONE/COL	8532306	N/A	2017/01/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8531631	N/A	2017/01/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8531633	N/A	2017/01/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8531594	N/A	2017/01/19	
Conductance - water	AT/ALK	8531720	N/A	2017/01/19	
Fluoride	ISE/ISE	8532987	N/A	2017/01/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QK3156
Sample ID: KZ-21
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness Total (calculated as CaCO3)	CALC	8530202	N/A	2017/01/20	Name Redacted
Hardness (calculated as CaCO3)	CALC	8530203	N/A	2017/01/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8531242	N/A	2017/01/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8531203	2017/01/19	2017/01/19	
Ion Balance	CALC	8530722	N/A	2017/01/20	
Sum of cations, anions	CALC	8530723	N/A	2017/01/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8530362	N/A	2017/01/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8531404	N/A	2017/01/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8530363	N/A	2017/01/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8531496	N/A	2017/01/20	
Ammonia-N (Preserved)	KONE/COL	8531356	N/A	2017/01/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8532407	N/A	2017/01/19	
Nitrite (N) (low level)	TRAA/COL	8532411	N/A	2017/01/19	
Nitrogen - Nitrate (as N)	CALC	8530364	N/A	2017/01/20	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/01/19	
pH Water	AT/ALK	8531714	N/A	2017/01/19	
Sulphate by Automated Colourimetry	KONE/COL	8532324	N/A	2017/01/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8531570	2017/01/19	2017/01/19	
Total Phosphorus - unpreserved	KONE/COL	8531571	N/A	2017/01/19	
Total Suspended Solids-Low Level	BAL/BAL	8531319	2017/01/19	2017/01/19	

Maxxam ID: QK3156 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8531419	N/A	2017/01/19	Name Redacted

Maxxam ID: QK3157
Sample ID: KZ-22
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8531419	N/A	2017/01/19	Name Redacted
Alkalinity - Water	AT/ALK	8531708	2017/01/19	2017/01/19	
Chloride by Automated Colourimetry	KONE/COL	8532306	N/A	2017/01/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8531631	N/A	2017/01/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8531633	N/A	2017/01/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8531594	N/A	2017/01/19	
Conductance - water	AT/ALK	8531707	N/A	2017/01/19	
Fluoride	ISE/ISE	8532987	N/A	2017/01/19	
Hardness Total (calculated as CaCO3)	CALC	8530202	N/A	2017/01/20	
Hardness (calculated as CaCO3)	CALC	8530203	N/A	2017/01/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8531242	N/A	2017/01/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QK3157
Sample ID: KZ-22
Matrix: Water

Collected: 2017/01/16
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8531203	2017/01/19	2017/01/19	Name Redacted
Ion Balance	CALC	8530722	N/A	2017/01/20	
Sum of cations, anions	CALC	8530723	N/A	2017/01/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8530362	N/A	2017/01/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8531404	N/A	2017/01/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8530363	N/A	2017/01/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8531496	N/A	2017/01/20	
Ammonia-N (Preserved)	KONE/COL	8531357	N/A	2017/01/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8532407	N/A	2017/01/19	
Nitrite (N) (low level)	TRAA/COL	8532411	N/A	2017/01/19	
Nitrogen - Nitrate (as N)	CALC	8530364	N/A	2017/01/20	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/01/19	
pH Water	AT/ALK	8531705	N/A	2017/01/19	
Sulphate by Automated Colourimetry	KONE/COL	8532324	N/A	2017/01/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8531568	2017/01/19	2017/01/19	
Total Phosphorus - unpreserved	KONE/COL	8531567	N/A	2017/01/19	
Total Suspended Solids-Low Level	BAL/BAL	8531319	2017/01/19	2017/01/19	

Maxxam ID: QK3158
Sample ID: KZ-26
Matrix: Water

Collected: 2017/01/15
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8531419	N/A	2017/01/19	Name Redacted
Alkalinity - Water	AT/ALK	8531708	2017/01/19	2017/01/19	
Chloride by Automated Colourimetry	KONE/COL	8532306	N/A	2017/01/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8531631	N/A	2017/01/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8531633	N/A	2017/01/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8531594	N/A	2017/01/19	
Conductance - water	AT/ALK	8531707	N/A	2017/01/19	
Fluoride	ISE/ISE	8532987	N/A	2017/01/19	
Hardness Total (calculated as CaCO3)	CALC	8530202	N/A	2017/01/20	
Hardness (calculated as CaCO3)	CALC	8530203	N/A	2017/01/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8531242	N/A	2017/01/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8531203	2017/01/19	2017/01/19	
Ion Balance	CALC	8530722	N/A	2017/01/20	
Sum of cations, anions	CALC	8530723	N/A	2017/01/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8530362	N/A	2017/01/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8531404	N/A	2017/01/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8530363	N/A	2017/01/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8531496	N/A	2017/01/20	
Ammonia-N (Preserved)	KONE/COL	8531356	N/A	2017/01/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8532407	N/A	2017/01/19	
Nitrite (N) (low level)	TRAA/COL	8532411	N/A	2017/01/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QK3158
Sample ID: KZ-26
Matrix: Water

Collected: 2017/01/15
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8530364	N/A	2017/01/20	Name Redacted
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/01/19	
pH Water	AT/ALK	8531705	N/A	2017/01/19	
Sulphate by Automated Colourimetry	KONE/COL	8532324	N/A	2017/01/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8531568	2017/01/19	2017/01/19	
Total Phosphorus - unpreserved	KONE/COL	8531567	N/A	2017/01/19	
Total Suspended Solids-Low Level	BAL/BAL	8531319	2017/01/19	2017/01/19	

Maxxam ID: QK3161
Sample ID: KZ-28
Matrix: Water

Collected: 2017/01/15
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8531419	N/A	2017/01/19	Name Redacted
Alkalinity - Water	AT/ALK	8531708	2017/01/19	2017/01/19	
Chloride by Automated Colourimetry	KONE/COL	8532306	N/A	2017/01/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8531631	N/A	2017/01/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8531633	N/A	2017/01/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8531594	N/A	2017/01/19	
Conductance - water	AT/ALK	8531707	N/A	2017/01/19	
Fluoride	ISE/ISE	8532987	N/A	2017/01/19	
Hardness Total (calculated as CaCO3)	CALC	8530202	N/A	2017/01/20	
Hardness (calculated as CaCO3)	CALC	8547944	N/A	2017/02/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8531242	N/A	2017/01/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8531203	2017/01/19	2017/01/19	
Ion Balance	CALC	8530722	N/A	2017/01/20	
Sum of cations, anions	CALC	8530723	N/A	2017/01/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8547945	N/A	2017/02/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8537914	N/A	2017/01/30	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8530363	N/A	2017/01/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8531496	N/A	2017/01/20	
Ammonia-N (Preserved)	KONE/COL	8531357	N/A	2017/01/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8532407	N/A	2017/01/19	
Nitrite (N) (low level)	TRAA/COL	8532411	N/A	2017/01/19	
Nitrogen - Nitrate (as N)	CALC	8530364	N/A	2017/01/20	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/01/19	
pH Water	AT/ALK	8531705	N/A	2017/01/19	
Sulphate by Automated Colourimetry	KONE/COL	8532324	N/A	2017/01/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8531568	2017/01/19	2017/01/19	
Total Phosphorus - unpreserved	KONE/COL	8531567	N/A	2017/01/19	
Total Suspended Solids-Low Level	BAL/BAL	8531319	2017/01/19	2017/01/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QK3164
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/01/17
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8531419	N/A	2017/01/19	Name Redacted
Alkalinity - Water	AT/ALK	8531721	2017/01/19	2017/01/19	
Chloride by Automated Colourimetry	KONE/COL	8532306	N/A	2017/01/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8531631	N/A	2017/01/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8531633	N/A	2017/01/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8531594	N/A	2017/01/19	
Conductance - water	AT/ALK	8531720	N/A	2017/01/19	
Fluoride	ISE/ISE	8532987	N/A	2017/01/19	
Hardness Total (calculated as CaCO3)	CALC	8530202	N/A	2017/01/20	
Hardness (calculated as CaCO3)	CALC	8530203	N/A	2017/01/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8531242	N/A	2017/01/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8531203	2017/01/19	2017/01/19	
Ion Balance	CALC	8530722	N/A	2017/01/20	
Sum of cations, anions	CALC	8530723	N/A	2017/01/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8530362	N/A	2017/01/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8531404	N/A	2017/01/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8530363	N/A	2017/01/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8531496	N/A	2017/01/19	
Ammonia-N (Preserved)	KONE/COL	8531357	N/A	2017/01/19	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8532407	N/A	2017/01/19	
Nitrite (N) (low level)	TRAA/COL	8532411	N/A	2017/01/19	
Nitrogen - Nitrate (as N)	CALC	8530364	N/A	2017/01/20	
pH Water	AT/ALK	8531714	N/A	2017/01/19	
Sulphate by Automated Colourimetry	KONE/COL	8532324	N/A	2017/01/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8531570	2017/01/19	2017/01/19	
Total Phosphorus - unpreserved	KONE/COL	8531571	N/A	2017/01/19	
Total Suspended Solids-Low Level	BAL/BAL	8531319	2017/01/19	2017/01/19	

Maxxam ID: QK3164 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/01/17
Shipped:
Received: 2017/01/17

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8531242	N/A	2017/01/19	Name Redacted
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8531404	N/A	2017/01/19	
Elements by ICPMS Low Level (total)	ICP/CRCM	8531496	N/A	2017/01/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
Package 2	3.7°C
Package 3	5.0°C

Revised Report V2 (M_S, 2017/02/09): Revised results for sample KZ-28 for Dissolved Metals.

Sample QK3135 [KZ-7] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample QK3141 [KZ-18] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample QK3144 [KZ-15] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample QK3164 [TRIP BLANK] : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Sample QK3137, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample QK3139, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8530581	Dissolved Lead (Pb)	2017/01/20	101	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8530581	Dissolved Nickel (Ni)	2017/01/20	98	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8531203	Total Mercury (Hg)	2017/01/19	105	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8531242	Dissolved Mercury (Hg)	2017/01/19	103	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8531319	Total Suspended Solids	2017/01/19			100	80 - 120	<1.0	mg/L		
8531356	Total Ammonia (N)	2017/01/19	113	80 - 120	106	80 - 120	<0.0050	mg/L	0.099	20
8531357	Total Ammonia (N)	2017/01/19	108	80 - 120	108	80 - 120	<0.0050	mg/L	0.10	20
8531404	Dissolved Aluminum (Al)	2017/01/19	109	80 - 120	114	80 - 120	<0.00050	mg/L	NC	20
8531404	Dissolved Antimony (Sb)	2017/01/19	103	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8531404	Dissolved Arsenic (As)	2017/01/19	102	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8531404	Dissolved Barium (Ba)	2017/01/19	NC	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8531404	Dissolved Beryllium (Be)	2017/01/19	103	80 - 120	108	80 - 120	<0.000010	mg/L	NC	20
8531404	Dissolved Bismuth (Bi)	2017/01/19	94	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8531404	Dissolved Boron (B)	2017/01/19	98	80 - 120	104	80 - 120	<0.010	mg/L	NC	20
8531404	Dissolved Cadmium (Cd)	2017/01/19	97	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8531404	Dissolved Chromium (Cr)	2017/01/19	100	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8531404	Dissolved Cobalt (Co)	2017/01/19	97	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8531404	Dissolved Copper (Cu)	2017/01/19	95	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8531404	Dissolved Iron (Fe)	2017/01/19	105	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20
8531404	Dissolved Lead (Pb)	2017/01/19	98	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8531404	Dissolved Lithium (Li)	2017/01/19	101	80 - 120	108	80 - 120	<0.00050	mg/L	NC	20
8531404	Dissolved Manganese (Mn)	2017/01/19	95	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8531404	Dissolved Molybdenum (Mo)	2017/01/19	NC	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20
8531404	Dissolved Nickel (Ni)	2017/01/19	96	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8531404	Dissolved Phosphorus (P)	2017/01/19					<0.0020	mg/L	NC	20
8531404	Dissolved Selenium (Se)	2017/01/19	102	80 - 120	102	80 - 120	<0.000040	mg/L	NC	20
8531404	Dissolved Silicon (Si)	2017/01/19					<0.050	mg/L	NC	20
8531404	Dissolved Silver (Ag)	2017/01/19	102	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8531404	Dissolved Strontium (Sr)	2017/01/19	NC	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8531404	Dissolved Thallium (Tl)	2017/01/19	98	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8531404	Dissolved Tin (Sn)	2017/01/19	101	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20

Maxxam Job #: B703771
Report Date: 2017/02/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8531404	Dissolved Titanium (Ti)	2017/01/19	115	80 - 120	111	80 - 120	<0.00050	mg/L	NC	20
8531404	Dissolved Uranium (U)	2017/01/19	104	80 - 120	109	80 - 120	<0.0000020	mg/L	NC	20
8531404	Dissolved Vanadium (V)	2017/01/19	102	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
8531404	Dissolved Zinc (Zn)	2017/01/19	NC	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
8531404	Dissolved Zirconium (Zr)	2017/01/19					<0.00010	mg/L	NC	20
8531419	Acidity (pH 4.5)	2017/01/19					<0.50	mg/L	NC	20
8531419	Acidity (pH 8.3)	2017/01/19			103	80 - 120	<0.50	mg/L	2.3	20
8531421	Acidity (pH 4.5)	2017/01/19					<0.50	mg/L		
8531421	Acidity (pH 8.3)	2017/01/19			106	80 - 120	0.84, RDL=0.50	mg/L		
8531496	Total Aluminum (Al)	2017/01/19	116	80 - 120	115	80 - 120	<0.00050	mg/L	NC	20
8531496	Total Antimony (Sb)	2017/01/19	111	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
8531496	Total Arsenic (As)	2017/01/19	106	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8531496	Total Barium (Ba)	2017/01/19	NC	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8531496	Total Beryllium (Be)	2017/01/19	112	80 - 120	108	80 - 120	<0.000010	mg/L	NC	20
8531496	Total Bismuth (Bi)	2017/01/19	101	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8531496	Total Boron (B)	2017/01/19	107	80 - 120	104	80 - 120	<0.010	mg/L	NC	20
8531496	Total Cadmium (Cd)	2017/01/19	97	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8531496	Total Chromium (Cr)	2017/01/19	97	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8531496	Total Cobalt (Co)	2017/01/19	95	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8531496	Total Copper (Cu)	2017/01/19	93	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8531496	Total Iron (Fe)	2017/01/19	106	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20
8531496	Total Lead (Pb)	2017/01/19	106	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8531496	Total Lithium (Li)	2017/01/19	113	80 - 120	109	80 - 120	<0.00050	mg/L	NC	20
8531496	Total Manganese (Mn)	2017/01/19	100	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8531496	Total Molybdenum (Mo)	2017/01/19	NC	80 - 120	107	80 - 120	<0.000050	mg/L	NC	20
8531496	Total Nickel (Ni)	2017/01/19	94	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8531496	Total Phosphorus (P)	2017/01/19					<0.0020	mg/L	NC	20
8531496	Total Selenium (Se)	2017/01/19	105	80 - 120	101	80 - 120	<0.000040	mg/L	NC	20
8531496	Total Silicon (Si)	2017/01/19					<0.050	mg/L	NC	20
8531496	Total Silver (Ag)	2017/01/19	97	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8531496	Total Strontium (Sr)	2017/01/19	NC	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8531496	Total Thallium (Tl)	2017/01/19	103	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8531496	Total Tin (Sn)	2017/01/19	110	80 - 120	107	80 - 120	<0.00020	mg/L	NC	20
8531496	Total Titanium (Ti)	2017/01/19	94	80 - 120	89	80 - 120	<0.00050	mg/L	NC	20
8531496	Total Uranium (U)	2017/01/19	111	80 - 120	108	80 - 120	<0.0000020	mg/L	NC	20
8531496	Total Vanadium (V)	2017/01/19	99	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
8531496	Total Zinc (Zn)	2017/01/19	NC	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8531496	Total Zirconium (Zr)	2017/01/19					<0.00010	mg/L	NC	20
8531567	Total Phosphorus (P)	2017/01/19	96	80 - 120	101	80 - 120	<0.0020	mg/L	NC	20
8531568	Dissolved Phosphorus (P)	2017/01/19	NC	80 - 120	101	80 - 120	<0.0020	mg/L	0.41	20
8531570	Dissolved Phosphorus (P)	2017/01/19	NC	80 - 120	101	80 - 120	<0.0020	mg/L	2.0	20
8531571	Total Phosphorus (P)	2017/01/19	97	80 - 120	101	80 - 120	<0.0020	mg/L	NC	20
8531594	Dissolved Organic Carbon (C)	2017/01/19	112	80 - 120	108	80 - 120	<0.50	mg/L	NC	20
8531595	Dissolved Organic Carbon (C)	2017/01/19	104	80 - 120	113	80 - 120	0.52, RDL=0.50	mg/L	NC	20
8531631	Strong Acid Dissoc. Cyanide (CN)	2017/01/19	103	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8531633	Weak Acid Dissoc. Cyanide (CN)	2017/01/19	104	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8531698	Total Aluminum (Al)	2017/01/20	NC	80 - 120	110	80 - 120	<0.0030	mg/L	0.28	20
8531698	Total Antimony (Sb)	2017/01/20	104	80 - 120	104	80 - 120	<0.000020	mg/L	1.7	20
8531698	Total Arsenic (As)	2017/01/20	103	80 - 120	101	80 - 120	<0.000020	mg/L	11	20
8531698	Total Barium (Ba)	2017/01/20	NC	80 - 120	103	80 - 120	<0.000050	mg/L	0.30	20
8531698	Total Beryllium (Be)	2017/01/20	107	80 - 120	107	80 - 120	<0.000010	mg/L	NC	20
8531698	Total Bismuth (Bi)	2017/01/20	96	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8531698	Total Boron (B)	2017/01/20	105	80 - 120	103	80 - 120	<0.010	mg/L	NC	20
8531698	Total Cadmium (Cd)	2017/01/20	106	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8531698	Total Chromium (Cr)	2017/01/20	99	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8531698	Total Cobalt (Co)	2017/01/20	100	80 - 120	101	80 - 120	<0.000010	mg/L	8.7	20
8531698	Total Copper (Cu)	2017/01/20	100	80 - 120	103	80 - 120	0.00015, RDL=0.00010	mg/L	2.6	20
8531698	Total Iron (Fe)	2017/01/20	NC	80 - 120	109	80 - 120	<0.0050	mg/L	0.041	20
8531698	Total Lead (Pb)	2017/01/20	102	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8531698	Total Lithium (Li)	2017/01/20	109	80 - 120	111	80 - 120	<0.00050	mg/L	NC	20
8531698	Total Manganese (Mn)	2017/01/20	NC	80 - 120	100	80 - 120	<0.00010	mg/L	0.54	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8531698	Total Molybdenum (Mo)	2017/01/20	NC	80 - 120	104	80 - 120	<0.000050	mg/L	1.5	20
8531698	Total Nickel (Ni)	2017/01/20	98	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8531698	Total Phosphorus (P)	2017/01/20					<0.0050	mg/L		
8531698	Total Selenium (Se)	2017/01/20	104	80 - 120	107	80 - 120	<0.000040	mg/L	NC	20
8531698	Total Silicon (Si)	2017/01/20					<0.050	mg/L	2.2	20
8531698	Total Silver (Ag)	2017/01/20	93	80 - 120	97	80 - 120	<0.000010	mg/L	NC	20
8531698	Total Strontium (Sr)	2017/01/20	NC	80 - 120	105	80 - 120	<0.000050	mg/L	5.6	20
8531698	Total Thallium (Tl)	2017/01/20	98	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8531698	Total Tin (Sn)	2017/01/20	100	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8531698	Total Titanium (Ti)	2017/01/20	103	80 - 120	106	80 - 120	<0.0020	mg/L	NC	20
8531698	Total Uranium (U)	2017/01/20	106	80 - 120	108	80 - 120	<0.0000050	mg/L	4.3	20
8531698	Total Vanadium (V)	2017/01/20	104	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8531698	Total Zinc (Zn)	2017/01/20	NC	80 - 120	105	80 - 120	<0.0010	mg/L	6.8	20
8531698	Total Zirconium (Zr)	2017/01/20					<0.00010	mg/L	NC	20
8531705	pH	2017/01/19			101	97 - 103			2.4	N/A
8531707	Conductivity	2017/01/19			99	80 - 120	<1.0	uS/cm	1.1	20
8531708	Alkalinity (PP as CaCO3)	2017/01/19					<0.50	mg/L		
8531708	Alkalinity (Total as CaCO3)	2017/01/19	NC	80 - 120	98	80 - 120	<0.50	mg/L		
8531708	Bicarbonate (HCO3)	2017/01/19					<0.50	mg/L		
8531708	Carbonate (CO3)	2017/01/19					<0.50	mg/L		
8531708	Hydroxide (OH)	2017/01/19					<0.50	mg/L		
8531714	pH	2017/01/19			101	97 - 103			0.24	N/A
8531720	Conductivity	2017/01/19			100	80 - 120	<1.0	uS/cm	0.42	20
8531721	Alkalinity (PP as CaCO3)	2017/01/19					<0.50	mg/L	NC	20
8531721	Alkalinity (Total as CaCO3)	2017/01/19	NC	80 - 120	100	80 - 120	0.73, RDL=0.50	mg/L	2.2	20
8531721	Bicarbonate (HCO3)	2017/01/19					0.89, RDL=0.50	mg/L	2.2	20
8531721	Carbonate (CO3)	2017/01/19					<0.50	mg/L	NC	20
8531721	Hydroxide (OH)	2017/01/19					<0.50	mg/L	NC	20
8531882	Dissolved Organic Carbon (C)	2017/01/19	104	80 - 120	114	80 - 120	<0.50	mg/L	NC	20
8532306	Dissolved Chloride (Cl)	2017/01/19	111	80 - 120	96	80 - 120	0.72, RDL=0.50	mg/L	NC	20
8532324	Dissolved Sulphate (SO4)	2017/01/19			93	80 - 120	0.70, RDL=0.50	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8532407	Nitrate plus Nitrite (N)	2017/01/19	NC	80 - 120	107	80 - 120	<0.0020	mg/L	1.5	25
8532411	Nitrite (N)	2017/01/19	NC	80 - 120	100	80 - 120	<0.0020	mg/L	3.6	25
8532985	Fluoride (F)	2017/01/19			94	80 - 120	<0.010	mg/L	0	20
8532987	Fluoride (F)	2017/01/19	93	80 - 120	94	80 - 120	0.010, RDL=0.010	mg/L	0	20
8533227	Dissolved Sulphate (SO4)	2017/01/20	NC	80 - 120	102	80 - 120	<0.50	mg/L	1.1	20
8537914	Dissolved Aluminum (Al)	2017/01/30			109	80 - 120	<0.00050	mg/L		
8537914	Dissolved Antimony (Sb)	2017/01/30			104	80 - 120	<0.000020	mg/L		
8537914	Dissolved Arsenic (As)	2017/01/30			98	80 - 120	<0.000020	mg/L		
8537914	Dissolved Barium (Ba)	2017/01/30			102	80 - 120	<0.000020	mg/L		
8537914	Dissolved Beryllium (Be)	2017/01/30			102	80 - 120	<0.000010	mg/L		
8537914	Dissolved Bismuth (Bi)	2017/01/30			97	80 - 120	<0.0000050	mg/L		
8537914	Dissolved Boron (B)	2017/01/30			103	80 - 120	<0.010	mg/L		
8537914	Dissolved Cadmium (Cd)	2017/01/30			97	80 - 120	<0.0000050	mg/L		
8537914	Dissolved Chromium (Cr)	2017/01/30			95	80 - 120	<0.00010	mg/L		
8537914	Dissolved Cobalt (Co)	2017/01/30			97	80 - 120	<0.0000050	mg/L		
8537914	Dissolved Copper (Cu)	2017/01/30			96	80 - 120	<0.000050	mg/L		
8537914	Dissolved Iron (Fe)	2017/01/30			100	80 - 120	<0.0010	mg/L		
8537914	Dissolved Lead (Pb)	2017/01/30			99	80 - 120	<0.0000050	mg/L		
8537914	Dissolved Lithium (Li)	2017/01/30			103	80 - 120	<0.00050	mg/L		
8537914	Dissolved Manganese (Mn)	2017/01/30			97	80 - 120	<0.000050	mg/L		
8537914	Dissolved Molybdenum (Mo)	2017/01/30			104	80 - 120	<0.000050	mg/L		
8537914	Dissolved Nickel (Ni)	2017/01/30			98	80 - 120	<0.000020	mg/L		
8537914	Dissolved Phosphorus (P)	2017/01/30					<0.0020	mg/L		
8537914	Dissolved Selenium (Se)	2017/01/30			110	80 - 120	<0.000040	mg/L		
8537914	Dissolved Silicon (Si)	2017/01/30					<0.050	mg/L		
8537914	Dissolved Silver (Ag)	2017/01/30			102	80 - 120	<0.0000050	mg/L		
8537914	Dissolved Strontium (Sr)	2017/01/30			97	80 - 120	<0.000050	mg/L		
8537914	Dissolved Thallium (Tl)	2017/01/30			101	80 - 120	<0.0000020	mg/L		
8537914	Dissolved Tin (Sn)	2017/01/30			104	80 - 120	<0.00020	mg/L		
8537914	Dissolved Titanium (Ti)	2017/01/30			97	80 - 120	<0.00050	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8537914	Dissolved Uranium (U)	2017/01/30			104	80 - 120	<0.0000020	mg/L		
8537914	Dissolved Vanadium (V)	2017/01/30			94	80 - 120	<0.00020	mg/L		
8537914	Dissolved Zinc (Zn)	2017/01/30			98	80 - 120	<0.00010	mg/L		
8537914	Dissolved Zirconium (Zr)	2017/01/30					<0.00010	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spiked amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than 2x that of the native sample concentration).

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (one or both samples < 5x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B703771
Report Date: 2017/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Name Redacted Scientific Specialist

Name Redacted Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

RECEIVED IN WHITEHORSE

Signature

Maxxam
A Bureau Veritas Group Company

2017-01-17

B703771_COC

08434896

BBY FCD-00077/05

Page 1 2

Invoice Information	Report Information (if different)	Quotation (where applicable)	Turnaround Time (TAT) Required
Company Name: BMC MINERALS LTD. TEMP: 2, 5	Company Name: ALEXCO ENVIRONMENTAL 1, 5, 5	Quotation #: B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:	Contact Name: KAI WOLOSHYN	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 530-1130 WEST PENDER ST	Address: UNIT 3 151 INDUSTRIAL RD	Project #: BMC-15-01	Rush TAT (Surcharges will be applied)
Vancouver, BC PC: V6E 4A4	Whitehorse, YK PC: V1A 2V3	Site Location: Kutz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:	Phone: (867) 668-6483	Site #:	Date Required:
Email:	Email: kwoloshyn@alexcoresource.com	Sampled By:	Rush Confirmation #:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water [ ] CCME (Specify) [ ] Other (Specify) [ ] Drinking Water [ ] BC Water Quality	[ ] Return Cooler [ ] Ship Sample Bottles (Please Specify) USE SCENARIO # 12 ES

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	Total Low Level Metals Incl. Mercury	Dissolved Low Level Metals Incl. Mercury	Low Level TSS	Anions (Cl, F, SO4, NO2, NO3)	Ammonia	Cyanide (Dad & WAD)	Conductivity	pH	Alkalinity & Acidity	DOC	Total Phosphorus - Low Level	Dissolved Phosphorus - Low Level	# of Containers Submitted	Hold - DO NOT ANALYZE	Analysis Requested
1	KZ-2		16-Jan-17	17:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
2	KZ-6		16-Jan-17	15:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
3	KZ-7		16-Jan-17	14:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
4	KZ-9		16-Jan-17	12:55	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
5	KZ-13		17-Jan-17	9:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
6	KZ-18		16-Jan-17	13:25	Water	x	x	x	x	x	x	x	x	x		x	x	10		Dissolved metals FF/FP, Total Metals FP
7	KZ-15		16-Jan-17	10:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
8	KZ-16		16-Jan-17	11:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
9	KZ-17		16-Jan-17	11:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
10	KZ-19		17-Jan-17	10:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP

LABORATORY USE ONLY

Custody Seal Y / N		Cooler Temperatures
Present	Intact	
NA	NA	6, 6, 6
		7, 6, 5
		6, 5, 5

Cooling Media Present: Y / N

COMMENTS

Relinquished By: (Signature/Print)	Date: (YYYY/MM/DD)	Time: (HH:MM)	Received By: (Signature/Print)	Date: (YYYY/MM/DD)	Time: (HH:MM)	Maxxam Job #
Signature Redacted	17/01/2017	15:00	Signature Redacted	2017/01/18	12:55	B703771

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY F

08434897

COC #:

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Andrew MacPhail	Date Required:
						Rush Confirmation #:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-21		16-Jan-17	9:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
2	KZ-22		16-Jan-17	8:10	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
3	KZ-26		15-Jan-17	14:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
4	KZ-28		15-Jan-17	15:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
5	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Dissolved metals FF/FP, Total Metals FP
6																				
7																				
8																				
9																				
10																				

B703771_COC

LABORATORY USE ONLY

CUSTODY SEAL Y / N MA		COOLER TEMPERATURES
Present	Intact	
MA	MA	6,6,6
		7,6,5
		6,5,5

COOLING MEDIA PRESENT Y / N

RECEIVED IN WHITEHORSE
BY: Signature @ 15:00
2017/01/17
TEMP: 1 / 1 / 2
BY:
TEMP: 3 / 3 / 5

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	17/01/2017	15:00	Signature Redacted	2017/01/18	12:55	

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08435806, 08435805

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/03/03
Report #: R2352594
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B714107
Received: 2017/02/27, 10:30

Sample Matrix: Water
Samples Received: 16

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	16	N/A	2017/02/28	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	16	2017/02/28	2017/02/28	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	16	N/A	2017/02/28	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	16	N/A	2017/02/28	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	16	N/A	2017/02/28	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	16	N/A	2017/02/28	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	16	N/A	2017/02/28	BBY6SOP-00026	SM 22 2510 B m
Fluoride	16	N/A	2017/02/28	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	16	N/A	2017/03/01	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	16	N/A	2017/03/01	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	16	N/A	2017/03/01	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	16	2017/03/01	2017/03/01	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance	16	N/A	2017/03/01	BBY WI-00033	Auto Calc
Sum of cations, anions	16	N/A	2017/03/01	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	16	N/A	2017/03/01	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	16	N/A	2017/02/28	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	2	2017/02/28	2017/02/28	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	16	N/A	2017/03/01	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	13	N/A	2017/02/28	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	1	N/A	2017/03/01	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	15	N/A	2017/02/28	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	1	N/A	2017/03/02	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	16	N/A	2017/02/28	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	16	N/A	2017/02/28	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	16	N/A	2017/03/01	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	4	N/A	2017/02/28	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	11	N/A	2017/03/01	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	16	N/A	2017/02/28	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	16	N/A	2017/02/28	BBY6SOP-00017	SM 22 4500-SO42- E m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08435806, 08435805

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/03/03
Report #: R2352594
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B714107
Received: 2017/02/27, 10:30

Sample Matrix: Water
Samples Received: 16

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Phosphorus-P (LL Tot, dissolved) - UF/UP	15	2017/02/28	2017/02/28	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2017/03/02	2017/03/02	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	15	N/A	2017/02/28	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - unpreserved	1	N/A	2017/03/02	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	16	2017/02/28	2017/03/01	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08435806, 08435805

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/03/03
Report #: R2352594
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B714107
Received: 2017/02/27, 10:30

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QP7735		QP7736		QP7737		
Sampling Date		2017/02/23 16:20		2017/02/23 14:50		2017/02/23 13:55		
COC Number		08435806		08435806		08435806		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	3.0	8563710	3.7	8563710	3.8	N/A	8563710
Cation Sum	meq/L	3.1	8563710	3.6	8563710	3.8	N/A	8563710
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	1.0	8563333	0.99	8563333	1.0	0.010	8563333
Nitrate (N)	mg/L	0.180	8563311	0.211	8563311	0.155	0.0020	8563311
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8564715	<0.00050	8564715	<0.00050	0.00050	8564715
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8564722	<0.00050	8564722	<0.00050	0.00050	8564722
Fluoride (F)	mg/L	0.047	8564951	0.074	8564951	0.079	0.010	8564951
Dissolved Organic Carbon (C)	mg/L	<0.50	8564587	<0.50	8564587	0.59	0.50	8564587
Acidity (pH 4.5)	mg/L	<0.50	8564271	<0.50	8564271	<0.50	0.50	8564271
Alkalinity (Total as CaCO3)	mg/L	86.1	8564880	156	8564880	152	0.50	8564875
Acidity (pH 8.3)	mg/L	<0.50	8564271	<0.50	8564271	0.56	0.50	8564271
Alkalinity (PP as CaCO3)	mg/L	<0.50	8564880	<0.50	8564880	<0.50	0.50	8564875
Bicarbonate (HCO3)	mg/L	105	8564880	190	8564880	186	0.50	8564875
Carbonate (CO3)	mg/L	<0.50	8564880	<0.50	8564880	<0.50	0.50	8564875
Hydroxide (OH)	mg/L	<0.50	8564880	<0.50	8564880	<0.50	0.50	8564875
Anions								
Dissolved Sulphate (SO4)	mg/L	60.5	8565284	25.1	8565284	36.2	0.50	8564853
Dissolved Chloride (Cl)	mg/L	<0.50	8565283	0.61	8565283	<0.50	0.50	8564852
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	8565397	0.0034 (1)	8565397	0.0029 (1)	0.0020	8565393
Total Ammonia (N)	mg/L	0.037	8564412	0.032	8564413	0.039	0.0050	8564413
Nitrate plus Nitrite (N)	mg/L	0.180 (1)	8564914	0.211 (1)	8564914	0.155 (1)	0.0020	8564912
Nitrite (N)	mg/L	<0.0020 (1)	8564916	<0.0020 (1)	8564916	<0.0020 (1)	0.0020	8564913
Total Phosphorus (P)	mg/L	0.0021 (1)	8565398	0.0029 (1)	8565398	0.0032 (1)	0.0020	8565394
Physical Properties								
Conductivity	uS/cm	294	8564884	338	8564884	361	1.0	8564878
pH	pH	7.91	8564882	8.19	8564882	8.10		8564877

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QP7735		QP7736		QP7737		
Sampling Date		2017/02/23 16:20		2017/02/23 14:50		2017/02/23 13:55		
COC Number		08435806		08435806		08435806		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8564253	4.4	8564253	<1.0	1.0	8564253
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QP7738		QP7739		QP7740		
Sampling Date		2017/02/23 11:35		2017/02/23 12:00		2017/02/23 11:00		
COC Number		08435806		08435806		08435806		
	UNITS	KZ-9	QC Batch	KZ-18	QC Batch	KZ-37	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	4.6	8563710	4.5	8563710	4.6	N/A	8563710
Cation Sum	meq/L	4.8	8563710	4.4	8563710	4.4	N/A	8563710
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	1.0	8563333	0.98	8563333	0.97	0.010	8563333
Nitrate (N)	mg/L	0.227	8563311	0.246	8563311	0.232	0.0020	8563311
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8564715	<0.00050	8564715	<0.00050	0.00050	8564715
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8564722	<0.00050	8564722	<0.00050	0.00050	8564722
Fluoride (F)	mg/L	0.100	8564951	0.078	8564951	0.099	0.010	8564951
Dissolved Organic Carbon (C)	mg/L	1.05	8564587	<0.50	8564587	<0.50	0.50	8564587
Acidity (pH 4.5)	mg/L	<0.50	8564271	<0.50	8564271	<0.50	0.50	8564271
Alkalinity (Total as CaCO3)	mg/L	193	8564875	200	8564875	196	0.50	8564875
Acidity (pH 8.3)	mg/L	9.09	8564271	4.04	8564271	7.56	0.50	8564271
Alkalinity (PP as CaCO3)	mg/L	<0.50	8564875	<0.50	8564875	<0.50	0.50	8564875
Bicarbonate (HCO3)	mg/L	235	8564875	244	8564875	239	0.50	8564875
Carbonate (CO3)	mg/L	<0.50	8564875	<0.50	8564875	<0.50	0.50	8564875
Hydroxide (OH)	mg/L	<0.50	8564875	<0.50	8564875	<0.50	0.50	8564875
Anions								
Dissolved Sulphate (SO4)	mg/L	34.3	8565284	21.4	8565284	30.9	0.50	8564853
Dissolved Chloride (Cl)	mg/L	0.76	8565283	0.52	8565283	<0.50	0.50	8564852
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0043 (1)	8565393	0.0585 (1)	8565397	0.0180 (1)	0.0020	8565393
Total Ammonia (N)	mg/L	0.039	8564413	0.027	8564412	0.037	0.0050	8564413
Nitrate plus Nitrite (N)	mg/L	0.227 (1)	8564912	0.246 (1)	8564914	0.232 (1)	0.0020	8564912
Nitrite (N)	mg/L	<0.0020 (1)	8564913	<0.0020 (1)	8564916	<0.0020 (1)	0.0020	8564913
Total Phosphorus (P)	mg/L	0.0043 (1)	8565394	0.0587 (1)	8565398	0.0180 (1)	0.0020	8565394
Physical Properties								
Conductivity	uS/cm	432	8564878	414	8564878	422	1.0	8564878
pH	pH	7.80	8564877	7.98	8564877	7.90		8564877

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QP7738		QP7739		QP7740		
Sampling Date		2017/02/23 11:35		2017/02/23 12:00		2017/02/23 11:00		
COC Number		08435806		08435806		08435806		
	UNITS	KZ-9	QC Batch	KZ-18	QC Batch	KZ-37	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	4.5	8564259	2.8	8564259	1.0	1.0	8564259
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QP7741		QP7742		QP7743		
Sampling Date		2017/02/22 15:15		2017/02/23 08:00		2017/02/23 09:05		
COC Number		08435806		08435806		08435806		
	UNITS	KZ-13	QC Batch	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.4	8563710	5.8	8563710	6.2	N/A	8563710
Cation Sum	meq/L	2.3	8563710	5.9	8563710	5.6	N/A	8563710
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.96	8563333	1.0	8563333	0.90	0.010	8563333
Nitrate (N)	mg/L	0.143	8563311	0.255	8563311	0.311	0.0020	8563311
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8564715	<0.00050	8564715	<0.00050	0.00050	8564715
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8564722	<0.00050	8564722	<0.00050	0.00050	8564722
Fluoride (F)	mg/L	0.056	8564951	0.120	8564951	0.089	0.010	8564951
Dissolved Organic Carbon (C)	mg/L	2.47	8564587	0.89	8564587	0.91	0.50	8564587
Acidity (pH 4.5)	mg/L	<0.50	8564271	<0.50	8564271	<0.50	0.50	8564271
Alkalinity (Total as CaCO3)	mg/L	99.6	8564880	246	8564880	258	0.50	8564875
Acidity (pH 8.3)	mg/L	<0.50	8564271	3.56	8564271	11.9	0.50	8564271
Alkalinity (PP as CaCO3)	mg/L	<0.50	8564880	<0.50	8564880	<0.50	0.50	8564875
Bicarbonate (HCO3)	mg/L	122	8564880	300	8564880	315	0.50	8564875
Carbonate (CO3)	mg/L	<0.50	8564880	<0.50	8564880	<0.50	0.50	8564875
Hydroxide (OH)	mg/L	<0.50	8564880	<0.50	8564880	<0.50	0.50	8564875
Anions								
Dissolved Sulphate (SO4)	mg/L	17.9	8565284	39.6	8565284	45.5	0.50	8565284
Dissolved Chloride (Cl)	mg/L	0.54	8565283	0.68	8565283	0.86	0.50	8565283
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0042 (1)	8565397	0.0894 (1)	8565984	<0.0020 (1)	0.0020	8565393
Total Ammonia (N)	mg/L	0.054	8564413	0.031	8564413	0.035	0.0050	8564413
Nitrate plus Nitrite (N)	mg/L	0.146 (1)	8564914	0.255 (1)	8564914	0.311 (1)	0.0020	8564912
Nitrite (N)	mg/L	0.0022 (1)	8564916	<0.0020 (1)	8564916	<0.0020 (1)	0.0020	8564913
Total Phosphorus (P)	mg/L	0.0031 (1)	8565398	0.109 (1)	8565986	<0.0020 (1)	0.0020	8565394
Physical Properties								
Conductivity	uS/cm	228	8564884	518	8564884	556	1.0	8564878
pH	pH	8.03	8564882	8.13	8564882	7.83		8564877

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QP7741		QP7742		QP7743		
Sampling Date		2017/02/22 15:15		2017/02/23 08:00		2017/02/23 09:05		
COC Number		08435806		08435806		08435806		
	UNITS	KZ-13	QC Batch	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	1.1	8564259	26.9	8564259	<1.0	1.0	8564259
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QP7744			QP7745		QP7746		
Sampling Date		2017/02/23 09:55			2017/02/22 15:30		2017/02/22 13:55		
COC Number		08435806			08435806		08435805		
	UNITS	KZ-17	RDL	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	6.0	N/A	8563710	0.012	8563710	7.3	N/A	8563710
Cation Sum	meq/L	5.9	N/A	8563710	0.0052	8563710	7.3	N/A	8563710
Filter and HNO3 Preservation	N/A	FIELD		ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.98	0.010	8563333	0.44 (1)	8563333	1.0	0.010	8563333
Nitrate (N)	mg/L	0.313	0.0020	8563311	<0.0020	8563311	0.203	0.0020	8563311
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8564715	<0.00050	8564715	<0.00050	0.00050	8564715
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8564722	<0.00050	8564722	<0.00050	0.00050	8564722
Fluoride (F)	mg/L	0.074	0.010	8564951	0.012	8564951	0.230	0.010	8564951
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8564587	<0.50	8564587	1.70	0.50	8564587
Acidity (pH 4.5)	mg/L	<0.50	0.50	8564271	<0.50	8564271	<0.50	0.50	8564271
Alkalinity (Total as CaCO3)	mg/L	256	0.50	8564880	<0.50	8564880	318	0.50	8564875
Acidity (pH 8.3)	mg/L	5.04	0.50	8564271	<0.50	8564271	15.1	0.50	8564271
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8564880	<0.50	8564880	<0.50	0.50	8564875
Bicarbonate (HCO3)	mg/L	312	0.50	8564880	<0.50	8564880	387	0.50	8564875
Carbonate (CO3)	mg/L	<0.50	0.50	8564880	<0.50	8564880	<0.50	0.50	8564875
Hydroxide (OH)	mg/L	<0.50	0.50	8564880	<0.50	8564880	<0.50	0.50	8564875
Anions									
Dissolved Sulphate (SO4)	mg/L	42.0	0.50	8565284	0.54	8565284	42.5	0.50	8565284
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8565283	<0.50	8565283	1.1	0.50	8565283
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0020 (2)	0.0020	8565397	<0.0020 (2)	8565397	0.0250 (2)	0.0020	8565393
Total Ammonia (N)	mg/L	0.036	0.0050	8564413	0.0087	8566972	0.14	0.0050	8564413
Nitrate plus Nitrite (N)	mg/L	0.313 (2)	0.0020	8564914	<0.0020 (2)	8564914	0.203 (2)	0.0020	8564912
Nitrite (N)	mg/L	<0.0020 (2)	0.0020	8564916	<0.0020 (2)	8564916	<0.0020 (2)	0.0020	8564913
Total Phosphorus (P)	mg/L	0.0039 (2)	0.0020	8565398	<0.0020 (2)	8565398	0.0253 (2)	0.0020	8565394
Physical Properties									
Conductivity	uS/cm	544	1.0	8564884	1.2	8564884	644	1.0	8564878

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

(2) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QP7744			QP7745		QP7746		
Sampling Date		2017/02/23 09:55			2017/02/22 15:30		2017/02/22 13:55		
COC Number		08435806			08435806		08435805		
	UNITS	KZ-17	RDL	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
pH	pH	8.06		8564882	5.43	8564882	7.88		8564877
Physical Properties									
Total Suspended Solids	mg/L	<1.1 (1)	1.1	8564259	<1.0	8564259	6.2	1.0	8564259

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QP7747	QP7748			QP7749		
Sampling Date		2017/02/22 13:20	2017/02/22 12:15			2017/02/23 11:30		
COC Number		08435805	08435805			08435805		
	UNITS	KZ-22	KZ-26	RDL	QC Batch	KZ-28	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	6.7	6.5	N/A	8563710	4.6	N/A	8563710
Cation Sum	meq/L	6.7	6.6	N/A	8563710	4.6	N/A	8563710
Filter and HNO3 Preservation	N/A	FIELD	FIELD		ONSITE	FIELD		ONSITE
Ion Balance	N/A	1.0	1.0	0.010	8563333	1.0	0.010	8563333
Nitrate (N)	mg/L	0.254	0.299	0.0020	8563311	0.234	0.0020	8563311
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	0.00050	8564715	<0.00050	0.00050	8564715
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	0.00050	8564722	<0.00050	0.00050	8564722
Fluoride (F)	mg/L	0.170	0.130	0.010	8564951	0.096	0.010	8564951
Dissolved Organic Carbon (C)	mg/L	1.37	1.63	0.50	8564587	<0.50	0.50	8564587
Acidity (pH 4.5)	mg/L	<0.50	<0.50	0.50	8564271	<0.50	0.50	8564271
Alkalinity (Total as CaCO3)	mg/L	285	275	0.50	8564880	196	0.50	8564875
Acidity (pH 8.3)	mg/L	10.2	<0.50	0.50	8564271	8.92	0.50	8564271
Alkalinity (PP as CaCO3)	mg/L	<0.50	1.69	0.50	8564880	<0.50	0.50	8564875
Bicarbonate (HCO3)	mg/L	348	331	0.50	8564880	240	0.50	8564875
Carbonate (CO3)	mg/L	<0.50	2.03	0.50	8564880	<0.50	0.50	8564875
Hydroxide (OH)	mg/L	<0.50	<0.50	0.50	8564880	<0.50	0.50	8564875
Anions								
Dissolved Sulphate (SO4)	mg/L	47.5	48.0	0.50	8565284	31.0	0.50	8565284
Dissolved Chloride (Cl)	mg/L	0.85	0.91	0.50	8565283	0.58	0.50	8565283
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0087 (1)	0.0061 (1)	0.0020	8565397	0.0167 (1)	0.0020	8565393
Total Ammonia (N)	mg/L	0.094	0.039	0.0050	8564413	0.040	0.0050	8564413
Nitrate plus Nitrite (N)	mg/L	0.254 (1)	0.299 (1)	0.0020	8564914	0.234 (1)	0.0020	8564914
Nitrite (N)	mg/L	<0.0020 (1)	<0.0020 (1)	0.0020	8564916	<0.0020 (1)	0.0020	8564916
Total Phosphorus (P)	mg/L	0.0092 (1)	0.0052 (1)	0.0020	8565398	0.0179 (1)	0.0020	8565394
Physical Properties								
Conductivity	uS/cm	604	577	1.0	8564884	424	1.0	8564878
pH	pH	7.99	8.31		8564882	7.85		8564877

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QP7747	QP7748			QP7749		
Sampling Date		2017/02/22 13:20	2017/02/22 12:15			2017/02/23 11:30		
COC Number		08435805	08435805			08435805		
	UNITS	KZ-22	KZ-26	RDL	QC Batch	KZ-28	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	1.1	2.5	1.0	8564259	1.3 (1)	1.1	8564259

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QP7769		
Sampling Date		2017/02/27 10:30		
COC Number		08435805		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Anion Sum	meq/L	0.019	N/A	8563710
Cation Sum	meq/L	0.0013	N/A	8563710
Ion Balance	N/A	0.068 (1)	0.010	8563333
Nitrate (N)	mg/L	<0.0020	0.0020	8563311
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8564715
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8564722
Fluoride (F)	mg/L	0.012	0.010	8564951
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8564587
Acidity (pH 4.5)	mg/L	<0.50	0.50	8564271
Alkalinity (Total as CaCO3)	mg/L	0.93	0.50	8564880
Acidity (pH 8.3)	mg/L	<0.50	0.50	8564271
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8564880
Bicarbonate (HCO3)	mg/L	1.13	0.50	8564880
Carbonate (CO3)	mg/L	<0.50	0.50	8564880
Hydroxide (OH)	mg/L	<0.50	0.50	8564880
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8565284
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8565283
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8565397
Total Ammonia (N)	mg/L	<0.0050	0.0050	8564412
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	8564914
Nitrite (N)	mg/L	<0.0020	0.0020	8564916
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8565398
Physical Properties				
Conductivity	uS/cm	1.4	1.0	8564884
pH	pH	5.89		8564882

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QP7769		
Sampling Date		2017/02/27 10:30		
COC Number		08435805		
	UNITS	TRIP BLANK	RDL	QC Batch
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8564259
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QP7735		QP7736		QP7737		
Sampling Date		2017/02/23 16:20		2017/02/23 14:50		2017/02/23 13:55		
COC Number		08435806		08435806		08435806		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	148	8563001	179	8563001	186	0.50	8563001
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8565222	<0.0000020	8565222	<0.0000020	0.0000020	8565222
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00164	8564155	0.00185	8564155	0.00422	0.00050	8564155
Dissolved Antimony (Sb)	mg/L	0.000026	8564155	<0.000020	8564155	0.000028	0.000020	8564155
Dissolved Arsenic (As)	mg/L	0.000059	8564155	0.000073	8564155	0.000097	0.000020	8564155
Dissolved Barium (Ba)	mg/L	0.0813	8564155	0.0502	8564155	0.102	0.000020	8564155
Dissolved Beryllium (Be)	mg/L	<0.000010	8564155	<0.000010	8564155	<0.000010	0.000010	8564155
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8564155	<0.0000050	8564155	<0.0000050	0.0000050	8564155
Dissolved Boron (B)	mg/L	<0.010	8564155	<0.010	8564155	<0.010	0.010	8564155
Dissolved Cadmium (Cd)	mg/L	0.000260	8564155	0.0000160	8564155	0.0000720	0.0000050	8564155
Dissolved Chromium (Cr)	mg/L	<0.00010	8564155	<0.00010	8564155	<0.00010	0.00010	8564155
Dissolved Cobalt (Co)	mg/L	0.0000060	8564155	0.0000060	8564155	0.0000500	0.0000050	8564155
Dissolved Copper (Cu)	mg/L	0.000427	8564155	0.000104	8564155	0.000141	0.000050	8564155
Dissolved Iron (Fe)	mg/L	<0.0010	8564155	0.0020	8564155	0.0188	0.0010	8564155
Dissolved Lead (Pb)	mg/L	0.0000180	8564155	<0.0000050	8564155	<0.0000050	0.0000050	8564155
Dissolved Lithium (Li)	mg/L	0.00149	8564155	0.00073	8564155	0.00403	0.00050	8564155
Dissolved Manganese (Mn)	mg/L	0.000070	8564155	0.000266	8564155	0.0612	0.000050	8564155
Dissolved Molybdenum (Mo)	mg/L	0.000687	8564155	0.000642	8564155	0.000688	0.000050	8564155
Dissolved Nickel (Ni)	mg/L	0.000332	8564155	0.000126	8564155	0.000395	0.000020	8564155
Dissolved Phosphorus (P)	mg/L	0.0035	8564155	0.0081	8564155	0.0048	0.0020	8564155
Dissolved Selenium (Se)	mg/L	0.00269	8564155	0.00137	8564155	0.000957	0.000040	8564155
Dissolved Silicon (Si)	mg/L	2.38	8564155	2.93	8564155	3.50	0.050	8564155
Dissolved Silver (Ag)	mg/L	<0.0000050	8564155	<0.0000050	8564155	<0.0000050	0.0000050	8564155
Dissolved Strontium (Sr)	mg/L	0.147	8564155	0.180	8564155	0.199	0.000050	8564155
Dissolved Thallium (Tl)	mg/L	0.0000030	8564155	<0.0000020	8564155	<0.0000020	0.0000020	8564155
Dissolved Tin (Sn)	mg/L	<0.00020	8564155	<0.00020	8564155	<0.00020	0.00020	8564155
Dissolved Titanium (Ti)	mg/L	<0.00050	8564155	<0.00050	8564155	<0.00050	0.00050	8564155
Dissolved Uranium (U)	mg/L	0.00478	8564155	0.00132	8564155	0.00154	0.0000020	8564155
Dissolved Vanadium (V)	mg/L	<0.00020	8564155	<0.00020	8564155	<0.00020	0.00020	8564155
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QP7735		QP7736		QP7737		
Sampling Date		2017/02/23 16:20		2017/02/23 14:50		2017/02/23 13:55		
COC Number		08435806		08435806		08435806		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-7	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0346	8564155	0.00117	8566204	0.0422	0.00010	8564155
Dissolved Zirconium (Zr)	mg/L	<0.00010	8564155	<0.00010	8564155	<0.00010	0.00010	8564155
Dissolved Calcium (Ca)	mg/L	48.2	8563307	59.1	8563307	61.9	0.050	8563307
Dissolved Magnesium (Mg)	mg/L	6.79	8563307	7.67	8563307	7.54	0.050	8563307
Dissolved Potassium (K)	mg/L	2.22	8563307	0.995	8563307	1.75	0.050	8563307
Dissolved Sodium (Na)	mg/L	0.923	8563307	0.807	8563307	1.33	0.050	8563307
Dissolved Sulphur (S)	mg/L	19.4	8563307	8.6	8563307	11.5	3.0	8563307
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QP7738	QP7739	QP7740	QP7741	QP7742		
Sampling Date		2017/02/23 11:35	2017/02/23 12:00	2017/02/23 11:00	2017/02/22 15:15	2017/02/23 08:00		
COC Number		08435806	08435806	08435806	08435806	08435806		
	UNITS	KZ-9	KZ-18	KZ-37	KZ-13	KZ-15	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	232	216	217	109	288	0.50	8563001
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8565222
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00200	0.0252 (1)	0.00160	0.00329	0.00091	0.00050	8564155
Dissolved Antimony (Sb)	mg/L	0.000033	0.000031	0.000024	0.000027	0.000029	0.000020	8564155
Dissolved Arsenic (As)	mg/L	0.000188	0.00101	0.000384	0.000221	0.000408	0.000020	8564155
Dissolved Barium (Ba)	mg/L	0.104	0.0547	0.0881	0.129	0.100	0.000020	8564155
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8564155
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8564155
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8564155
Dissolved Cadmium (Cd)	mg/L	0.0000590	0.0000510	0.0000410	0.0000270	0.0000520	0.0000050	8564155
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00013	<0.00010	<0.00010	<0.00010	0.00010	8564155
Dissolved Cobalt (Co)	mg/L	0.000150	0.0000330	0.000111	0.0000490	0.0000300	0.0000050	8564155
Dissolved Copper (Cu)	mg/L	0.000161	0.000058	0.000109	0.000261	0.000204	0.000050	8564155
Dissolved Iron (Fe)	mg/L	0.202	0.0441	0.133	0.0529	0.0076	0.0010	8564155
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8564155
Dissolved Lithium (Li)	mg/L	0.00481	0.00206	0.00386	0.00194	0.00421	0.00050	8564155
Dissolved Manganese (Mn)	mg/L	0.119	0.0167	0.0897	0.112	0.0492	0.000050	8564155
Dissolved Molybdenum (Mo)	mg/L	0.000704	0.00168	0.00106	0.000772	0.00160	0.000050	8564155
Dissolved Nickel (Ni)	mg/L	0.000406	0.000326	0.000445	0.000354	0.00105	0.000020	8564155
Dissolved Phosphorus (P)	mg/L	0.0065	0.0570	0.0208	0.0054	0.0075	0.0020	8564155
Dissolved Selenium (Se)	mg/L	0.00131	0.00142	0.00125	0.000363	0.00181	0.000040	8564155
Dissolved Silicon (Si)	mg/L	4.22	3.11	3.61	4.10	4.21	0.050	8564155
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8564155
Dissolved Strontium (Sr)	mg/L	0.247	0.185	0.235	0.111	0.277	0.000050	8564155
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8564155
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8564155
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8564155
Dissolved Uranium (U)	mg/L	0.00167	0.00303	0.00215	0.00161	0.00558	0.0000020	8564155

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QP7738	QP7739	QP7740	QP7741	QP7742		
Sampling Date		2017/02/23 11:35	2017/02/23 12:00	2017/02/23 11:00	2017/02/22 15:15	2017/02/23 08:00		
COC Number		08435806	08435806	08435806	08435806	08435806		
	UNITS	KZ-9	KZ-18	KZ-37	KZ-13	KZ-15	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8564155
Dissolved Zinc (Zn)	mg/L	0.0144	0.00271	0.0106	0.00265	0.00800	0.00010	8564155
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8564155
Dissolved Calcium (Ca)	mg/L	78.7	56.7	67.1	37.1	83.9	0.050	8563307
Dissolved Magnesium (Mg)	mg/L	8.66	18.0	12.0	4.04	19.0	0.050	8563307
Dissolved Potassium (K)	mg/L	1.84	0.661	1.44	2.36	1.54	0.050	8563307
Dissolved Sodium (Na)	mg/L	1.59	0.974	1.38	1.22	1.66	0.050	8563307
Dissolved Sulphur (S)	mg/L	11.1	7.0	10.0	5.8	13.8	3.0	8563307

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QP7743	QP7744	QP7745	QP7746	QP7747		
Sampling Date		2017/02/23 09:05	2017/02/23 09:55	2017/02/22 15:30	2017/02/22 13:55	2017/02/22 13:20		
COC Number		08435806	08435806	08435806	08435805	08435805		
	UNITS	KZ-16	KZ-17	KZ-19	KZ-21	KZ-22	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	273	289	<0.50	356	328	0.50	8563001
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8565222
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00114	0.00101	0.00063	0.00089	0.00093	0.00050	8564155
Dissolved Antimony (Sb)	mg/L	0.000027	0.000021	<0.000020	0.000028	0.000028	0.000020	8564155
Dissolved Arsenic (As)	mg/L	0.000122	0.000217	<0.000020	0.000614	0.000516	0.000020	8564155
Dissolved Barium (Ba)	mg/L	0.104	0.103	<0.000020	0.0811	0.0888	0.000020	8564155
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8564155
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8564155
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8564155
Dissolved Cadmium (Cd)	mg/L	0.0000390	0.0000290	<0.0000050	0.0000120	0.0000210	0.0000050	8564155
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8564155
Dissolved Cobalt (Co)	mg/L	0.0000770	0.0000060	<0.0000050	0.000268	0.000145	0.0000050	8564155
Dissolved Copper (Cu)	mg/L	0.000179	0.000220	<0.000050	0.000148	0.000172	0.000050	8564155
Dissolved Iron (Fe)	mg/L	0.0066	<0.0010	<0.0010	0.0555	0.0295	0.0010	8564155
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000060	0.0000050	8564155
Dissolved Lithium (Li)	mg/L	0.00420	0.00335	<0.00050	0.0102	0.00778	0.00050	8564155
Dissolved Manganese (Mn)	mg/L	0.0289	0.000680	<0.000050	0.250	0.112	0.000050	8564155
Dissolved Molybdenum (Mo)	mg/L	0.000489	0.000558	<0.000050	0.00160	0.00137	0.000050	8564155
Dissolved Nickel (Ni)	mg/L	0.000951	0.000562	<0.000020	0.00239	0.00152	0.000020	8564155
Dissolved Phosphorus (P)	mg/L	0.0043	0.0042	0.0036	0.0053	0.0080	0.0020	8564155
Dissolved Selenium (Se)	mg/L	0.00166	0.00176	<0.000040	0.000577	0.00111	0.000040	8564155
Dissolved Silicon (Si)	mg/L	3.92	4.12	<0.050	6.80	5.35	0.050	8564155
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8564155
Dissolved Strontium (Sr)	mg/L	0.282	0.288	<0.000050	0.282	0.279	0.000050	8564155
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8564155
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8564155
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8564155
Dissolved Uranium (U)	mg/L	0.00308	0.00338	<0.0000020	0.00292	0.00400	0.0000020	8564155
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8564155

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QP7743	QP7744	QP7745	QP7746	QP7747		
Sampling Date		2017/02/23 09:05	2017/02/23 09:55	2017/02/22 15:30	2017/02/22 13:55	2017/02/22 13:20		
COC Number		08435806	08435806	08435806	08435805	08435805		
	UNITS	KZ-16	KZ-17	KZ-19	KZ-21	KZ-22	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00140	0.00268	0.00013	0.00184	0.00191	0.00010	8564155
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00027	0.00013	0.00010	8564155
Dissolved Calcium (Ca)	mg/L	79.4	86.8	<0.050	88.8	86.7	0.050	8563307
Dissolved Magnesium (Mg)	mg/L	18.1	17.6	<0.050	32.6	27.1	0.050	8563307
Dissolved Potassium (K)	mg/L	1.41	1.45	<0.050	2.36	1.87	0.050	8563307
Dissolved Sodium (Na)	mg/L	1.59	1.55	<0.050	2.84	2.25	0.050	8563307
Dissolved Sulphur (S)	mg/L	14.1	14.3	<3.0	15.0	15.9	3.0	8563307
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QP7748	QP7749	QP7769		
Sampling Date		2017/02/22 12:15	2017/02/23 11:30	2017/02/27 10:30		
COC Number		08435805	08435805	08435805		
	UNITS	KZ-26	KZ-28	TRIP BLANK	RDL	QC Batch
Misc. Inorganics						
Dissolved Hardness (CaCO3)	mg/L	322	226	<0.50	0.50	8563001
Elements						
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8565222
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	0.00472	0.00739	<0.00050	0.00050	8564155
Dissolved Antimony (Sb)	mg/L	0.000077	0.000026	<0.000020	0.000020	8564155
Dissolved Arsenic (As)	mg/L	0.000402	0.000494	<0.000020	0.000020	8564155
Dissolved Barium (Ba)	mg/L	0.0940	0.0893	<0.000020	0.000020	8564155
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8564155
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8564155
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	8564155
Dissolved Cadmium (Cd)	mg/L	0.0000180	0.0000580	<0.0000050	0.0000050	8564155
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8564155
Dissolved Cobalt (Co)	mg/L	0.0000200	0.000105	<0.0000050	0.0000050	8564155
Dissolved Copper (Cu)	mg/L	0.000535	0.000118	<0.000050	0.000050	8564155
Dissolved Iron (Fe)	mg/L	0.0058	0.186	<0.0010	0.0010	8564155
Dissolved Lead (Pb)	mg/L	0.0000490	0.0000230	<0.0000050	0.0000050	8564155
Dissolved Lithium (Li)	mg/L	0.00747	0.00408	<0.00050	0.00050	8564155
Dissolved Manganese (Mn)	mg/L	0.00657	0.0901	<0.000050	0.000050	8564155
Dissolved Molybdenum (Mo)	mg/L	0.000963	0.00105	<0.000050	0.000050	8564155
Dissolved Nickel (Ni)	mg/L	0.000812	0.000485	<0.000020	0.000020	8564155
Dissolved Phosphorus (P)	mg/L	0.0041	0.0208	<0.0020	0.0020	8564155
Dissolved Selenium (Se)	mg/L	0.00110	0.00139	<0.000040	0.000040	8564155
Dissolved Silicon (Si)	mg/L	4.91	3.99	<0.050	0.050	8564155
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8564155
Dissolved Strontium (Sr)	mg/L	0.288	0.240	<0.000050	0.000050	8564155
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8564155
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8564155
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8564155
Dissolved Uranium (U)	mg/L	0.00361	0.00219	<0.0000020	0.0000020	8564155
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8564155
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QP7748	QP7749	QP7769		
Sampling Date		2017/02/22 12:15	2017/02/23 11:30	2017/02/27 10:30		
COC Number		08435805	08435805	08435805		
	UNITS	KZ-26	KZ-28	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00291	0.0107	<0.00010	0.00010	8564155
Dissolved Zirconium (Zr)	mg/L	0.00012	<0.00010	<0.00010	0.00010	8564155
Dissolved Calcium (Ca)	mg/L	84.9	70.4	<0.050	0.050	8563307
Dissolved Magnesium (Mg)	mg/L	26.7	12.3	<0.050	0.050	8563307
Dissolved Potassium (K)	mg/L	1.68	1.45	<0.050	0.050	8563307
Dissolved Sodium (Na)	mg/L	2.47	1.51	<0.050	0.050	8563307
Dissolved Sulphur (S)	mg/L	16.0	10.2	<3.0	3.0	8563307
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QP7735	QP7736	QP7737	QP7738	QP7740		
Sampling Date		2017/02/23 16:20	2017/02/23 14:50	2017/02/23 13:55	2017/02/23 11:35	2017/02/23 11:00		
COC Number		08435806	08435806	08435806	08435806	08435806		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-9	KZ-37	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	140	177	182	225	218	0.50	8562914
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8565243
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00361	0.00351	0.00552	0.0153	0.00764	0.00050	8564173
Total Antimony (Sb)	mg/L	0.000021	<0.000020	0.000026	0.000028	0.000028	0.000020	8564173
Total Arsenic (As)	mg/L	0.000074	0.000070	0.000165	0.000315	0.000497	0.000020	8564173
Total Barium (Ba)	mg/L	0.0784	0.0486	0.101	0.108	0.0900	0.000020	8564173
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8564173
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8564173
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8564173
Total Cadmium (Cd)	mg/L	0.000250	0.0000230	0.000112	0.000173	0.0000560	0.0000050	8564173
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8564173
Total Cobalt (Co)	mg/L	0.0000060	0.0000100	0.0000560	0.000186	0.000127	0.0000050	8564173
Total Copper (Cu)	mg/L	0.000436	0.000114	0.000180	0.000327	0.000151	0.000050	8564173
Total Iron (Fe)	mg/L	0.0040	0.0213	0.154	0.737	0.331	0.0010	8564173
Total Lead (Pb)	mg/L	0.0000340	0.0000100	0.0000370	0.0000750	0.0000160	0.0000050	8564173
Total Lithium (Li)	mg/L	0.00161	0.00078	0.00418	0.00502	0.00409	0.00050	8564173
Total Manganese (Mn)	mg/L	0.000174	0.00285	0.0683	0.133	0.0923	0.000050	8564173
Total Molybdenum (Mo)	mg/L	0.000679	0.000632	0.000676	0.000698	0.00104	0.000050	8564173
Total Nickel (Ni)	mg/L	0.000328	0.000146	0.000403	0.000535	0.000466	0.000020	8564173
Total Phosphorus (P)	mg/L	0.0021	0.0066	0.0067	0.0121	0.0255	0.0020	8564173
Total Selenium (Se)	mg/L	0.00249	0.00130	0.000966	0.00126	0.00134	0.000040	8564173
Total Silicon (Si)	mg/L	2.48	2.95	3.70	3.99	3.86	0.050	8564173
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8564173
Total Strontium (Sr)	mg/L	0.153	0.175	0.204	0.254	0.231	0.000050	8564173
Total Thallium (Tl)	mg/L	0.0000030	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8564173
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8564173
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00132	<0.00050	0.00050	8564173
Total Uranium (U)	mg/L	0.00470	0.00127	0.00147	0.00170	0.00218	0.0000020	8564173
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8564173

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QP7735	QP7736	QP7737	QP7738	QP7740		
Sampling Date		2017/02/23 16:20	2017/02/23 14:50	2017/02/23 13:55	2017/02/23 11:35	2017/02/23 11:00		
COC Number		08435806	08435806	08435806	08435806	08435806		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-9	KZ-37	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0346	0.00084	0.0455	0.0213	0.0108	0.00010	8564173
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8564173
Total Calcium (Ca)	mg/L	44.7	58.6	60.2	75.6	67.7	0.050	8563309
Total Magnesium (Mg)	mg/L	6.89	7.34	7.79	8.78	11.9	0.050	8563309
Total Potassium (K)	mg/L	2.27	0.970	1.78	1.88	1.44	0.050	8563309
Total Sodium (Na)	mg/L	0.905	0.749	1.29	1.67	1.36	0.050	8563309
Total Sulphur (S)	mg/L	20.0	8.5	12.5	11.5	10.5	3.0	8563309

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QP7741	QP7743	QP7744	QP7745	QP7746		
Sampling Date		2017/02/22 15:15	2017/02/23 09:05	2017/02/23 09:55	2017/02/22 15:30	2017/02/22 13:55		
COC Number		08435806	08435806	08435806	08435806	08435805		
	UNITS	KZ-13	KZ-16	KZ-17	KZ-19	KZ-21	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	110	290	289	<0.50	344	0.50	8562914
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8565243
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0211	0.00138	0.00662	0.00079	0.00623	0.00050	8564173
Total Antimony (Sb)	mg/L	0.000030	<0.000020	0.000023	<0.000020	0.000036	0.000020	8564173
Total Arsenic (As)	mg/L	0.000283	0.000167	0.000272	<0.000020	0.00272	0.000020	8564173
Total Barium (Ba)	mg/L	0.128	0.101	0.106	0.000024	0.0869	0.000020	8564173
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8564173
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8564173
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8564173
Total Cadmium (Cd)	mg/L	0.0000420	0.0000410	0.0000490	<0.0000050	0.0000250	0.0000050	8564173
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8564173
Total Cobalt (Co)	mg/L	0.0000660	0.0000840	0.0000170	<0.0000050	0.000302	0.0000050	8564173
Total Copper (Cu)	mg/L	0.000302	0.000178	0.000261	<0.000050	0.000232	0.000050	8564173
Total Iron (Fe)	mg/L	0.197	0.0199	0.0170	<0.0010	0.743	0.0010	8564173
Total Lead (Pb)	mg/L	0.0000470	<0.0000050	0.0000170	<0.0000050	0.0000860	0.0000050	8564173
Total Lithium (Li)	mg/L	0.00203	0.00426	0.00355	<0.00050	0.0110	0.00050	8564173
Total Manganese (Mn)	mg/L	0.124	0.0306	0.00292	<0.000050	0.267	0.000050	8564173
Total Molybdenum (Mo)	mg/L	0.000802	0.000469	0.000558	<0.000050	0.00171	0.000050	8564173
Total Nickel (Ni)	mg/L	0.000394	0.000927	0.000618	<0.000020	0.00255	0.000020	8564173
Total Phosphorus (P)	mg/L	0.0073	0.0043	0.0045	0.0039	0.0299	0.0020	8564173
Total Selenium (Se)	mg/L	0.000367	0.00178	0.00171	<0.000040	0.000566	0.000040	8564173
Total Silicon (Si)	mg/L	4.18	4.27	4.00	<0.050	7.12	0.050	8564173
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8564173
Total Strontium (Sr)	mg/L	0.108	0.290	0.293	<0.000050	0.291	0.000050	8564173
Total Thallium (Tl)	mg/L	0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8564173
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8564173
Total Titanium (Ti)	mg/L	0.00092	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8564173
Total Uranium (U)	mg/L	0.00163	0.00313	0.00337	<0.0000020	0.00299	0.0000020	8564173
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8564173

RDL = Reportable Detection Limit

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QP7741	QP7743	QP7744	QP7745	QP7746		
Sampling Date		2017/02/22 15:15	2017/02/23 09:05	2017/02/23 09:55	2017/02/22 15:30	2017/02/22 13:55		
COC Number		08435806	08435806	08435806	08435806	08435805		
	UNITS	KZ-13	KZ-16	KZ-17	KZ-19	KZ-21	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00411	0.00144	0.00288	0.00020	0.00244	0.00010	8564173
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00031	0.00010	8564173
Total Calcium (Ca)	mg/L	37.5	85.8	87.2	<0.050	81.9	0.050	8563309
Total Magnesium (Mg)	mg/L	4.01	18.5	17.4	<0.050	33.8	0.050	8563309
Total Potassium (K)	mg/L	2.31	1.44	1.41	<0.050	2.41	0.050	8563309
Total Sodium (Na)	mg/L	1.22	1.60	1.51	<0.050	2.89	0.050	8563309
Total Sulphur (S)	mg/L	5.5	13.6	13.5	<3.0	15.5	3.0	8563309

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QP7747	QP7748	QP7749	QP7769		
Sampling Date		2017/02/22 13:20	2017/02/22 12:15	2017/02/23 11:30	2017/02/27 10:30		
COC Number		08435805	08435805	08435805	08435805		
	UNITS	KZ-22	KZ-26	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	355	309	216	<0.50	0.50	8562914
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8565243
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00372	0.0173	0.00747	<0.00050	0.00050	8564173
Total Antimony (Sb)	mg/L	0.000029	0.000071	0.000026	<0.000020	0.000020	8564173
Total Arsenic (As)	mg/L	0.00138	0.000537	0.000553	<0.000020	0.000020	8564173
Total Barium (Ba)	mg/L	0.0817	0.0929	0.0879	<0.000020	0.000020	8564173
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8564173
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8564173
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8564173
Total Cadmium (Cd)	mg/L	0.0000220	0.0000220	0.0000580	<0.0000050	0.0000050	8564173
Total Chromium (Cr)	mg/L	<0.00010	0.00075	0.00010	<0.00010	0.00010	8564173
Total Cobalt (Co)	mg/L	0.000157	0.0000430	0.000113	<0.0000050	0.0000050	8564173
Total Copper (Cu)	mg/L	0.000184	0.000530	0.000172	<0.000050	0.000050	8564173
Total Iron (Fe)	mg/L	0.433	0.154	0.321	<0.0010	0.0010	8564173
Total Lead (Pb)	mg/L	0.0000230	0.000208	0.0000140	<0.0000050	0.0000050	8564173
Total Lithium (Li)	mg/L	0.00735	0.00776	0.00427	<0.00050	0.00050	8564173
Total Manganese (Mn)	mg/L	0.116	0.0112	0.0928	<0.000050	0.000050	8564173
Total Molybdenum (Mo)	mg/L	0.00126	0.00129	0.00104	<0.000050	0.000050	8564173
Total Nickel (Ni)	mg/L	0.00148	0.000896	0.000464	<0.000020	0.000020	8564173
Total Phosphorus (P)	mg/L	0.0153	0.0073	0.0272	<0.0020	0.0020	8564173
Total Selenium (Se)	mg/L	0.00119	0.00102	0.00129	<0.000040	0.000040	8564173
Total Silicon (Si)	mg/L	5.79	4.99	3.95	<0.050	0.050	8564173
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8564173
Total Strontium (Sr)	mg/L	0.267	0.277	0.227	<0.000050	0.000050	8564173
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8564173
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8564173
Total Titanium (Ti)	mg/L	<0.00050	0.00076	<0.00050	<0.00050	0.00050	8564173
Total Uranium (U)	mg/L	0.00372	0.00355	0.00216	<0.0000020	0.0000020	8564173
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8564173

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QP7747	QP7748	QP7749	QP7769		
Sampling Date		2017/02/22 13:20	2017/02/22 12:15	2017/02/23 11:30	2017/02/27 10:30		
COC Number		08435805	08435805	08435805	08435805		
	UNITS	KZ-22	KZ-26	KZ-28	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00164	0.00270	0.0104	<0.00010	0.00010	8564173
Total Zirconium (Zr)	mg/L	0.00015	0.00012	<0.00010	<0.00010	0.00010	8564173
Total Calcium (Ca)	mg/L	99.6	82.3	67.0	<0.050	0.050	8563309
Total Magnesium (Mg)	mg/L	25.9	25.2	11.8	<0.050	0.050	8563309
Total Potassium (K)	mg/L	1.79	1.57	1.44	<0.050	0.050	8563309
Total Sodium (Na)	mg/L	2.11	2.25	1.34	<0.050	0.050	8563309
Total Sulphur (S)	mg/L	15.1	15.6	10.2	<3.0	3.0	8563309
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		QP7739	QP7742		
Sampling Date		2017/02/23 12:00	2017/02/23 08:00		
COC Number		08435806	08435806		
	UNITS	KZ-18	KZ-15	RDL	QC Batch
Calculated Parameters					
Total Hardness (CaCO3)	mg/L	225	287	0.50	8562914
Elements					
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8565243
Total Metals by ICPMS					
Total Aluminum (Al)	mg/L	0.0183	0.395	0.0030	8564477
Total Antimony (Sb)	mg/L	0.000041	0.000068	0.000020	8564477
Total Arsenic (As)	mg/L	0.000993	0.00431	0.000020	8564477
Total Barium (Ba)	mg/L	0.0594	0.131	0.000050	8564477
Total Beryllium (Be)	mg/L	0.000010	0.000032	0.000010	8564477
Total Bismuth (Bi)	mg/L	<0.000010	0.000010	0.000010	8564477
Total Boron (B)	mg/L	<0.010	<0.010	0.010	8564477
Total Cadmium (Cd)	mg/L	0.0000660	0.000375	0.0000050	8564477
Total Chromium (Cr)	mg/L	0.00018	0.00092	0.00010	8564477
Total Cobalt (Co)	mg/L	0.000054	0.000952	0.000010	8564477
Total Copper (Cu)	mg/L	0.00101	0.00277	0.00010	8564477
Total Iron (Fe)	mg/L	0.111	2.16	0.0050	8564477
Total Lead (Pb)	mg/L	0.000147	0.00141	0.000020	8564477
Total Lithium (Li)	mg/L	0.00243	0.00554	0.00050	8564477
Total Manganese (Mn)	mg/L	0.0198	0.520	0.00010	8564477
Total Molybdenum (Mo)	mg/L	0.00183	0.00170	0.000050	8564477
Total Nickel (Ni)	mg/L	0.00056	0.00366	0.00010	8564477
Total Phosphorus (P)	mg/L	0.0692	0.118	0.0050	8564477
Total Selenium (Se)	mg/L	0.00141	0.00165	0.000040	8564477
Total Silicon (Si)	mg/L	3.53	5.00	0.050	8564477
Total Silver (Ag)	mg/L	<0.000010	0.000015	0.000010	8564477
Total Strontium (Sr)	mg/L	0.183	0.266	0.000050	8564477
Total Thallium (Tl)	mg/L	<0.0000020	0.0000080	0.0000020	8564477
Total Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8564477
Total Titanium (Ti)	mg/L	<0.0020	0.0251	0.0020	8564477
Total Uranium (U)	mg/L	0.00316	0.00576	0.0000050	8564477
Total Vanadium (V)	mg/L	<0.00020	0.00124	0.00020	8564477
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		QP7739	QP7742		
Sampling Date		2017/02/23 12:00	2017/02/23 08:00		
COC Number		08435806	08435806		
	UNITS	KZ-18	KZ-15	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0023	0.0405	0.0010	8564477
Total Zirconium (Zr)	mg/L	<0.00010	0.00012	0.00010	8564477
Total Calcium (Ca)	mg/L	59.8	83.9	0.25	8563309
Total Magnesium (Mg)	mg/L	18.3	19.0	0.25	8563309
Total Potassium (K)	mg/L	0.66	1.51	0.25	8563309
Total Sodium (Na)	mg/L	0.94	1.51	0.25	8563309
Total Sulphur (S)	mg/L	7.4	13.5	3.0	8563309
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QP7735
Sample ID: KZ-2
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8564271	N/A	2017/02/28	Name Redacted
Alkalinity - Water	AT/ALK	8564880	2017/02/28	2017/02/28	
Chloride by Automated Colourimetry	KONE/COL	8565283	N/A	2017/02/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8564715	N/A	2017/02/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8564722	N/A	2017/02/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8564587	N/A	2017/02/28	
Conductance - water	AT/ALK	8564884	N/A	2017/02/28	
Fluoride	ISE/ISE	8564951	N/A	2017/02/28	
Hardness Total (calculated as CaCO3)	CALC	8562914	N/A	2017/03/01	
Hardness (calculated as CaCO3)	CALC	8563001	N/A	2017/03/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8565222	N/A	2017/03/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8565243	2017/03/01	2017/03/01	
Ion Balance	CALC	8563333	N/A	2017/03/01	
Sum of cations, anions	CALC	8563710	N/A	2017/03/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8563307	N/A	2017/03/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8564155	N/A	2017/02/28	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8563309	N/A	2017/03/01	
Elements by ICPMS Low Level (total)	ICP/CRCM	8564173	N/A	2017/02/28	
Ammonia-N (Preserved)	KONE/COL	8564412	N/A	2017/02/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8564914	N/A	2017/02/28	
Nitrite (N) (low level)	TRAA/COL	8564916	N/A	2017/02/28	
Nitrogen - Nitrate (as N)	CALC	8563311	N/A	2017/03/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/02/27	
pH Water	AT/ALK	8564882	N/A	2017/02/28	
Sulphate by Automated Colourimetry	KONE/COL	8565284	N/A	2017/02/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8565397	2017/02/28	2017/02/28	
Total Phosphorus - unpreserved	KONE/COL	8565398	N/A	2017/02/28	
Total Suspended Solids-Low Level	BAL/BAL	8564253	2017/02/28	2017/03/01	

Maxxam ID: QP7735 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8564880	2017/02/28	2017/02/28	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8564715	N/A	2017/02/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8564722	N/A	2017/02/28	
Conductance - water	AT/ALK	8564884	N/A	2017/02/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8564155	N/A	2017/02/28	
Elements by ICPMS Low Level (total)	ICP/CRCM	8564173	N/A	2017/02/28	
pH Water	AT/ALK	8564882	N/A	2017/02/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8565397	2017/02/28	2017/02/28	
Total Phosphorus - unpreserved	KONE/COL	8565398	N/A	2017/02/28	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QP7736
Sample ID: KZ-6
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8564271	N/A	2017/02/28	Name Redacted
Alkalinity - Water	AT/ALK	8564880	2017/02/28	2017/02/28	
Chloride by Automated Colourimetry	KONE/COL	8565283	N/A	2017/02/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8564715	N/A	2017/02/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8564722	N/A	2017/02/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8564587	N/A	2017/02/28	
Conductance - water	AT/ALK	8564884	N/A	2017/02/28	
Fluoride	ISE/ISE	8564951	N/A	2017/02/28	
Hardness Total (calculated as CaCO3)	CALC	8562914	N/A	2017/03/01	
Hardness (calculated as CaCO3)	CALC	8563001	N/A	2017/03/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8565222	N/A	2017/03/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8565243	2017/03/01	2017/03/01	
Ion Balance	CALC	8563333	N/A	2017/03/01	
Sum of cations, anions	CALC	8563710	N/A	2017/03/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8563307	N/A	2017/03/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8564155	N/A	2017/02/28	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8563309	N/A	2017/03/01	
Elements by ICPMS Low Level (total)	ICP/CRCM	8564173	N/A	2017/02/28	
Ammonia-N (Preserved)	KONE/COL	8564413	N/A	2017/02/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8564914	N/A	2017/02/28	
Nitrite (N) (low level)	TRAA/COL	8564916	N/A	2017/02/28	
Nitrogen - Nitrate (as N)	CALC	8563311	N/A	2017/03/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/02/27	
pH Water	AT/ALK	8564882	N/A	2017/02/28	
Sulphate by Automated Colourimetry	KONE/COL	8565284	N/A	2017/02/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8565397	2017/02/28	2017/02/28	
Total Phosphorus - unpreserved	KONE/COL	8565398	N/A	2017/02/28	
Total Suspended Solids-Low Level	BAL/BAL	8564253	2017/02/28	2017/03/01	

Maxxam ID: QP7737
Sample ID: KZ-7
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8564271	N/A	2017/02/28	Name Redacted
Alkalinity - Water	AT/ALK	8564875	2017/02/28	2017/02/28	
Chloride by Automated Colourimetry	KONE/COL	8564852	N/A	2017/02/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8564715	N/A	2017/02/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8564722	N/A	2017/02/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8564587	N/A	2017/02/28	
Conductance - water	AT/ALK	8564878	N/A	2017/02/28	
Fluoride	ISE/ISE	8564951	N/A	2017/02/28	
Hardness Total (calculated as CaCO3)	CALC	8562914	N/A	2017/03/01	
Hardness (calculated as CaCO3)	CALC	8563001	N/A	2017/03/01	

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QP7737
Sample ID: KZ-7
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8565222	N/A	2017/03/01	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8565243	2017/03/01	2017/03/01	
Ion Balance	CALC	8563333	N/A	2017/03/01	
Sum of cations, anions	CALC	8563710	N/A	2017/03/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8563307	N/A	2017/03/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8564155	N/A	2017/02/28	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8563309	N/A	2017/03/01	
Elements by ICPMS Low Level (total)	ICP/CRCM	8564173	N/A	2017/02/28	
Ammonia-N (Preserved)	KONE/COL	8564413	N/A	2017/02/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8564912	N/A	2017/02/28	
Nitrite (N) (low level)	TRAA/COL	8564913	N/A	2017/02/28	
Nitrogen - Nitrate (as N)	CALC	8563311	N/A	2017/03/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/02/27	
pH Water	AT/ALK	8564877	N/A	2017/02/28	
Sulphate by Automated Colourimetry	KONE/COL	8564853	N/A	2017/02/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8565393	2017/02/28	2017/02/28	
Total Phosphorus - unpreserved	KONE/COL	8565394	N/A	2017/02/28	
Total Suspended Solids-Low Level	BAL/BAL	8564253	2017/02/28	2017/03/01	

Maxxam ID: QP7737 Dup
Sample ID: KZ-7
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8564413	N/A	2017/02/28	Name Redacted

Maxxam ID: QP7738
Sample ID: KZ-9
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8564271	N/A	2017/02/28	Name Redacted
Alkalinity - Water	AT/ALK	8564875	2017/02/28	2017/02/28	
Chloride by Automated Colourimetry	KONE/COL	8565283	N/A	2017/02/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8564715	N/A	2017/02/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8564722	N/A	2017/02/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8564587	N/A	2017/02/28	
Conductance - water	AT/ALK	8564878	N/A	2017/02/28	
Fluoride	ISE/ISE	8564951	N/A	2017/02/28	
Hardness Total (calculated as CaCO3)	CALC	8562914	N/A	2017/03/01	
Hardness (calculated as CaCO3)	CALC	8563001	N/A	2017/03/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8565222	N/A	2017/03/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8565243	2017/03/01	2017/03/01	
Ion Balance	CALC	8563333	N/A	2017/03/01	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QP7738
Sample ID: KZ-9
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sum of cations, anions	CALC	8563710	N/A	2017/03/01	Name Redacted
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8563307	N/A	2017/03/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8564155	N/A	2017/02/28	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8563309	N/A	2017/03/01	
Elements by ICPMS Low Level (total)	ICP/CRCM	8564173	N/A	2017/02/28	
Ammonia-N (Preserved)	KONE/COL	8564413	N/A	2017/02/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8564912	N/A	2017/02/28	
Nitrite (N) (low level)	TRAA/COL	8564913	N/A	2017/02/28	
Nitrogen - Nitrate (as N)	CALC	8563311	N/A	2017/03/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/02/27	
pH Water	AT/ALK	8564877	N/A	2017/02/28	
Sulphate by Automated Colourimetry	KONE/COL	8565284	N/A	2017/02/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8565393	2017/02/28	2017/02/28	
Total Phosphorus - unpreserved	KONE/COL	8565394	N/A	2017/02/28	
Total Suspended Solids-Low Level	BAL/BAL	8564259	2017/02/28	2017/03/01	

Maxxam ID: QP7739
Sample ID: KZ-18
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8564271	N/A	2017/02/28	Name Redacted
Alkalinity - Water	AT/ALK	8564875	2017/02/28	2017/02/28	
Chloride by Automated Colourimetry	KONE/COL	8565283	N/A	2017/02/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8564715	N/A	2017/02/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8564722	N/A	2017/02/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8564587	N/A	2017/02/28	
Conductance - water	AT/ALK	8564878	N/A	2017/02/28	
Fluoride	ISE/ISE	8564951	N/A	2017/02/28	
Hardness Total (calculated as CaCO3)	CALC	8562914	N/A	2017/03/01	
Hardness (calculated as CaCO3)	CALC	8563001	N/A	2017/03/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8565222	N/A	2017/03/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8565243	2017/03/01	2017/03/01	
Ion Balance	CALC	8563333	N/A	2017/03/01	
Sum of cations, anions	CALC	8563710	N/A	2017/03/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8563307	N/A	2017/03/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8564155	N/A	2017/02/28	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8564477	2017/02/28	2017/02/28	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8563309	N/A	2017/03/01	
Ammonia-N (Preserved)	KONE/COL	8564412	N/A	2017/02/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8564914	N/A	2017/02/28	
Nitrite (N) (low level)	TRAA/COL	8564916	N/A	2017/02/28	
Nitrogen - Nitrate (as N)	CALC	8563311	N/A	2017/03/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/02/27	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QP7739
Sample ID: KZ-18
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH Water	AT/ALK	8564877	N/A	2017/02/28	Name Redacted
Sulphate by Automated Colourimetry	KONE/COL	8565284	N/A	2017/02/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8565397	2017/02/28	2017/02/28	
Total Phosphorus - unpreserved	KONE/COL	8565398	N/A	2017/02/28	
Total Suspended Solids-Low Level	BAL/BAL	8564259	2017/02/28	2017/03/01	

Maxxam ID: QP7739 Dup
Sample ID: KZ-18
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8564875	2017/03/01	2017/03/01	Name Redacted

Maxxam ID: QP7740
Sample ID: KZ-37
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8564271	N/A	2017/02/28	Name Redacted
Alkalinity - Water	AT/ALK	8564875	2017/02/28	2017/02/28	
Chloride by Automated Colourimetry	KONE/COL	8564852	N/A	2017/02/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8564715	N/A	2017/02/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8564722	N/A	2017/02/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8564587	N/A	2017/02/28	
Conductance - water	AT/ALK	8564878	N/A	2017/02/28	
Fluoride	ISE/ISE	8564951	N/A	2017/02/28	
Hardness Total (calculated as CaCO3)	CALC	8562914	N/A	2017/03/01	
Hardness (calculated as CaCO3)	CALC	8563001	N/A	2017/03/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8565222	N/A	2017/03/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8565243	2017/03/01	2017/03/01	
Ion Balance	CALC	8563333	N/A	2017/03/01	
Sum of cations, anions	CALC	8563710	N/A	2017/03/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8563307	N/A	2017/03/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8564155	N/A	2017/02/28	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8563309	N/A	2017/03/01	
Elements by ICPMS Low Level (total)	ICP/CRCM	8564173	N/A	2017/02/28	
Ammonia-N (Preserved)	KONE/COL	8564413	N/A	2017/02/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8564912	N/A	2017/02/28	
Nitrite (N) (low level)	TRAA/COL	8564913	N/A	2017/02/28	
Nitrogen - Nitrate (as N)	CALC	8563311	N/A	2017/03/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/02/27	
pH Water	AT/ALK	8564877	N/A	2017/02/28	
Sulphate by Automated Colourimetry	KONE/COL	8564853	N/A	2017/02/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8565393	2017/02/28	2017/02/28	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QP7740
Sample ID: KZ-37
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - unpreserved	KONE/COL	8565394	N/A	2017/02/28	Name Redacted
Total Suspended Solids-Low Level	BAL/BAL	8564259	2017/02/28	2017/03/01	

Maxxam ID: QP7741
Sample ID: KZ-13
Matrix: Water

Collected: 2017/02/22
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8564271	N/A	2017/02/28	Name Redacted
Alkalinity - Water	AT/ALK	8564880	2017/02/28	2017/02/28	
Chloride by Automated Colourimetry	KONE/COL	8565283	N/A	2017/02/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8564715	N/A	2017/02/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8564722	N/A	2017/02/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8564587	N/A	2017/02/28	
Conductance - water	AT/ALK	8564884	N/A	2017/02/28	
Fluoride	ISE/ISE	8564951	N/A	2017/02/28	
Hardness Total (calculated as CaCO3)	CALC	8562914	N/A	2017/03/01	
Hardness (calculated as CaCO3)	CALC	8563001	N/A	2017/03/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8565222	N/A	2017/03/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8565243	2017/03/01	2017/03/01	
Ion Balance	CALC	8563333	N/A	2017/03/01	
Sum of cations, anions	CALC	8563710	N/A	2017/03/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8563307	N/A	2017/03/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8564155	N/A	2017/02/28	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8563309	N/A	2017/03/01	
Elements by ICPMS Low Level (total)	ICP/CRCM	8564173	N/A	2017/02/28	
Ammonia-N (Preserved)	KONE/COL	8564413	N/A	2017/02/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8564914	N/A	2017/02/28	
Nitrite (N) (low level)	TRAA/COL	8564916	N/A	2017/02/28	
Nitrogen - Nitrate (as N)	CALC	8563311	N/A	2017/03/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/02/27	
pH Water	AT/ALK	8564882	N/A	2017/02/28	
Sulphate by Automated Colourimetry	KONE/COL	8565284	N/A	2017/02/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8565397	2017/02/28	2017/02/28	
Total Phosphorus - unpreserved	KONE/COL	8565398	N/A	2017/02/28	
Total Suspended Solids-Low Level	BAL/BAL	8564259	2017/02/28	2017/03/01	

Maxxam ID: QP7742
Sample ID: KZ-15
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8564271	N/A	2017/02/28	Name Redacted
Alkalinity - Water	AT/ALK	8564880	2017/02/28	2017/02/28	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QP7742
Sample ID: KZ-15
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8565283	N/A	2017/02/28	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8564715	N/A	2017/02/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8564722	N/A	2017/02/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8564587	N/A	2017/02/28	
Conductance - water	AT/ALK	8564884	N/A	2017/02/28	
Fluoride	ISE/ISE	8564951	N/A	2017/02/28	
Hardness Total (calculated as CaCO3)	CALC	8562914	N/A	2017/03/01	
Hardness (calculated as CaCO3)	CALC	8563001	N/A	2017/03/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8565222	N/A	2017/03/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8565243	2017/03/01	2017/03/01	
Ion Balance	CALC	8563333	N/A	2017/03/01	
Sum of cations, anions	CALC	8563710	N/A	2017/03/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8563307	N/A	2017/03/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8564155	N/A	2017/02/28	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8564477	2017/02/28	2017/02/28	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8563309	N/A	2017/03/01	
Ammonia-N (Preserved)	KONE/COL	8564413	N/A	2017/02/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8564914	N/A	2017/02/28	
Nitrite (N) (low level)	TRAA/COL	8564916	N/A	2017/02/28	
Nitrogen - Nitrate (as N)	CALC	8563311	N/A	2017/03/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/02/27	
pH Water	AT/ALK	8564882	N/A	2017/02/28	
Sulphate by Automated Colourimetry	KONE/COL	8565284	N/A	2017/02/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8565984	2017/03/02	2017/03/02	
Total Phosphorus - unpreserved	KONE/COL	8565986	N/A	2017/03/02	
Total Suspended Solids-Low Level	BAL/BAL	8564259	2017/02/28	2017/03/01	

Maxxam ID: QP7743
Sample ID: KZ-16
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8564271	N/A	2017/02/28	Name Redacted
Alkalinity - Water	AT/ALK	8564875	2017/02/28	2017/02/28	
Chloride by Automated Colourimetry	KONE/COL	8565283	N/A	2017/02/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8564715	N/A	2017/02/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8564722	N/A	2017/02/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8564587	N/A	2017/02/28	
Conductance - water	AT/ALK	8564878	N/A	2017/02/28	
Fluoride	ISE/ISE	8564951	N/A	2017/02/28	
Hardness Total (calculated as CaCO3)	CALC	8562914	N/A	2017/03/01	
Hardness (calculated as CaCO3)	CALC	8563001	N/A	2017/03/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8565222	N/A	2017/03/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8565243	2017/03/01	2017/03/01	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QP7743
Sample ID: KZ-16
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance	CALC	8563333	N/A	2017/03/01	Name Redacted
Sum of cations, anions	CALC	8563710	N/A	2017/03/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8563307	N/A	2017/03/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8564155	N/A	2017/02/28	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8563309	N/A	2017/03/01	
Elements by ICPMS Low Level (total)	ICP/CRCM	8564173	N/A	2017/02/28	
Ammonia-N (Preserved)	KONE/COL	8564413	N/A	2017/02/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8564912	N/A	2017/02/28	
Nitrite (N) (low level)	TRAA/COL	8564913	N/A	2017/02/28	
Nitrogen - Nitrate (as N)	CALC	8563311	N/A	2017/03/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/02/27	
pH Water	AT/ALK	8564877	N/A	2017/02/28	
Sulphate by Automated Colourimetry	KONE/COL	8565284	N/A	2017/02/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8565393	2017/02/28	2017/02/28	
Total Phosphorus - unpreserved	KONE/COL	8565394	N/A	2017/02/28	
Total Suspended Solids-Low Level	BAL/BAL	8564259	2017/02/28	2017/03/01	

Maxxam ID: QP7744
Sample ID: KZ-17
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8564271	N/A	2017/02/28	Name Redacted
Alkalinity - Water	AT/ALK	8564880	2017/02/28	2017/02/28	
Chloride by Automated Colourimetry	KONE/COL	8565283	N/A	2017/02/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8564715	N/A	2017/02/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8564722	N/A	2017/02/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8564587	N/A	2017/02/28	
Conductance - water	AT/ALK	8564884	N/A	2017/02/28	
Fluoride	ISE/ISE	8564951	N/A	2017/02/28	
Hardness Total (calculated as CaCO3)	CALC	8562914	N/A	2017/03/01	
Hardness (calculated as CaCO3)	CALC	8563001	N/A	2017/03/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8565222	N/A	2017/03/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8565243	2017/03/01	2017/03/01	
Ion Balance	CALC	8563333	N/A	2017/03/01	
Sum of cations, anions	CALC	8563710	N/A	2017/03/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8563307	N/A	2017/03/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8564155	N/A	2017/02/28	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8563309	N/A	2017/03/01	
Elements by ICPMS Low Level (total)	ICP/CRCM	8564173	N/A	2017/02/28	
Ammonia-N (Preserved)	KONE/COL	8564413	N/A	2017/02/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8564914	N/A	2017/02/28	
Nitrite (N) (low level)	TRAA/COL	8564916	N/A	2017/02/28	
Nitrogen - Nitrate (as N)	CALC	8563311	N/A	2017/03/01	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QP7744
Sample ID: KZ-17
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/02/27	Name Redacted
pH Water	AT/ALK	8564882	N/A	2017/02/28	
Sulphate by Automated Colourimetry	KONE/COL	8565284	N/A	2017/02/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8565397	2017/02/28	2017/02/28	
Total Phosphorus - unpreserved	KONE/COL	8565398	N/A	2017/02/28	
Total Suspended Solids-Low Level	BAL/BAL	8564259	2017/02/28	2017/03/01	

Maxxam ID: QP7744 Dup
Sample ID: KZ-17
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8564587	N/A	2017/02/28	Name Redacted

Maxxam ID: QP7745
Sample ID: KZ-19
Matrix: Water

Collected: 2017/02/22
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8564271	N/A	2017/02/28	Name Redacted
Alkalinity - Water	AT/ALK	8564880	2017/02/28	2017/02/28	
Chloride by Automated Colourimetry	KONE/COL	8565283	N/A	2017/02/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8564715	N/A	2017/02/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8564722	N/A	2017/02/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8564587	N/A	2017/02/28	
Conductance - water	AT/ALK	8564884	N/A	2017/02/28	
Fluoride	ISE/ISE	8564951	N/A	2017/02/28	
Hardness Total (calculated as CaCO3)	CALC	8562914	N/A	2017/03/01	
Hardness (calculated as CaCO3)	CALC	8563001	N/A	2017/03/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8565222	N/A	2017/03/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8565243	2017/03/01	2017/03/01	
Ion Balance	CALC	8563333	N/A	2017/03/01	
Sum of cations, anions	CALC	8563710	N/A	2017/03/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8563307	N/A	2017/03/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8564155	N/A	2017/02/28	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8563309	N/A	2017/03/01	
Elements by ICPMS Low Level (total)	ICP/CRCM	8564173	N/A	2017/02/28	
Ammonia-N (Preserved)	KONE/COL	8566972	N/A	2017/03/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8564914	N/A	2017/02/28	
Nitrite (N) (low level)	TRAA/COL	8564916	N/A	2017/02/28	
Nitrogen - Nitrate (as N)	CALC	8563311	N/A	2017/03/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/02/27	
pH Water	AT/ALK	8564882	N/A	2017/02/28	
Sulphate by Automated Colourimetry	KONE/COL	8565284	N/A	2017/02/28	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QP7745
Sample ID: KZ-19
Matrix: Water

Collected: 2017/02/22
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8565397	2017/02/28	2017/02/28	Name Redacted
Total Phosphorus - unpreserved	KONE/COL	8565398	N/A	2017/02/28	
Total Suspended Solids-Low Level	BAL/BAL	8564259	2017/02/28	2017/03/01	

Maxxam ID: QP7746
Sample ID: KZ-21
Matrix: Water

Collected: 2017/02/22
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8564271	N/A	2017/02/28	Name Redacted
Alkalinity - Water	AT/ALK	8564875	2017/02/28	2017/02/28	
Chloride by Automated Colourimetry	KONE/COL	8565283	N/A	2017/02/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8564715	N/A	2017/02/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8564722	N/A	2017/02/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8564587	N/A	2017/02/28	
Conductance - water	AT/ALK	8564878	N/A	2017/02/28	
Fluoride	ISE/ISE	8564951	N/A	2017/02/28	
Hardness Total (calculated as CaCO3)	CALC	8562914	N/A	2017/03/01	
Hardness (calculated as CaCO3)	CALC	8563001	N/A	2017/03/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8565222	N/A	2017/03/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8565243	2017/03/01	2017/03/01	
Ion Balance	CALC	8563333	N/A	2017/03/01	
Sum of cations, anions	CALC	8563710	N/A	2017/03/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8563307	N/A	2017/03/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8564155	N/A	2017/02/28	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8563309	N/A	2017/03/01	
Elements by ICPMS Low Level (total)	ICP/CRCM	8564173	N/A	2017/02/28	
Ammonia-N (Preserved)	KONE/COL	8564413	N/A	2017/02/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8564912	N/A	2017/02/28	
Nitrite (N) (low level)	TRAA/COL	8564913	N/A	2017/02/28	
Nitrogen - Nitrate (as N)	CALC	8563311	N/A	2017/03/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/02/27	
pH Water	AT/ALK	8564877	N/A	2017/02/28	
Sulphate by Automated Colourimetry	KONE/COL	8565284	N/A	2017/02/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8565393	2017/02/28	2017/02/28	
Total Phosphorus - unpreserved	KONE/COL	8565394	N/A	2017/02/28	
Total Suspended Solids-Low Level	BAL/BAL	8564259	2017/02/28	2017/03/01	

Maxxam ID: QP7747
Sample ID: KZ-22
Matrix: Water

Collected: 2017/02/22
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8564271	N/A	2017/02/28	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QP7747
Sample ID: KZ-22
Matrix: Water

Collected: 2017/02/22
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8564880	2017/02/28	2017/02/28	Name Redacted
Chloride by Automated Colourimetry	KONE/COL	8565283	N/A	2017/02/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8564715	N/A	2017/02/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8564722	N/A	2017/02/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8564587	N/A	2017/02/28	
Conductance - water	AT/ALK	8564884	N/A	2017/02/28	
Fluoride	ISE/ISE	8564951	N/A	2017/02/28	
Hardness Total (calculated as CaCO3)	CALC	8562914	N/A	2017/03/01	
Hardness (calculated as CaCO3)	CALC	8563001	N/A	2017/03/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8565222	N/A	2017/03/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8565243	2017/03/01	2017/03/01	
Ion Balance	CALC	8563333	N/A	2017/03/01	
Sum of cations, anions	CALC	8563710	N/A	2017/03/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8563307	N/A	2017/03/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8564155	N/A	2017/02/28	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8563309	N/A	2017/03/01	
Elements by ICPMS Low Level (total)	ICP/CRCM	8564173	N/A	2017/02/28	
Ammonia-N (Preserved)	KONE/COL	8564413	N/A	2017/02/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8564914	N/A	2017/02/28	
Nitrite (N) (low level)	TRAA/COL	8564916	N/A	2017/02/28	
Nitrogen - Nitrate (as N)	CALC	8563311	N/A	2017/03/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/02/27	
pH Water	AT/ALK	8564882	N/A	2017/02/28	
Sulphate by Automated Colourimetry	KONE/COL	8565284	N/A	2017/02/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8565397	2017/02/28	2017/02/28	
Total Phosphorus - unpreserved	KONE/COL	8565398	N/A	2017/02/28	
Total Suspended Solids-Low Level	BAL/BAL	8564259	2017/02/28	2017/03/01	

Maxxam ID: QP7748
Sample ID: KZ-26
Matrix: Water

Collected: 2017/02/22
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8564271	N/A	2017/02/28	Name Redacted
Alkalinity - Water	AT/ALK	8564880	2017/02/28	2017/02/28	
Chloride by Automated Colourimetry	KONE/COL	8565283	N/A	2017/02/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8564715	N/A	2017/02/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8564722	N/A	2017/02/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8564587	N/A	2017/02/28	
Conductance - water	AT/ALK	8564884	N/A	2017/02/28	
Fluoride	ISE/ISE	8564951	N/A	2017/02/28	
Hardness Total (calculated as CaCO3)	CALC	8562914	N/A	2017/03/01	
Hardness (calculated as CaCO3)	CALC	8563001	N/A	2017/03/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8565222	N/A	2017/03/01	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QP7748
Sample ID: KZ-26
Matrix: Water

Collected: 2017/02/22
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8565243	2017/03/01	2017/03/01	Name Redacted
Ion Balance	CALC	8563333	N/A	2017/03/01	
Sum of cations, anions	CALC	8563710	N/A	2017/03/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8563307	N/A	2017/03/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8564155	N/A	2017/02/28	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8563309	N/A	2017/03/01	
Elements by ICPMS Low Level (total)	ICP/CRCM	8564173	N/A	2017/02/28	
Ammonia-N (Preserved)	KONE/COL	8564413	N/A	2017/02/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8564914	N/A	2017/02/28	
Nitrite (N) (low level)	TRAA/COL	8564916	N/A	2017/02/28	
Nitrogen - Nitrate (as N)	CALC	8563311	N/A	2017/03/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/02/27	
pH Water	AT/ALK	8564882	N/A	2017/02/28	
Sulphate by Automated Colourimetry	KONE/COL	8565284	N/A	2017/02/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8565397	2017/02/28	2017/02/28	
Total Phosphorus - unpreserved	KONE/COL	8565398	N/A	2017/02/28	
Total Suspended Solids-Low Level	BAL/BAL	8564259	2017/02/28	2017/03/01	

Maxxam ID: QP7749
Sample ID: KZ-28
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8564271	N/A	2017/02/28	Name Redacted
Alkalinity - Water	AT/ALK	8564875	2017/02/28	2017/02/28	
Chloride by Automated Colourimetry	KONE/COL	8565283	N/A	2017/02/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8564715	N/A	2017/02/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8564722	N/A	2017/02/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8564587	N/A	2017/02/28	
Conductance - water	AT/ALK	8564878	N/A	2017/02/28	
Fluoride	ISE/ISE	8564951	N/A	2017/02/28	
Hardness Total (calculated as CaCO3)	CALC	8562914	N/A	2017/03/01	
Hardness (calculated as CaCO3)	CALC	8563001	N/A	2017/03/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8565222	N/A	2017/03/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8565243	2017/03/01	2017/03/01	
Ion Balance	CALC	8563333	N/A	2017/03/01	
Sum of cations, anions	CALC	8563710	N/A	2017/03/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8563307	N/A	2017/03/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8564155	N/A	2017/02/28	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8563309	N/A	2017/03/01	
Elements by ICPMS Low Level (total)	ICP/CRCM	8564173	N/A	2017/02/28	
Ammonia-N (Preserved)	KONE/COL	8564413	N/A	2017/02/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8564914	N/A	2017/02/28	
Nitrite (N) (low level)	TRAA/COL	8564916	N/A	2017/02/28	

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QP7749
Sample ID: KZ-28
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N)	CALC	8563311	N/A	2017/03/01	Name Redacted
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/02/27	
pH Water	AT/ALK	8564877	N/A	2017/02/28	
Sulphate by Automated Colourimetry	KONE/COL	8565284	N/A	2017/02/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8565393	2017/02/28	2017/02/28	
Total Phosphorus - unpreserved	KONE/COL	8565394	N/A	2017/02/28	
Total Suspended Solids-Low Level	BAL/BAL	8564259	2017/02/28	2017/03/01	

Maxxam ID: QP7749 Dup
Sample ID: KZ-28
Matrix: Water

Collected: 2017/02/23
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8565283	N/A	2017/02/28	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8564914	N/A	2017/02/28	
Nitrite (N) (low level)	TRAA/COL	8564916	N/A	2017/02/28	
Sulphate by Automated Colourimetry	KONE/COL	8565284	N/A	2017/02/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8565393	2017/02/28	2017/02/28	
Total Phosphorus - unpreserved	KONE/COL	8565394	N/A	2017/02/28	

Maxxam ID: QP7769
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/02/27
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8564271	N/A	2017/02/28	Name Redacted
Alkalinity - Water	AT/ALK	8564880	2017/02/28	2017/02/28	
Chloride by Automated Colourimetry	KONE/COL	8565283	N/A	2017/02/28	
Cyanide SAD (strong acid dissociable)	TECH/COL	8564715	N/A	2017/02/28	
Cyanide WAD (weak acid dissociable)	TECH/COL	8564722	N/A	2017/02/28	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8564587	N/A	2017/02/28	
Conductance - water	AT/ALK	8564884	N/A	2017/02/28	
Fluoride	ISE/ISE	8564951	N/A	2017/02/28	
Hardness Total (calculated as CaCO3)	CALC	8562914	N/A	2017/03/01	
Hardness (calculated as CaCO3)	CALC	8563001	N/A	2017/03/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8565222	N/A	2017/03/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8565243	2017/03/01	2017/03/01	
Ion Balance	CALC	8563333	N/A	2017/03/01	
Sum of cations, anions	CALC	8563710	N/A	2017/03/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8563307	N/A	2017/03/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8564155	N/A	2017/02/28	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8563309	N/A	2017/03/01	
Elements by ICPMS Low Level (total)	ICP/CRCM	8564173	N/A	2017/03/01	
Ammonia-N (Preserved)	KONE/COL	8564412	N/A	2017/02/28	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QP7769
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/02/27
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8564914	N/A	2017/02/28	Name Redacted	
Nitrite (N) (low level)	TRAA/COL	8564916	N/A	2017/02/28		
Nitrogen - Nitrate (as N)	CALC	8563311	N/A	2017/03/01		
pH Water	AT/ALK	8564882	N/A	2017/02/28		
Sulphate by Automated Colourimetry	KONE/COL	8565284	N/A	2017/02/28		
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8565397	2017/02/28	2017/02/28		
Total Phosphorus - unpreserved	KONE/COL	8565398	N/A	2017/02/28		
Total Suspended Solids-Low Level	BAL/BAL	8564259	2017/02/28	2017/03/01		

Maxxam ID: QP7769 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/02/27
Shipped:
Received: 2017/02/27

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8565222	N/A	2017/03/01	Name Redacted	
Mercury (Total-LowLevel) by CVAF	CV/AF	8565243	2017/03/01	2017/03/01		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

GENERAL COMMENTS

All samples were received at analytical lab past recommended hold time for Nitrate, Nitrite, Total Phosphorus and Dissolved Phosphorus. (M_S)

Sample QP7739 [KZ-18] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample QP7742 [KZ-15] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample QP7736, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8564155	Dissolved Aluminum (Al)	2017/02/28	106	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
8564155	Dissolved Antimony (Sb)	2017/02/28	99	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8564155	Dissolved Arsenic (As)	2017/02/28	105	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
8564155	Dissolved Barium (Ba)	2017/02/28	NC	80 - 120	103	80 - 120	<0.000020	mg/L	2.5	20
8564155	Dissolved Beryllium (Be)	2017/02/28	99	80 - 120	99	80 - 120	<0.000010	mg/L	NC	20
8564155	Dissolved Bismuth (Bi)	2017/02/28	93	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8564155	Dissolved Boron (B)	2017/02/28	99	80 - 120	99	80 - 120	<0.010	mg/L	NC	20
8564155	Dissolved Cadmium (Cd)	2017/02/28	98	80 - 120	100	80 - 120	<0.0000050	mg/L	7.4	20
8564155	Dissolved Chromium (Cr)	2017/02/28	97	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
8564155	Dissolved Cobalt (Co)	2017/02/28	95	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8564155	Dissolved Copper (Cu)	2017/02/28	93	80 - 120	102	80 - 120	<0.000050	mg/L	3.1	20
8564155	Dissolved Iron (Fe)	2017/02/28	99	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20
8564155	Dissolved Lead (Pb)	2017/02/28	95	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8564155	Dissolved Lithium (Li)	2017/02/28	94	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8564155	Dissolved Manganese (Mn)	2017/02/28	97	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8564155	Dissolved Molybdenum (Mo)	2017/02/28	103	80 - 120	99	80 - 120	<0.000050	mg/L	2.1	20
8564155	Dissolved Nickel (Ni)	2017/02/28	96	80 - 120	103	80 - 120	<0.000020	mg/L	2.1	20
8564155	Dissolved Phosphorus (P)	2017/02/28					<0.0020	mg/L	NC	20
8564155	Dissolved Selenium (Se)	2017/02/28	100	80 - 120	104	80 - 120	<0.000040	mg/L	7.5	20
8564155	Dissolved Silicon (Si)	2017/02/28					<0.050	mg/L	5.7	20
8564155	Dissolved Silver (Ag)	2017/02/28	101	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8564155	Dissolved Strontium (Sr)	2017/02/28	NC	80 - 120	99	80 - 120	<0.000050	mg/L	1.7	20
8564155	Dissolved Thallium (Tl)	2017/02/28	94	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8564155	Dissolved Tin (Sn)	2017/02/28	99	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8564155	Dissolved Titanium (Ti)	2017/02/28	99	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8564155	Dissolved Uranium (U)	2017/02/28	98	80 - 120	102	80 - 120	<0.0000020	mg/L	1.4	20
8564155	Dissolved Vanadium (V)	2017/02/28	102	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8564155	Dissolved Zinc (Zn)	2017/02/28	NC	80 - 120	103	80 - 120	<0.00010	mg/L	2.3	20
8564155	Dissolved Zirconium (Zr)	2017/02/28					<0.00010	mg/L	NC	20
8564173	Total Aluminum (Al)	2017/02/28	102	80 - 120	105	80 - 120	<0.00050	mg/L	3.3	20
8564173	Total Antimony (Sb)	2017/02/28	97	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8564173	Total Arsenic (As)	2017/02/28	103	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8564173	Total Barium (Ba)	2017/02/28	NC	80 - 120	101	80 - 120	<0.000020	mg/L	0.97	20
8564173	Total Beryllium (Be)	2017/02/28	96	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8564173	Total Bismuth (Bi)	2017/02/28	91	80 - 120	95	80 - 120	<0.0000050	mg/L	NC	20
8564173	Total Boron (B)	2017/02/28	95	80 - 120	101	80 - 120	<0.010	mg/L	NC	20
8564173	Total Cadmium (Cd)	2017/02/28	99	80 - 120	103	80 - 120	<0.0000050	mg/L	0	20
8564173	Total Chromium (Cr)	2017/02/28	96	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8564173	Total Cobalt (Co)	2017/02/28	92	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8564173	Total Copper (Cu)	2017/02/28	92	80 - 120	99	80 - 120	<0.000050	mg/L	2.8	20
8564173	Total Iron (Fe)	2017/02/28	99	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20
8564173	Total Lead (Pb)	2017/02/28	93	80 - 120	97	80 - 120	<0.0000050	mg/L	9.2	20
8564173	Total Lithium (Li)	2017/02/28	93	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8564173	Total Manganese (Mn)	2017/02/28	93	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8564173	Total Molybdenum (Mo)	2017/02/28	99	80 - 120	102	80 - 120	<0.000050	mg/L	3.9	20
8564173	Total Nickel (Ni)	2017/02/28	94	80 - 120	101	80 - 120	<0.000020	mg/L	1.8	20
8564173	Total Phosphorus (P)	2017/02/28					<0.0020	mg/L	NC	20
8564173	Total Selenium (Se)	2017/02/28	101	80 - 120	105	80 - 120	<0.000040	mg/L	1.0	20
8564173	Total Silicon (Si)	2017/02/28					<0.050	mg/L	1.1	20
8564173	Total Silver (Ag)	2017/02/28	98	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8564173	Total Strontium (Sr)	2017/02/28	NC	80 - 120	101	80 - 120	<0.000050	mg/L	1.1	20
8564173	Total Thallium (Tl)	2017/02/28	93	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8564173	Total Tin (Sn)	2017/02/28	98	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
8564173	Total Titanium (Ti)	2017/02/28	92	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8564173	Total Uranium (U)	2017/02/28	97	80 - 120	101	80 - 120	<0.0000020	mg/L	0.15	20
8564173	Total Vanadium (V)	2017/02/28	98	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8564173	Total Zinc (Zn)	2017/02/28	NC	80 - 120	103	80 - 120	<0.00010	mg/L	3.0	20
8564173	Total Zirconium (Zr)	2017/02/28					<0.00010	mg/L	NC	20
8564253	Total Suspended Solids	2017/03/01			101	80 - 120	<1.0	mg/L		
8564259	Total Suspended Solids	2017/03/01			100	80 - 120	<1.0	mg/L		
8564271	Acidity (pH 4.5)	2017/02/28					<0.50	mg/L	NC	20
8564271	Acidity (pH 8.3)	2017/02/28			101	80 - 120	<0.50	mg/L	1.4	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8564412	Total Ammonia (N)	2017/02/28	107	80 - 120	97	80 - 120	<0.0050	mg/L	6.5	20
8564413	Total Ammonia (N)	2017/02/28	110	80 - 120	99	80 - 120	<0.0050	mg/L	1.9	20
8564477	Total Aluminum (Al)	2017/02/28	97	80 - 120	105	80 - 120	<0.0030	mg/L	18	20
8564477	Total Antimony (Sb)	2017/02/28	110	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8564477	Total Arsenic (As)	2017/02/28	102	80 - 120	94	80 - 120	<0.000020	mg/L	11	20
8564477	Total Barium (Ba)	2017/02/28	NC	80 - 120	99	80 - 120	<0.000050	mg/L	1.6	20
8564477	Total Beryllium (Be)	2017/02/28	119	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8564477	Total Bismuth (Bi)	2017/02/28	100	80 - 120	92	80 - 120	<0.000010	mg/L	NC	20
8564477	Total Boron (B)	2017/02/28	113	80 - 120	102	80 - 120	<0.010	mg/L	NC	20
8564477	Total Cadmium (Cd)	2017/02/28	99	80 - 120	94	80 - 120	<0.0000050	mg/L	NC	20
8564477	Total Chromium (Cr)	2017/02/28	97	80 - 120	95	80 - 120	<0.00010	mg/L	NC	20
8564477	Total Cobalt (Co)	2017/02/28	96	80 - 120	94	80 - 120	<0.000010	mg/L	13	20
8564477	Total Copper (Cu)	2017/02/28	130 (1)	80 - 120	97	80 - 120	<0.00010	mg/L	0.51	20
8564477	Total Iron (Fe)	2017/02/28	NC	80 - 120	100	80 - 120	<0.0050	mg/L	3.7	20
8564477	Total Lead (Pb)	2017/02/28	105	80 - 120	94	80 - 120	<0.000020	mg/L	2.2	20
8564477	Total Lithium (Li)	2017/02/28	117	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8564477	Total Manganese (Mn)	2017/02/28	101	80 - 120	96	80 - 120	<0.00010	mg/L	7.5	20
8564477	Total Molybdenum (Mo)	2017/02/28	112	80 - 120	97	80 - 120	<0.000050	mg/L	0.87	20
8564477	Total Nickel (Ni)	2017/02/28	105	80 - 120	93	80 - 120	<0.00010	mg/L	1.6	20
8564477	Total Phosphorus (P)	2017/02/28					<0.0050	mg/L		
8564477	Total Selenium (Se)	2017/02/28	104	80 - 120	98	80 - 120	<0.000040	mg/L	NC	20
8564477	Total Silicon (Si)	2017/02/28					<0.050	mg/L	3.2	20
8564477	Total Silver (Ag)	2017/02/28	107	80 - 120	97	80 - 120	<0.000010	mg/L	NC	20
8564477	Total Strontium (Sr)	2017/02/28	NC	80 - 120	96	80 - 120	0.000061, RDL=0.000050	mg/L	1.6	20
8564477	Total Thallium (Tl)	2017/02/28	100	80 - 120	91	80 - 120	<0.0000020	mg/L	NC	20
8564477	Total Tin (Sn)	2017/02/28	105	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
8564477	Total Titanium (Ti)	2017/02/28	119	80 - 120	103	80 - 120	<0.0020	mg/L	NC	20
8564477	Total Uranium (U)	2017/02/28	105	80 - 120	95	80 - 120	<0.0000050	mg/L	1.2	20
8564477	Total Vanadium (V)	2017/02/28	101	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
8564477	Total Zinc (Zn)	2017/02/28	107	80 - 120	94	80 - 120	<0.0010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8564477	Total Zirconium (Zr)	2017/02/28					<0.00010	mg/L	NC	20
8564587	Dissolved Organic Carbon (C)	2017/02/28	101	80 - 120	103	80 - 120	<0.50	mg/L	NC	20
8564715	Strong Acid Dissoc. Cyanide (CN)	2017/02/28	106	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8564722	Weak Acid Dissoc. Cyanide (CN)	2017/02/28	108	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
8564852	Dissolved Chloride (Cl)	2017/02/28	118	80 - 120	98	80 - 120	0.60, RDL=0.50	mg/L	NC	20
8564853	Dissolved Sulphate (SO4)	2017/02/28	NC	80 - 120	97	80 - 120	<0.50	mg/L	1.7	20
8564875	Alkalinity (PP as CaCO3)	2017/03/01					<0.50	mg/L	NC	20
8564875	Alkalinity (Total as CaCO3)	2017/03/01	NC	80 - 120	97	80 - 120	<0.50	mg/L	0.68	20
8564875	Bicarbonate (HCO3)	2017/03/01					<0.50	mg/L	0.68	20
8564875	Carbonate (CO3)	2017/03/01					<0.50	mg/L	NC	20
8564875	Hydroxide (OH)	2017/03/01					<0.50	mg/L	NC	20
8564877	pH	2017/02/28			101	97 - 103			0.13	N/A
8564878	Conductivity	2017/02/28			99	80 - 120	<1.0	uS/cm		
8564880	Alkalinity (PP as CaCO3)	2017/02/28					<0.50	mg/L	NC	20
8564880	Alkalinity (Total as CaCO3)	2017/02/28	NC	80 - 120	99	80 - 120	<0.50	mg/L	0.90	20
8564880	Bicarbonate (HCO3)	2017/02/28					<0.50	mg/L	0.90	20
8564880	Carbonate (CO3)	2017/02/28					<0.50	mg/L	NC	20
8564880	Hydroxide (OH)	2017/02/28					<0.50	mg/L	NC	20
8564882	pH	2017/02/28			101	97 - 103			1.3	N/A
8564884	Conductivity	2017/02/28			100	80 - 120	<1.0	uS/cm	0	20
8564912	Nitrate plus Nitrite (N)	2017/02/28	104	80 - 120	106	80 - 120	<0.0020	mg/L	4.1	25
8564913	Nitrite (N)	2017/02/28	98	80 - 120	99	80 - 120	<0.0020	mg/L	NC	25
8564914	Nitrate plus Nitrite (N)	2017/02/28	104	80 - 120	108	80 - 120	<0.0020	mg/L	0.77	25
8564916	Nitrite (N)	2017/02/28	99	80 - 120	101	80 - 120	<0.0020	mg/L	NC	25
8564951	Fluoride (F)	2017/02/28	94	80 - 120	102	80 - 120	0.013, RDL=0.010	mg/L	NC	20
8565222	Dissolved Mercury (Hg)	2017/03/01	98	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8565243	Total Mercury (Hg)	2017/03/01	98	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8565283	Dissolved Chloride (Cl)	2017/02/28	106	80 - 120	99	80 - 120	<0.50	mg/L	NC	20
8565284	Dissolved Sulphate (SO4)	2017/02/28	NC	80 - 120	96	80 - 120	<0.50	mg/L	0.54	20
8565393	Dissolved Phosphorus (P)	2017/02/28	95	80 - 120	102	80 - 120	<0.0020	mg/L	0.26	20

Maxxam Job #: B714107
Report Date: 2017/03/03

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8565394	Total Phosphorus (P)	2017/02/28	89	80 - 120	102	80 - 120	<0.0020	mg/L	0.050	20
8565397	Dissolved Phosphorus (P)	2017/02/28	91	80 - 120	93	80 - 120	<0.0020	mg/L	NC	20
8565398	Total Phosphorus (P)	2017/02/28	94	80 - 120	93	80 - 120	<0.0020	mg/L	NC	20
8565984	Dissolved Phosphorus (P)	2017/03/02	104	80 - 120	98	80 - 120	<0.0020	mg/L	NC	20
8565986	Total Phosphorus (P)	2017/03/02	91	80 - 120	93	80 - 120	<0.0020	mg/L	0.51	20
8566204	Dissolved Zinc (Zn)	2017/03/02			93	80 - 120	<0.00010	mg/L		
8566972	Total Ammonia (N)	2017/03/02	NC	80 - 120	95	80 - 120	<0.0050	mg/L	1.5	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B714107
Report Date: 2017/03/03

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

CO 08435806

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Andrew MacPhail	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		23-Feb-17	16:20	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
2	KZ-6		23-Feb-17	14:50	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3	KZ-7		23-Feb-17	13:55	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
4	KZ-9		23-Feb-17	11:35	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5	KZ-18		23-Feb-17	12:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
6	KZ-37		23-Feb-17	11:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
7	KZ-13		22-Feb-17	15:15	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
8	KZ-15		23-Feb-17	8:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
9	KZ-16		23-Feb-17	9:05	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
10	KZ-17		23-Feb-17	9:55	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
11	KZ-19		22-Feb-17	15:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		
NA		
NA		

COOLING MEDIA PRESENT Y / N

COMMENTS

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Andrew MacPhail	24/02/2017	12:00	Laurel Berthier	2017/02/27	10:30

B714107_COC

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

C 08435805

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Andrew MacPhail	Date Required:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		
NA		
NA		

COOLING MEDIA PRESENT Y / N

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-21		22-Feb-17	13:55	Water	x	x	x	x	x	x	x	x	x	x	x	x				11		
2	KZ-22		22-Feb-17	13:20	Water	x	x	x	x	x	x	x	x	x	x	x	x				11		
3	KZ-26		22-Feb-17	12:15	Water	x	x	x	x	x	x	x	x	x	x	x	x				11		
4	KZ-28		23-Feb-17	11:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11		
5	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x				11		
6																							
7																							
8																							
9																							
10																							

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Andrew MacPhail	24/02/2017	12:00	Laurel Berthier	2017/02/27	10:30

B714107_COC

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08437329, 08437330

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/04/06
Report #: R2366612
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B721739
Received: 2017/03/23, 11:50

Sample Matrix: Water
Samples Received: 16

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	16	N/A	2017/03/25	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	16	2017/03/25	2017/03/25	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	16	N/A	2017/03/27	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	16	N/A	2017/03/27	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	16	N/A	2017/03/27	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	15	N/A	2017/03/27	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2017/03/25	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	16	N/A	2017/03/25	BBY6SOP-00026	SM 22 2510 B m
Fluoride	10	N/A	2017/03/27	BBY6SOP-00048	SM 22 4500-F C m
Fluoride	6	N/A	2017/03/28	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	16	N/A	2017/03/29	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	16	N/A	2017/03/28	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	16	N/A	2017/03/27	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	16	2017/03/28	2017/03/28	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance (as Cations/Anions Ratio)	16	N/A	2017/03/28	BBY WI-00033	Auto Calc
Sum of cations, anions	16	N/A	2017/03/28	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	16	N/A	2017/03/28	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	16	N/A	2017/03/27	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	16	N/A	2017/03/29	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	15	N/A	2017/03/28	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	1	N/A	2017/03/29	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	15	N/A	2017/03/25	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	1	N/A	2017/03/30	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	16	N/A	2017/03/25	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	16	N/A	2017/03/25	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N)	16	N/A	2017/03/28	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	2	N/A	2017/03/25	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	1	N/A	2017/03/27	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	12	N/A	2017/03/29	BBY7 WI-00004	BCMOE Reqs 08/14

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08437329, 08437330

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/04/06
Report #: R2366612
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B721739
Received: 2017/03/23, 11:50

Sample Matrix: Water
Samples Received: 16

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
pH Water (2)	16	N/A	2017/03/25	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	14	N/A	2017/03/27	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	2	N/A	2017/03/28	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	10	2017/03/25	2017/03/25	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	6	2017/03/27	2017/03/27	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	10	N/A	2017/03/25	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	6	N/A	2017/03/27	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	16	2017/03/27	2017/03/28	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08437329, 08437330

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/04/06
Report #: R2366612
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B721739
Received: 2017/03/23, 11:50

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QT8603			QT8604			QT8605		
Sampling Date		2017/03/21 17:30			2017/03/21 15:10			2017/03/21 13:50		
COC Number		08437329			08437329			08437329		
	UNITS	KZ-2	RDL	QC Batch	KZ-6	RDL	QC Batch	KZ-7	RDL	QC Batch
Calculated Parameters										
Anion Sum	meq/L	3.2	N/A	8586855	3.6	N/A	8586855	3.9	N/A	8586855
Cation Sum	meq/L	3.2	N/A	8586855	3.6	N/A	8586855	4.3	N/A	8586855
Filter and HNO3 Preservation	N/A	FIELD		ONSITE	FIELD		ONSITE	FIELD		ONSITE
Ion Balance	N/A	1.0	0.010	8586748	1.0	0.010	8586748	1.1	0.010	8586748
Nitrate (N)	mg/L	0.180	0.0020	8586856	0.214	0.0020	8586856	0.163	0.0020	8586856
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8588301	<0.00050	0.00050	8588301	<0.00050	0.00050	8588301
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8588304	<0.00050	0.00050	8588304	<0.00050	0.00050	8588304
Fluoride (F)	mg/L	0.050	0.010	8589370	0.074	0.010	8589370	0.079	0.010	8589370
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8588400	0.73	0.50	8588398	<0.50	0.50	8588398
Acidity (pH 4.5)	mg/L	<0.50	0.50	8587259	<0.50	0.50	8587259	<0.50	0.50	8587259
Alkalinity (Total as CaCO3)	mg/L	90.6	0.50	8587275	154	0.50	8587275	159	0.50	8587275
Acidity (pH 8.3)	mg/L	0.97	0.50	8587259	0.79	0.50	8587259	0.67	0.50	8587259
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8587275	<0.50	0.50	8587275	<0.50	0.50	8587275
Bicarbonate (HCO3)	mg/L	110	0.50	8587275	188	0.50	8587275	194	0.50	8587275
Carbonate (CO3)	mg/L	<0.50	0.50	8587275	<0.50	0.50	8587275	<0.50	0.50	8587275
Hydroxide (OH)	mg/L	<0.50	0.50	8587275	<0.50	0.50	8587275	<0.50	0.50	8587275
Anions										
Dissolved Sulphate (SO4)	mg/L	63.6	0.50	8589098	24.8	0.50	8589098	35.2	0.50	8589098
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8589097	0.50	0.50	8589097	<0.50	0.50	8589097
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0022 (1)	0.0020	8587425	0.0034 (1)	0.0020	8587425	0.0035 (1)	0.0020	8587422
Total Ammonia (N)	mg/L	0.023	0.0050	8587354	0.026	0.0050	8587354	0.037	0.0050	8587354
Nitrate plus Nitrite (N)	mg/L	0.180 (2)	0.0020	8587507	0.214 (2)	0.0020	8587507	0.163 (2)	0.0020	8587507
Nitrite (N)	mg/L	<0.0020 (2)	0.0020	8587508	<0.0020 (2)	0.0020	8587508	<0.0020 (2)	0.0020	8587508
Total Phosphorus (P)	mg/L	0.0030 (1)	0.0020	8587433	0.0026 (1)	0.0020	8587427	0.0022 (1)	0.0020	8587423
Physical Properties										
Conductivity	uS/cm	301	1.0	8587274	334	1.0	8587274	364	1.0	8587274
pH	pH	7.82		8587273	8.02		8587273	8.06		8587273

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.
(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QT8603			QT8604			QT8605		
Sampling Date		2017/03/21 17:30			2017/03/21 15:10			2017/03/21 13:50		
COC Number		08437329			08437329			08437329		
	UNITS	KZ-2	RDL	QC Batch	KZ-6	RDL	QC Batch	KZ-7	RDL	QC Batch
Physical Properties										
Total Suspended Solids	mg/L	<1.0	1.0	8587819	<1.1 (1)	1.1	8587819	<1.0	1.0	8587819

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QT8606		QT8607			QT8608		
Sampling Date		2017/03/21 12:00		2017/03/20 15:45			2017/03/21 11:00		
COC Number		08437329		08437329			08437329		
	UNITS	KZ-9	QC Batch	KZ-13	RDL	QC Batch	KZ-37	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	4.6	8586855	2.5	N/A	8586855	4.6	N/A	8586855
Cation Sum	meq/L	4.6	8586855	2.6	N/A	8586855	4.5	N/A	8586855
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD		ONSITE	FIELD		ONSITE
Ion Balance	N/A	1.0	8586748	1.0	0.010	8586748	0.98	0.010	8586748
Nitrate (N)	mg/L	0.221	8586856	0.150	0.0020	8586856	0.229	0.0020	8586856
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8588301	<0.00050	0.00050	8588301	<0.00050	0.00050	8588301
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8588304	<0.00050	0.00050	8588304	<0.00050	0.00050	8588304
Fluoride (F)	mg/L	0.100	8589370	0.058	0.010	8589743	0.098	0.010	8589370
Dissolved Organic Carbon (C)	mg/L	1.11	8588400	3.37	0.50	8588398	0.64	0.50	8588398
Acidity (pH 4.5)	mg/L	<0.50	8587259	<0.50	0.50	8587260	<0.50	0.50	8587259
Alkalinity (Total as CaCO3)	mg/L	193	8587275	104	0.50	8587283	198	0.50	8587275
Acidity (pH 8.3)	mg/L	13.5	8587259	1.22	0.50	8587260	12.6	0.50	8587259
Alkalinity (PP as CaCO3)	mg/L	<0.50	8587275	<0.50	0.50	8587283	<0.50	0.50	8587275
Bicarbonate (HCO3)	mg/L	235	8587275	127	0.50	8587283	242	0.50	8587275
Carbonate (CO3)	mg/L	<0.50	8587275	<0.50	0.50	8587283	<0.50	0.50	8587275
Hydroxide (OH)	mg/L	<0.50	8587275	<0.50	0.50	8587283	<0.50	0.50	8587275
Anions									
Dissolved Sulphate (SO4)	mg/L	33.1	8589098	19.9	0.50	8589597	30.3	0.50	8589098
Dissolved Chloride (Cl)	mg/L	1.5	8589097	0.87	0.50	8589108	0.60	0.50	8589097
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0054 (1)	8587425	0.0114 (1)	0.0020	8587657	0.0176 (1)	0.0020	8587422
Total Ammonia (N)	mg/L	0.047	8587354	0.067	0.0050	8587354	0.060	0.0050	8587353
Nitrate plus Nitrite (N)	mg/L	0.221 (2)	8587507	0.150 (2)	0.0020	8587509	0.229 (2)	0.0020	8587507
Nitrite (N)	mg/L	<0.0020 (2)	8587508	<0.0020 (2)	0.0020	8587510	<0.0020 (2)	0.0020	8587508
Total Phosphorus (P)	mg/L	0.0037 (1)	8587427	0.0137 (1)	0.0020	8587658	0.0157 (1)	0.0020	8587423
Physical Properties									
Conductivity	uS/cm	423	8587274	245	1.0	8587289	426	1.0	8587274
pH	pH	7.32	8587273	7.95		8587290	7.44		8587273

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.
(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QT8606		QT8607			QT8608		
Sampling Date		2017/03/21 12:00		2017/03/20 15:45			2017/03/21 11:00		
COC Number		08437329		08437329			08437329		
	UNITS	KZ-9	QC Batch	KZ-13	RDL	QC Batch	KZ-37	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	1.8	8587819	1.8	1.0	8587819	1.4 (1)	1.1	8587819

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QT8618		QT8620	QT8621		QT8622		
Sampling Date		2017/03/21 08:05		2017/03/21 12:35	2017/03/21 09:20		2017/03/21 10:00		
COC Number		08437329		08437329	08437329		08437329		
	UNITS	KZ-15	QC Batch	KZ-18	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	5.8	8586855	4.6	6.0	8586855	6.1	N/A	8586855
Cation Sum	meq/L	5.7	8586855	5.0	6.6	8586855	5.5	N/A	8586855
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.98	8586748	1.1	1.1	8586748	0.90	0.010	8586748
Nitrate (N)	mg/L	0.248	8586856	0.251	0.313	8586856	0.322	0.0020	8586856
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8588301	<0.00050	<0.00050	8588301	<0.00050	0.00050	8588301
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8588304	<0.00050	<0.00050	8588304	<0.00050	0.00050	8588304
Fluoride (F)	mg/L	0.120	8589370	0.084	0.091	8589370	0.069	0.010	8589370
Dissolved Organic Carbon (C)	mg/L	0.58	8588400	<0.50	0.95	8588400	1.68	0.50	8588398
Acidity (pH 4.5)	mg/L	<0.50	8587259	<0.50	<0.50	8587259	<0.50	0.50	8587259
Alkalinity (Total as CaCO3)	mg/L	247	8587275	205	256	8587275	258	0.50	8587275
Acidity (pH 8.3)	mg/L	7.80	8587259	4.66	13.1	8587259	9.70	0.50	8587259
Alkalinity (PP as CaCO3)	mg/L	<0.50	8587275	<0.50	<0.50	8587275	<0.50	0.50	8587275
Bicarbonate (HCO3)	mg/L	302	8587275	251	312	8587275	315	0.50	8587275
Carbonate (CO3)	mg/L	<0.50	8587275	<0.50	<0.50	8587275	<0.50	0.50	8587275
Hydroxide (OH)	mg/L	<0.50	8587275	<0.50	<0.50	8587275	<0.50	0.50	8587275
Anions									
Dissolved Sulphate (SO4)	mg/L	38.7	8589098	22.1	42.4	8589098	41.8	0.50	8589098
Dissolved Chloride (Cl)	mg/L	0.72	8589097	0.56	0.75	8589097	0.72	0.50	8589097
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0039 (1)	8587422	0.0629 (1)	0.0029 (1)	8587422	0.0035 (1)	0.0020	8587422
Total Ammonia (N)	mg/L	0.031	8587354	0.019	0.040	8587355	0.031	0.0050	8587354
Nitrate plus Nitrite (N)	mg/L	0.248 (2)	8587507	0.251 (2)	0.313 (2)	8587507	0.322 (2)	0.0020	8587507
Nitrite (N)	mg/L	<0.0020 (2)	8587508	<0.0020 (2)	<0.0020 (2)	8587508	<0.0020 (2)	0.0020	8587508
Total Phosphorus (P)	mg/L	0.0050 (1)	8587423	0.0630 (1)	0.0026 (1)	8587423	0.0038 (1)	0.0020	8587423
Physical Properties									
Conductivity	uS/cm	527	8587274	419	552	8587274	552	1.0	8587274
pH	pH	7.82	8587273	7.80	7.56	8587273	7.74		8587273

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.
(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QT8618		QT8620	QT8621		QT8622		
Sampling Date		2017/03/21 08:05		2017/03/21 12:35	2017/03/21 09:20		2017/03/21 10:00		
COC Number		08437329		08437329	08437329		08437329		
	UNITS	KZ-15	QC Batch	KZ-18	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	1.0	8587819	2.0	<1.0	8587819	<1.0	1.0	8587819
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QT8623		QT8624			QT8625		
Sampling Date		2017/03/20 16:30		2017/03/20 13:35			2017/03/20 13:00		
COC Number		08437329		08437330			08437330		
	UNITS	KZ-19	QC Batch	KZ-21	RDL	QC Batch	KZ-22	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	0.00070	8586855	8.1	N/A	8586855	7.2	N/A	8586855
Cation Sum	meq/L	0.0082	8586855	8.0	N/A	8586855	7.1	N/A	8586855
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD		ONSITE	FIELD		ONSITE
Ion Balance	N/A	NC	8586748	0.99	0.010	8586748	1.0	0.010	8586748
Nitrate (N)	mg/L	<0.0020	8586856	0.218	0.0020	8586856	0.267	0.0020	8586856
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8588301	<0.00050	0.00050	8588301	<0.00050	0.00050	8588301
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8588304	<0.00050	0.00050	8588304	<0.00050	0.00050	8588304
Fluoride (F)	mg/L	0.014	8589741	0.230	0.010	8589743	0.180	0.010	8589743
Dissolved Organic Carbon (C)	mg/L	<0.50	8588400	3.02	0.50	8588400	1.28	0.50	8588400
Acidity (pH 4.5)	mg/L	<0.50	8587260	<0.50	0.50	8587260	<0.50	0.50	8587260
Alkalinity (Total as CaCO3)	mg/L	<0.50	8587283	335	0.50	8587283	303	0.50	8587283
Acidity (pH 8.3)	mg/L	<0.50	8587260	17.1	0.50	8587260	12.4	0.50	8587260
Alkalinity (PP as CaCO3)	mg/L	<0.50	8587283	<0.50	0.50	8587283	<0.50	0.50	8587283
Bicarbonate (HCO3)	mg/L	<0.50	8587283	409	0.50	8587283	369	0.50	8587283
Carbonate (CO3)	mg/L	<0.50	8587283	<0.50	0.50	8587283	<0.50	0.50	8587283
Hydroxide (OH)	mg/L	<0.50	8587283	<0.50	0.50	8587283	<0.50	0.50	8587283
Anions									
Dissolved Sulphate (SO4)	mg/L	<0.50	8589104	48.4	0.50	8589597	50.3	0.50	8589110
Dissolved Chloride (Cl)	mg/L	<0.50	8589100	13	0.50	8589108	0.78	0.50	8589108
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	8587657	0.0222 (1)	0.0020	8587657	0.0076 (1)	0.0020	8587657
Total Ammonia (N)	mg/L	<0.0050	8591567	0.14	0.0050	8587354	0.074	0.0050	8587355
Nitrate plus Nitrite (N)	mg/L	<0.0020 (2)	8587509	0.220 (2)	0.0020	8587509	0.267 (2)	0.0020	8587509
Nitrite (N)	mg/L	<0.0020 (2)	8587510	0.0022 (2)	0.0020	8587510	<0.0020 (2)	0.0020	8587510
Total Phosphorus (P)	mg/L	<0.0020 (1)	8587658	0.0229 (1)	0.0020	8587658	0.0083 (1)	0.0020	8587658
Physical Properties									
Conductivity	uS/cm	1.3	8587289	727	1.0	8587289	636	1.0	8587289
pH	pH	5.24	8587290	7.72		8587290	7.83		8587290

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.
(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QT8623		QT8624			QT8625		
Sampling Date		2017/03/20 16:30		2017/03/20 13:35			2017/03/20 13:00		
COC Number		08437329		08437330			08437330		
	UNITS	KZ-19	QC Batch	KZ-21	RDL	QC Batch	KZ-22	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8587819	3.6	1.0	8587819	1.4	1.1	8587819
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QT8626		QT8627		QT8628		
Sampling Date		2017/03/20 11:40		2017/03/21 11:30		2017/03/23		
COC Number		08437330		08437330		08437330		
	UNITS	KZ-26	QC Batch	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	6.8	8586855	4.6	8586855	0.00060	N/A	8586855
Cation Sum	meq/L	6.8	8586855	4.6	8586855	0.0055	N/A	8586855
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE			ONSITE
Ion Balance	N/A	1.0	8586748	1.0	8586748	NC	0.010	8586748
Nitrate (N)	mg/L	0.308	8586856	0.232	8586856	<0.0020	0.0020	8586856
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8588301	<0.00050	8588301	<0.00050	0.00050	8588301
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8588304	<0.00050	8588304	<0.00050	0.00050	8588304
Fluoride (F)	mg/L	0.130	8589741	0.097	8589370	0.012	0.010	8589743
Dissolved Organic Carbon (C)	mg/L	1.38	8588400	1.04	8588400	<0.50	0.50	8587387
Acidity (pH 4.5)	mg/L	<0.50	8587260	<0.50	8587259	<0.50	0.50	8587260
Alkalinity (Total as CaCO3)	mg/L	283	8587283	198	8587276	<0.50	0.50	8587283
Acidity (pH 8.3)	mg/L	<0.50	8587260	4.52	8587259	<0.50	0.50	8587260
Alkalinity (PP as CaCO3)	mg/L	<0.50	8587283	<0.50	8587276	<0.50	0.50	8587283
Bicarbonate (HCO3)	mg/L	345	8587283	241	8587276	<0.50	0.50	8587283
Carbonate (CO3)	mg/L	<0.50	8587283	<0.50	8587276	<0.50	0.50	8587283
Hydroxide (OH)	mg/L	<0.50	8587283	<0.50	8587276	<0.50	0.50	8587283
Anions								
Dissolved Sulphate (SO4)	mg/L	51.0	8589104	30.8	8589098	<0.50	0.50	8589110
Dissolved Chloride (Cl)	mg/L	0.82	8589100	<0.50	8589097	<0.50	0.50	8589108
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0020 (1)	8587657	0.0157 (1)	8587422	<0.0020 (1)	0.0020	8587657
Total Ammonia (N)	mg/L	0.044	8587355	0.042	8587355	<0.0050	0.0050	8587355
Nitrate plus Nitrite (N)	mg/L	0.308 (2)	8587509	0.232 (2)	8587507	<0.0020	0.0020	8587509
Nitrite (N)	mg/L	<0.0020 (2)	8587510	<0.0020 (2)	8587508	<0.0020	0.0020	8587510
Total Phosphorus (P)	mg/L	0.0037 (1)	8587658	0.0161 (1)	8587423	<0.0020 (1)	0.0020	8587658
Physical Properties								
Conductivity	uS/cm	594	8587289	430	8587277	1.1	1.0	8587289
pH	pH	8.23	8587290	7.86	8587278	5.26		8587290

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.
(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QT8626		QT8627		QT8628		
Sampling Date		2017/03/20 11:40		2017/03/21 11:30		2017/03/23		
COC Number		08437330		08437330		08437330		
	UNITS	KZ-26	QC Batch	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	1.1	8587819	1.2	8587819	<1.0	1.0	8587819
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QT8603	QT8604	QT8605	QT8606	QT8607		
Sampling Date		2017/03/21 17:30	2017/03/21 15:10	2017/03/21 13:50	2017/03/21 12:00	2017/03/20 15:45		
COC Number		08437329	08437329	08437329	08437329	08437329		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-9	KZ-13	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	155	179	207	225	121	0.50	8586339
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8588277
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00156	0.00152	0.00093	0.00196	0.00345	0.00050	8588092
Dissolved Antimony (Sb)	mg/L	0.000043	0.000047	0.000032	0.000046	0.000101	0.000020	8588092
Dissolved Arsenic (As)	mg/L	0.000046	0.000067	0.000101	0.000220	0.000183	0.000020	8588092
Dissolved Barium (Ba)	mg/L	0.0822	0.0503	0.0975	0.112	0.135	0.000020	8588092
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8588092
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8588092
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8588092
Dissolved Cadmium (Cd)	mg/L	0.000270	0.0000210	0.0000840	0.0000580	0.0000300	0.0000050	8588092
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8588092
Dissolved Cobalt (Co)	mg/L	0.0000060	0.0000050	0.0000460	0.000180	0.0000490	0.0000050	8588092
Dissolved Copper (Cu)	mg/L	0.000487	0.000128	0.000178	0.000231	0.000507	0.000050	8588092
Dissolved Iron (Fe)	mg/L	<0.0010	0.0025	0.0210	0.257	0.0476	0.0010	8588092
Dissolved Lead (Pb)	mg/L	0.0000200	0.0000050	<0.0000050	0.0000120	0.0000580	0.0000050	8588092
Dissolved Lithium (Li)	mg/L	0.00161	0.00077	0.00399	0.00563	0.00236	0.00050	8588092
Dissolved Manganese (Mn)	mg/L	0.000051	0.000465	0.0611	0.135	0.117	0.000050	8588092
Dissolved Molybdenum (Mo)	mg/L	0.000708	0.000672	0.000664	0.000755	0.000858	0.000050	8588092
Dissolved Nickel (Ni)	mg/L	0.000304	0.000130	0.000394	0.000471	0.000419	0.000020	8588092
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0030	0.0052	<0.0020	0.0059	0.0020	8588092
Dissolved Selenium (Se)	mg/L	0.00262	0.00136	0.000951	0.00118	0.000345	0.000040	8588092
Dissolved Silicon (Si)	mg/L	2.27	2.69	3.42	3.59	4.09	0.050	8588092
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8588092
Dissolved Strontium (Sr)	mg/L	0.155	0.166	0.210	0.242	0.116	0.000050	8588092
Dissolved Thallium (Tl)	mg/L	0.0000040	<0.0000020	0.0000020	<0.0000020	0.0000020	0.0000020	8588092
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8588092
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8588092
Dissolved Uranium (U)	mg/L	0.00521	0.00128	0.00136	0.00177	0.00188	0.0000020	8588092
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8588092
RDL = Reportable Detection Limit								

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QT8603	QT8604	QT8605	QT8606	QT8607		
Sampling Date		2017/03/21 17:30	2017/03/21 15:10	2017/03/21 13:50	2017/03/21 12:00	2017/03/20 15:45		
COC Number		08437329	08437329	08437329	08437329	08437329		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-9	KZ-13	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0349	0.00074	0.0437	0.0163	0.0119	0.00010	8588092
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8588092
Dissolved Calcium (Ca)	mg/L	50.5	60.0	69.2	75.9	41.5	0.050	8586916
Dissolved Magnesium (Mg)	mg/L	7.00	7.19	8.32	8.51	4.34	0.050	8586916
Dissolved Potassium (K)	mg/L	2.30	1.01	1.95	1.85	2.52	0.050	8586916
Dissolved Sodium (Na)	mg/L	0.909	0.746	1.41	1.65	1.63	0.050	8586916
Dissolved Sulphur (S)	mg/L	19.9	7.5	11.2	10.8	5.5	3.0	8586916

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QT8608	QT8618	QT8620	QT8621	QT8622		
Sampling Date		2017/03/21 11:00	2017/03/21 08:05	2017/03/21 12:35	2017/03/21 09:20	2017/03/21 10:00		
COC Number		08437329	08437329	08437329	08437329	08437329		
	UNITS	KZ-37	KZ-15	KZ-18	KZ-16	KZ-17	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	222	278	246	324	269	0.50	8586339
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8588277
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00177	0.00074	0.00188	0.00082	0.00253 (1)	0.00050	8588092
Dissolved Antimony (Sb)	mg/L	0.000034	0.000044	0.000058	0.000022	0.000037	0.000020	8588092
Dissolved Arsenic (As)	mg/L	0.000382	0.000359	0.00103	0.000144	0.000182	0.000020	8588092
Dissolved Barium (Ba)	mg/L	0.0924	0.0987	0.0575	0.0950	0.103	0.000020	8588092
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8588092
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8588092
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8588092
Dissolved Cadmium (Cd)	mg/L	0.0000570	0.0000650	0.0000580	0.0000450	0.0000340	0.0000050	8588092
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00014	<0.00010	<0.00010	0.00010	8588092
Dissolved Cobalt (Co)	mg/L	0.000110	0.0000400	0.0000480	0.0000970	<0.0000050	0.0000050	8588092
Dissolved Copper (Cu)	mg/L	0.000156	0.000191	0.000087	0.000189	0.000263	0.000050	8588092
Dissolved Iron (Fe)	mg/L	0.189	0.0069	0.0668	0.0095	<0.0010	0.0010	8588092
Dissolved Lead (Pb)	mg/L	0.0000060	<0.0000050	0.0000050	0.0000060	0.0000060	0.0000050	8588092
Dissolved Lithium (Li)	mg/L	0.00447	0.00439	0.00239	0.00401	0.00328	0.00050	8588092
Dissolved Manganese (Mn)	mg/L	0.0992	0.0623	0.0226	0.0356	0.000178	0.000050	8588092
Dissolved Molybdenum (Mo)	mg/L	0.00104	0.00157	0.00181	0.000475	0.000597	0.000050	8588092
Dissolved Nickel (Ni)	mg/L	0.000479	0.00108	0.000364	0.00124	0.000605	0.000020	8588092
Dissolved Phosphorus (P)	mg/L	0.0135	<0.0020	0.0627	<0.0020	<0.0020	0.0020	8588092
Dissolved Selenium (Se)	mg/L	0.00120	0.00146	0.00150	0.00180	0.00146	0.000040	8588092
Dissolved Silicon (Si)	mg/L	3.49	3.84	3.28	3.93	4.04	0.050	8588092
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8588092
Dissolved Strontium (Sr)	mg/L	0.210	0.256	0.194	0.284	0.273	0.000050	8588092
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8588092
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8588092
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8588092
Dissolved Uranium (U)	mg/L	0.00218	0.00555	0.00312	0.00286	0.00342	0.0000020	8588092

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QT8608	QT8618	QT8620	QT8621	QT8622		
Sampling Date		2017/03/21 11:00	2017/03/21 08:05	2017/03/21 12:35	2017/03/21 09:20	2017/03/21 10:00		
COC Number		08437329	08437329	08437329	08437329	08437329		
	UNITS	KZ-37	KZ-15	KZ-18	KZ-16	KZ-17	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8588092
Dissolved Zinc (Zn)	mg/L	0.00988	0.00853	0.00196	0.00139	0.00238	0.00010	8588092
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8588092
Dissolved Calcium (Ca)	mg/L	70.9	81.7	66.6	99.1	78.6	0.050	8586916
Dissolved Magnesium (Mg)	mg/L	10.9	18.1	19.2	18.7	17.6	0.050	8586916
Dissolved Potassium (K)	mg/L	1.40	1.46	0.753	1.49	1.37	0.050	8586916
Dissolved Sodium (Na)	mg/L	1.29	1.50	0.981	1.63	1.49	0.050	8586916
Dissolved Sulphur (S)	mg/L	8.6	11.7	7.5	14.2	12.7	3.0	8586916

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QT8623	QT8624	QT8625	QT8626	QT8627		
Sampling Date		2017/03/20 16:30	2017/03/20 13:35	2017/03/20 13:00	2017/03/20 11:40	2017/03/21 11:30		
COC Number		08437329	08437330	08437330	08437330	08437330		
	UNITS	KZ-19	KZ-21	KZ-22	KZ-26	KZ-28	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	<0.50	379	349	331	224	0.50	8586339
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8588277
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	<0.00050	0.00137	0.00069	0.00064	0.00162	0.00050	8588092
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000039	0.000039	0.000062	0.000049	0.000020	8588092
Dissolved Arsenic (As)	mg/L	<0.000020	0.000535	0.000429	0.000341	0.000411	0.000020	8588092
Dissolved Barium (Ba)	mg/L	<0.000020	0.0867	0.0919	0.0957	0.0899	0.000020	8588092
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8588092
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8588092
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8588092
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.0000170	0.0000200	0.0000110	0.0000540	0.0000050	8588092
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8588092
Dissolved Cobalt (Co)	mg/L	<0.0000050	0.000339	0.000176	0.0000140	0.000136	0.0000050	8588092
Dissolved Copper (Cu)	mg/L	<0.000050	0.000224	0.000206	0.000298	0.000170	0.000050	8588092
Dissolved Iron (Fe)	mg/L	<0.0010	0.0632	0.0317	0.0057	0.181	0.0010	8588092
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000160	0.0000090	0.0000050	0.0000060	0.0000050	8588092
Dissolved Lithium (Li)	mg/L	<0.00050	0.0121	0.00851	0.00789	0.00442	0.00050	8588092
Dissolved Manganese (Mn)	mg/L	<0.000050	0.303	0.137	0.00432	0.107	0.000050	8588092
Dissolved Molybdenum (Mo)	mg/L	<0.000050	0.00182	0.00135	0.000905	0.00103	0.000050	8588092
Dissolved Nickel (Ni)	mg/L	<0.000020	0.00265	0.00157	0.000726	0.000521	0.000020	8588092
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0044	0.0034	0.0032	0.0132	0.0020	8588092
Dissolved Selenium (Se)	mg/L	<0.000040	0.000481	0.00104	0.000989	0.00116	0.000040	8588092
Dissolved Silicon (Si)	mg/L	<0.050	6.56	4.97	4.65	3.49	0.050	8588092
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8588092
Dissolved Strontium (Sr)	mg/L	<0.000050	0.286	0.286	0.276	0.224	0.000050	8588092
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8588092
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8588092
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8588092
Dissolved Uranium (U)	mg/L	<0.0000020	0.00308	0.00414	0.00372	0.00215	0.0000020	8588092
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8588092

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QT8623	QT8624	QT8625	QT8626	QT8627		
Sampling Date		2017/03/20 16:30	2017/03/20 13:35	2017/03/20 13:00	2017/03/20 11:40	2017/03/21 11:30		
COC Number		08437329	08437330	08437330	08437330	08437330		
	UNITS	KZ-19	KZ-21	KZ-22	KZ-26	KZ-28	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	<0.00010	0.00383	0.00206	0.00068	0.0105	0.00010	8588092
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00033	0.00017	<0.00010	<0.00010	0.00010	8588092
Dissolved Calcium (Ca)	mg/L	<0.050	95.5	93.5	89.0	69.8	0.050	8586916
Dissolved Magnesium (Mg)	mg/L	<0.050	34.0	28.1	26.5	12.0	0.050	8586916
Dissolved Potassium (K)	mg/L	<0.050	2.44	1.97	1.64	1.55	0.050	8586916
Dissolved Sodium (Na)	mg/L	<0.050	7.95 (1)	2.30	2.27	1.39	0.050	8586916
Dissolved Sulphur (S)	mg/L	<3.0	14.6	15.9	15.9	9.0	3.0	8586916

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QT8628		
Sampling Date		2017/03/23		
COC Number		08437330		
	UNITS	TRIP BLANK	RDL	QC Batch
Misc. Inorganics				
Dissolved Hardness (CaCO3)	mg/L	<0.50	0.50	8586339
Elements				
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000020	8588277
Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	mg/L	<0.00050	0.00050	8588092
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000020	8588092
Dissolved Arsenic (As)	mg/L	<0.000020	0.000020	8588092
Dissolved Barium (Ba)	mg/L	<0.000020	0.000020	8588092
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000010	8588092
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8588092
Dissolved Boron (B)	mg/L	<0.010	0.010	8588092
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.0000050	8588092
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00010	8588092
Dissolved Cobalt (Co)	mg/L	<0.0000050	0.0000050	8588092
Dissolved Copper (Cu)	mg/L	<0.000050	0.000050	8588092
Dissolved Iron (Fe)	mg/L	<0.0010	0.0010	8588092
Dissolved Lead (Pb)	mg/L	0.0000060	0.0000050	8588092
Dissolved Lithium (Li)	mg/L	<0.00050	0.00050	8588092
Dissolved Manganese (Mn)	mg/L	<0.000050	0.000050	8588092
Dissolved Molybdenum (Mo)	mg/L	<0.000050	0.000050	8588092
Dissolved Nickel (Ni)	mg/L	<0.000020	0.000020	8588092
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8588092
Dissolved Selenium (Se)	mg/L	<0.000040	0.000040	8588092
Dissolved Silicon (Si)	mg/L	<0.050	0.050	8588092
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	8588092
Dissolved Strontium (Sr)	mg/L	<0.000050	0.000050	8588092
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000020	8588092
Dissolved Tin (Sn)	mg/L	<0.00020	0.00020	8588092
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00050	8588092
Dissolved Uranium (U)	mg/L	<0.0000020	0.0000020	8588092
Dissolved Vanadium (V)	mg/L	<0.00020	0.00020	8588092
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QT8628		
Sampling Date		2017/03/23		
COC Number		08437330		
	UNITS	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	<0.00010	0.00010	8588092
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00010	8588092
Dissolved Calcium (Ca)	mg/L	<0.050	0.050	8586916
Dissolved Magnesium (Mg)	mg/L	<0.050	0.050	8586916
Dissolved Potassium (K)	mg/L	<0.050	0.050	8586916
Dissolved Sodium (Na)	mg/L	<0.050	0.050	8586916
Dissolved Sulphur (S)	mg/L	<3.0	3.0	8586916
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QT8603	QT8604	QT8605	QT8606	QT8607		
Sampling Date		2017/03/21 17:30	2017/03/21 15:10	2017/03/21 13:50	2017/03/21 12:00	2017/03/20 15:45		
COC Number		08437329	08437329	08437329	08437329	08437329		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-9	KZ-13	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	149	181	191	225	127	0.50	8586237
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000129	0.0000020	8588895
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00211	0.00267	0.00591	0.0277	0.0201	0.00050	8588888
Total Antimony (Sb)	mg/L	0.000036	<0.000020	0.000030	0.000030	0.000207	0.000020	8588888
Total Arsenic (As)	mg/L	0.000091	0.000083	0.000163	0.000412	0.000318	0.000020	8588888
Total Barium (Ba)	mg/L	0.0958	0.0519	0.118	0.112	0.129	0.000020	8588888
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8588888
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8588888
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8588888
Total Cadmium (Cd)	mg/L	0.000291	0.0000280	0.000105	0.0000880	0.0000610	0.0000050	8588888
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	0.00020	0.00010	8588888
Total Cobalt (Co)	mg/L	0.0000070	0.0000070	0.0000570	0.000239	0.0000650	0.0000050	8588888
Total Copper (Cu)	mg/L	0.000488	0.000112	0.000181	0.000314	0.000759	0.000050	8588888
Total Iron (Fe)	mg/L	0.0016	0.0159	0.149	0.924	0.241	0.0010	8588888
Total Lead (Pb)	mg/L	0.0000660	0.000158	0.0000390	0.000135	0.000476	0.0000050	8588888
Total Lithium (Li)	mg/L	0.00173	0.00078	0.00452	0.00514	0.00215	0.00050	8588888
Total Manganese (Mn)	mg/L	0.000130	0.00250	0.0680	0.171	0.135	0.000050	8588888
Total Molybdenum (Mo)	mg/L	0.000769	0.000703	0.000781	0.000709	0.000819	0.000050	8588888
Total Nickel (Ni)	mg/L	0.000329	0.000126	0.000460	0.000573	0.000531	0.000020	8588888
Total Phosphorus (P)	mg/L	0.0024	0.0038	0.0158	0.0325	0.0384	0.0020	8588888
Total Selenium (Se)	mg/L	0.00278	0.00138	0.000999	0.00128	0.000410	0.000040	8588888
Total Silicon (Si)	mg/L	2.63	2.82	4.03	4.68	4.89	0.050	8588888
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8588888
Total Strontium (Sr)	mg/L	0.176	0.198	0.230	0.286	0.133	0.000050	8588888
Total Thallium (Tl)	mg/L	0.0000040	<0.0000020	0.0000020	<0.0000020	0.0000020	0.0000020	8588888
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8588888
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00055	0.00083	0.00082	0.00050	8588888
Total Uranium (U)	mg/L	0.00558	0.00125	0.00153	0.00167	0.00174	0.0000020	8588888
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8588888

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QT8603	QT8604	QT8605	QT8606	QT8607		
Sampling Date		2017/03/21 17:30	2017/03/21 15:10	2017/03/21 13:50	2017/03/21 12:00	2017/03/20 15:45		
COC Number		08437329	08437329	08437329	08437329	08437329		
	UNITS	KZ-2	KZ-6	KZ-7	KZ-9	KZ-13	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0379	0.00113	0.0468	0.0194	0.0153	0.00010	8588888
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8588888
Total Calcium (Ca)	mg/L	48.2	60.9	63.4	75.8	43.6	0.050	8586917
Total Magnesium (Mg)	mg/L	7.04	7.03	7.94	8.80	4.36	0.050	8586917
Total Potassium (K)	mg/L	2.41	1.03	1.92	1.97	2.60	0.050	8586917
Total Sodium (Na)	mg/L	0.911	0.729	1.33	1.59	1.61	0.050	8586917
Total Sulphur (S)	mg/L	21.5	8.6	13.0	12.2	6.6	3.0	8586917

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QT8608		QT8618	QT8620	QT8621		
Sampling Date		2017/03/21 11:00		2017/03/21 08:05	2017/03/21 12:35	2017/03/21 09:20		
COC Number		08437329		08437329	08437329	08437329		
	UNITS	KZ-37	QC Batch	KZ-15	KZ-18	KZ-16	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	223	8586237	285	225	300	0.50	8586237
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	8588895	<0.0000020	<0.0000020	<0.0000020	0.0000020	8588895
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00605	8588888	0.00680	0.0141	0.00155	0.00050	8588888
Total Antimony (Sb)	mg/L	0.000032	8588888	0.000029	0.000038	0.000021	0.000020	8588888
Total Arsenic (As)	mg/L	0.000582	8588888	0.000637	0.00115	0.000153	0.000020	8588888
Total Barium (Ba)	mg/L	0.0960	8588888	0.105	0.0627	0.108	0.000020	8588888
Total Beryllium (Be)	mg/L	<0.000010	8588888	<0.000010	<0.000010	<0.000010	0.000010	8588888
Total Bismuth (Bi)	mg/L	<0.0000050	8588888	<0.0000050	<0.0000050	<0.0000050	0.0000050	8588888
Total Boron (B)	mg/L	<0.010	8588888	<0.010	<0.010	<0.010	0.010	8588888
Total Cadmium (Cd)	mg/L	0.0000630	8588888	0.0000700	0.0000590	0.0000390	0.0000050	8588888
Total Chromium (Cr)	mg/L	<0.00010	8588888	<0.00010	0.00016	<0.00010	0.00010	8588888
Total Cobalt (Co)	mg/L	0.000134	8588888	0.0000590	0.0000540	0.0000930	0.0000050	8588888
Total Copper (Cu)	mg/L	0.000145	8588888	0.000221	0.000108	0.000149	0.000050	8588888
Total Iron (Fe)	mg/L	0.398	8588888	0.107	0.136	0.0279	0.0010	8588888
Total Lead (Pb)	mg/L	0.0000160	8588888	0.0000300	0.0000310	0.0000070	0.0000050	8588888
Total Lithium (Li)	mg/L	0.00459	8588888	0.00458	0.00256	0.00459	0.00050	8588888
Total Manganese (Mn)	mg/L	0.113	8588888	0.0832	0.0254	0.0374	0.000050	8588888
Total Molybdenum (Mo)	mg/L	0.00111	8588888	0.00166	0.00189	0.000527	0.000050	8588888
Total Nickel (Ni)	mg/L	0.000501	8588888	0.00123	0.000463	0.00105	0.000020	8588888
Total Phosphorus (P)	mg/L	0.0287	8588888	0.0066	0.0731	0.0034	0.0020	8588888
Total Selenium (Se)	mg/L	0.00130	8588888	0.00157	0.00143	0.00173	0.000040	8588888
Total Silicon (Si)	mg/L	3.67	8588888	4.50	3.58	4.54	0.050	8588888
Total Silver (Ag)	mg/L	<0.0000050	8588888	<0.0000050	<0.0000050	<0.0000050	0.0000050	8588888
Total Strontium (Sr)	mg/L	0.256	8588888	0.294	0.216	0.323	0.000050	8588888
Total Thallium (Tl)	mg/L	<0.0000020	8588888	<0.0000020	<0.0000020	<0.0000020	0.0000020	8588888
Total Tin (Sn)	mg/L	<0.00020	8588888	<0.00020	<0.00020	<0.00020	0.00020	8588888
Total Titanium (Ti)	mg/L	<0.00050	8595517	0.00067	0.00055	<0.00050	0.00050	8588888
Total Uranium (U)	mg/L	0.00210	8588888	0.00560	0.00322	0.00307	0.0000020	8588888
Total Vanadium (V)	mg/L	<0.00020	8588888	<0.00020	<0.00020	<0.00020	0.00020	8588888
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QT8608		QT8618	QT8620	QT8621		
Sampling Date		2017/03/21 11:00		2017/03/21 08:05	2017/03/21 12:35	2017/03/21 09:20		
COC Number		08437329		08437329	08437329	08437329		
	UNITS	KZ-37	QC Batch	KZ-15	KZ-18	KZ-16	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0113	8588888	0.0101	0.00229	0.00132	0.00010	8588888
Total Zirconium (Zr)	mg/L	<0.00010	8588888	<0.00010	<0.00010	<0.00010	0.00010	8588888
Total Calcium (Ca)	mg/L	69.8	8586917	83.1	59.9	90.2	0.050	8586917
Total Magnesium (Mg)	mg/L	11.9	8586917	18.9	18.4	18.1	0.050	8586917
Total Potassium (K)	mg/L	1.57	8586917	1.55	0.752	1.50	0.050	8586917
Total Sodium (Na)	mg/L	1.37	8586917	1.50	0.933	1.54	0.050	8586917
Total Sulphur (S)	mg/L	10.7	8586917	14.4	8.2	15.8	3.0	8586917
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QT8622	QT8623	QT8624	QT8625	QT8626		
Sampling Date		2017/03/21 10:00	2017/03/20 16:30	2017/03/20 13:35	2017/03/20 13:00	2017/03/20 11:40		
COC Number		08437329	08437329	08437330	08437330	08437330		
	UNITS	KZ-17	KZ-19	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	284	<0.50	376	345	354	0.50	8586237
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8588895
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00114	<0.00050	0.00597	0.00211	0.00158	0.00050	8588888
Total Antimony (Sb)	mg/L	0.000028	<0.000020	0.000043	0.000030	0.000058	0.000020	8588888
Total Arsenic (As)	mg/L	0.000220	<0.000020	0.00261	0.00138	0.000429	0.000020	8588888
Total Barium (Ba)	mg/L	0.110	<0.000020	0.0907	0.0968	0.0921	0.000020	8588888
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8588888
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8588888
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8588888
Total Cadmium (Cd)	mg/L	0.0000300	<0.0000050	0.0000200	0.0000210	0.0000150	0.0000050	8588888
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8588888
Total Cobalt (Co)	mg/L	0.0000050	<0.0000050	0.000338	0.000176	0.0000180	0.0000050	8588888
Total Copper (Cu)	mg/L	0.000225	<0.000050	0.000233	0.000191	0.000290	0.000050	8588888
Total Iron (Fe)	mg/L	0.0033	<0.0010	0.880	0.372	0.0404	0.0010	8588888
Total Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.000273	0.0000700	<0.0000050	0.0000050	8588888
Total Lithium (Li)	mg/L	0.00358	<0.00050	0.0123	0.00883	0.00738	0.00050	8588888
Total Manganese (Mn)	mg/L	0.00113	<0.000050	0.322	0.141	0.00711	0.000050	8588888
Total Molybdenum (Mo)	mg/L	0.000662	<0.000050	0.00188	0.00141	0.000876	0.000050	8588888
Total Nickel (Ni)	mg/L	0.000618	<0.000020	0.00272	0.00160	0.000824	0.000020	8588888
Total Phosphorus (P)	mg/L	0.0033	<0.0020	0.0222	0.0091	0.0046	0.0020	8588888
Total Selenium (Se)	mg/L	0.00159	<0.000040	0.000519	0.00120	0.00109	0.000040	8588888
Total Silicon (Si)	mg/L	4.23	<0.050	7.68	6.07	5.65	0.050	8588888
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8588888
Total Strontium (Sr)	mg/L	0.320	<0.000050	0.330	0.315	0.327	0.000050	8588888
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8588888
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8588888
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8588888
Total Uranium (U)	mg/L	0.00350	<0.0000020	0.00305	0.00420	0.00347	0.0000020	8588888
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8588888

RDL = Reportable Detection Limit

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QT8622	QT8623	QT8624	QT8625	QT8626		
Sampling Date		2017/03/21 10:00	2017/03/20 16:30	2017/03/20 13:35	2017/03/20 13:00	2017/03/20 11:40		
COC Number		08437329	08437329	08437330	08437330	08437330		
	UNITS	KZ-17	KZ-19	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00248	<0.00010	0.00334	0.00209	0.00072	0.00010	8588888
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00042	0.00019	0.00011	0.00010	8588888
Total Calcium (Ca)	mg/L	84.9	<0.050	94.2	92.3	95.2	0.050	8586917
Total Magnesium (Mg)	mg/L	17.5	<0.050	34.3	27.8	28.3	0.050	8586917
Total Potassium (K)	mg/L	1.45	<0.050	2.47	1.93	1.78	0.050	8586917
Total Sodium (Na)	mg/L	1.44	<0.050	6.47	2.22	2.43	0.050	8586917
Total Sulphur (S)	mg/L	14.6	<3.0	16.9	18.1	19.8	3.0	8586917

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QT8627	QT8628		
Sampling Date		2017/03/21 11:30	2017/03/23		
COC Number		08437330	08437330		
	UNITS	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters					
Total Hardness (CaCO3)	mg/L	229	<0.50	0.50	8586237
Elements					
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8588895
Total Metals by ICPMS					
Total Aluminum (Al)	mg/L	0.00600	<0.00050	0.00050	8588888
Total Antimony (Sb)	mg/L	0.000030	<0.000020	0.000020	8588888
Total Arsenic (As)	mg/L	0.000494	<0.000020	0.000020	8588888
Total Barium (Ba)	mg/L	0.103	<0.000020	0.000020	8588888
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	8588888
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	0.0000050	8588888
Total Boron (B)	mg/L	<0.010	<0.010	0.010	8588888
Total Cadmium (Cd)	mg/L	0.0000610	<0.0000050	0.0000050	8588888
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00010	8588888
Total Cobalt (Co)	mg/L	0.000135	<0.0000050	0.0000050	8588888
Total Copper (Cu)	mg/L	0.000137	0.000055	0.000050	8588888
Total Iron (Fe)	mg/L	0.389	<0.0010	0.0010	8588888
Total Lead (Pb)	mg/L	0.0000150	0.0000050	0.0000050	8588888
Total Lithium (Li)	mg/L	0.00492	<0.00050	0.00050	8588888
Total Manganese (Mn)	mg/L	0.113	<0.000050	0.000050	8588888
Total Molybdenum (Mo)	mg/L	0.00113	<0.000050	0.000050	8588888
Total Nickel (Ni)	mg/L	0.000494	<0.000020	0.000020	8588888
Total Phosphorus (P)	mg/L	0.0234	<0.0020	0.0020	8588888
Total Selenium (Se)	mg/L	0.00127	<0.000040	0.000040	8588888
Total Silicon (Si)	mg/L	4.22	<0.050	0.050	8588888
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	0.0000050	8588888
Total Strontium (Sr)	mg/L	0.265	<0.000050	0.000050	8588888
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	8588888
Total Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8588888
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00050	8588888
Total Uranium (U)	mg/L	0.00219	0.0000020	0.0000020	8588888
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00020	8588888
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QT8627	QT8628		
Sampling Date		2017/03/21 11:30	2017/03/23		
COC Number		08437330	08437330		
	UNITS	KZ-28	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0117	0.00017	0.00010	8588888
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8588888
Total Calcium (Ca)	mg/L	72.2	<0.050	0.050	8586917
Total Magnesium (Mg)	mg/L	11.8	<0.050	0.050	8586917
Total Potassium (K)	mg/L	1.55	<0.050	0.050	8586917
Total Sodium (Na)	mg/L	1.33	<0.050	0.050	8586917
Total Sulphur (S)	mg/L	10.6	<3.0	3.0	8586917
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QT8603
Sample ID: KZ-2
Matrix: Water

Collected: 2017/03/21
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8587259	N/A	2017/03/25	Name Redacted
Alkalinity - Water	AT/ALK	8587275	2017/03/25	2017/03/25	
Chloride by Automated Colourimetry	KONE/COL	8589097	N/A	2017/03/27	
Cyanide SAD (strong acid dissociable)	TECH/COL	8588301	N/A	2017/03/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8588304	N/A	2017/03/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8588400	N/A	2017/03/27	
Conductance - water	AT/ALK	8587274	N/A	2017/03/25	
Fluoride	ISE/ISE	8589370	N/A	2017/03/27	
Hardness Total (calculated as CaCO3)	CALC	8586237	N/A	2017/03/29	
Hardness (calculated as CaCO3)	CALC	8586339	N/A	2017/03/28	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8588277	N/A	2017/03/27	
Mercury (Total-LowLevel) by CVAF	CV/AF	8588895	2017/03/28	2017/03/28	
Ion Balance (as Cations/Anions Ratio)	CALC	8586748	N/A	2017/03/28	
Sum of cations, anions	CALC	8586855	N/A	2017/03/28	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8586916	N/A	2017/03/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8588092	N/A	2017/03/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8586917	N/A	2017/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8588888	N/A	2017/03/28	
Ammonia-N (Preserved)	KONE/COL	8587354	N/A	2017/03/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8587507	N/A	2017/03/25	
Nitrite (N) (low level)	TRAA/COL	8587508	N/A	2017/03/25	
Nitrogen - Nitrate (as N)	CALC	8586856	N/A	2017/03/28	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/03/24	
pH Water	AT/ALK	8587273	N/A	2017/03/25	
Sulphate by Automated Colourimetry	KONE/COL	8589098	N/A	2017/03/27	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8587425	2017/03/25	2017/03/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8587433	N/A	2017/03/25	
Total Suspended Solids-Low Level	BAL/BAL	8587819	2017/03/27	2017/03/28	

Maxxam ID: QT8603 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2017/03/21
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8587275	2017/03/25	2017/03/25	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8588301	N/A	2017/03/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8588304	N/A	2017/03/27	
Conductance - water	AT/ALK	8587274	N/A	2017/03/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8588277	N/A	2017/03/27	
Mercury (Total-LowLevel) by CVAF	CV/AF	8588895	2017/03/28	2017/03/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8588092	N/A	2017/03/27	
pH Water	AT/ALK	8587273	N/A	2017/03/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QT8604
Sample ID: KZ-6
Matrix: Water

Collected: 2017/03/21
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8587259	N/A	2017/03/25	Name Redacted
Alkalinity - Water	AT/ALK	8587275	2017/03/25	2017/03/25	
Chloride by Automated Colourimetry	KONE/COL	8589097	N/A	2017/03/27	
Cyanide SAD (strong acid dissociable)	TECH/COL	8588301	N/A	2017/03/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8588304	N/A	2017/03/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8588398	N/A	2017/03/27	
Conductance - water	AT/ALK	8587274	N/A	2017/03/25	
Fluoride	ISE/ISE	8589370	N/A	2017/03/27	
Hardness Total (calculated as CaCO3)	CALC	8586237	N/A	2017/03/29	
Hardness (calculated as CaCO3)	CALC	8586339	N/A	2017/03/28	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8588277	N/A	2017/03/27	
Mercury (Total-LowLevel) by CVAF	CV/AF	8588895	2017/03/28	2017/03/28	
Ion Balance (as Cations/Anions Ratio)	CALC	8586748	N/A	2017/03/28	
Sum of cations, anions	CALC	8586855	N/A	2017/03/28	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8586916	N/A	2017/03/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8588092	N/A	2017/03/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8586917	N/A	2017/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8588888	N/A	2017/03/28	
Ammonia-N (Preserved)	KONE/COL	8587354	N/A	2017/03/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8587507	N/A	2017/03/25	
Nitrite (N) (low level)	TRAA/COL	8587508	N/A	2017/03/25	
Nitrogen - Nitrate (as N)	CALC	8586856	N/A	2017/03/28	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/03/24	
pH Water	AT/ALK	8587273	N/A	2017/03/25	
Sulphate by Automated Colourimetry	KONE/COL	8589098	N/A	2017/03/27	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8587425	2017/03/25	2017/03/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8587427	N/A	2017/03/25	
Total Suspended Solids-Low Level	BAL/BAL	8587819	2017/03/27	2017/03/28	

Maxxam ID: QT8605
Sample ID: KZ-7
Matrix: Water

Collected: 2017/03/21
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8587259	N/A	2017/03/25	Name Redacted
Alkalinity - Water	AT/ALK	8587275	2017/03/25	2017/03/25	
Chloride by Automated Colourimetry	KONE/COL	8589097	N/A	2017/03/27	
Cyanide SAD (strong acid dissociable)	TECH/COL	8588301	N/A	2017/03/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8588304	N/A	2017/03/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8588398	N/A	2017/03/27	
Conductance - water	AT/ALK	8587274	N/A	2017/03/25	
Fluoride	ISE/ISE	8589370	N/A	2017/03/27	
Hardness Total (calculated as CaCO3)	CALC	8586237	N/A	2017/03/29	
Hardness (calculated as CaCO3)	CALC	8586339	N/A	2017/03/28	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QT8605
Sample ID: KZ-7
Matrix: Water

Collected: 2017/03/21
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8588277	N/A	2017/03/27	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8588895	2017/03/28	2017/03/28	
Ion Balance (as Cations/Anions Ratio)	CALC	8586748	N/A	2017/03/28	
Sum of cations, anions	CALC	8586855	N/A	2017/03/28	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8586916	N/A	2017/03/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8588092	N/A	2017/03/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8586917	N/A	2017/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8588888	N/A	2017/03/28	
Ammonia-N (Preserved)	KONE/COL	8587354	N/A	2017/03/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8587507	N/A	2017/03/25	
Nitrite (N) (low level)	TRAA/COL	8587508	N/A	2017/03/25	
Nitrogen - Nitrate (as N)	CALC	8586856	N/A	2017/03/28	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/03/24	
pH Water	AT/ALK	8587273	N/A	2017/03/25	
Sulphate by Automated Colourimetry	KONE/COL	8589098	N/A	2017/03/27	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8587422	2017/03/25	2017/03/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8587423	N/A	2017/03/25	
Total Suspended Solids-Low Level	BAL/BAL	8587819	2017/03/27	2017/03/28	

Maxxam ID: QT8606
Sample ID: KZ-9
Matrix: Water

Collected: 2017/03/21
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8587259	N/A	2017/03/25	Name Redacted
Alkalinity - Water	AT/ALK	8587275	2017/03/25	2017/03/25	
Chloride by Automated Colourimetry	KONE/COL	8589097	N/A	2017/03/27	
Cyanide SAD (strong acid dissociable)	TECH/COL	8588301	N/A	2017/03/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8588304	N/A	2017/03/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8588400	N/A	2017/03/27	
Conductance - water	AT/ALK	8587274	N/A	2017/03/25	
Fluoride	ISE/ISE	8589370	N/A	2017/03/27	
Hardness Total (calculated as CaCO3)	CALC	8586237	N/A	2017/03/29	
Hardness (calculated as CaCO3)	CALC	8586339	N/A	2017/03/28	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8588277	N/A	2017/03/27	
Mercury (Total-LowLevel) by CVAF	CV/AF	8588895	2017/03/28	2017/03/28	
Ion Balance (as Cations/Anions Ratio)	CALC	8586748	N/A	2017/03/28	
Sum of cations, anions	CALC	8586855	N/A	2017/03/28	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8586916	N/A	2017/03/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8588092	N/A	2017/03/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8586917	N/A	2017/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8588888	N/A	2017/03/28	
Ammonia-N (Preserved)	KONE/COL	8587354	N/A	2017/03/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8587507	N/A	2017/03/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QT8606
Sample ID: KZ-9
Matrix: Water

Collected: 2017/03/21
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8587508	N/A	2017/03/25	Name Redacted
Nitrogen - Nitrate (as N)	CALC	8586856	N/A	2017/03/28	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/03/24	
pH Water	AT/ALK	8587273	N/A	2017/03/25	
Sulphate by Automated Colourimetry	KONE/COL	8589098	N/A	2017/03/27	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8587425	2017/03/25	2017/03/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8587427	N/A	2017/03/25	
Total Suspended Solids-Low Level	BAL/BAL	8587819	2017/03/27	2017/03/28	

Maxxam ID: QT8607
Sample ID: KZ-13
Matrix: Water

Collected: 2017/03/20
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8587260	N/A	2017/03/25	Name Redacted
Alkalinity - Water	AT/ALK	8587283	2017/03/25	2017/03/25	
Chloride by Automated Colourimetry	KONE/COL	8589108	N/A	2017/03/27	
Cyanide SAD (strong acid dissociable)	TECH/COL	8588301	N/A	2017/03/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8588304	N/A	2017/03/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8588398	N/A	2017/03/27	
Conductance - water	AT/ALK	8587289	N/A	2017/03/25	
Fluoride	ISE/ISE	8589743	N/A	2017/03/28	
Hardness Total (calculated as CaCO3)	CALC	8586237	N/A	2017/03/29	
Hardness (calculated as CaCO3)	CALC	8586339	N/A	2017/03/28	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8588277	N/A	2017/03/27	
Mercury (Total-LowLevel) by CVAF	CV/AF	8588895	2017/03/28	2017/03/28	
Ion Balance (as Cations/Anions Ratio)	CALC	8586748	N/A	2017/03/28	
Sum of cations, anions	CALC	8586855	N/A	2017/03/28	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8586916	N/A	2017/03/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8588092	N/A	2017/03/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8586917	N/A	2017/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8588888	N/A	2017/03/28	
Ammonia-N (Preserved)	KONE/COL	8587354	N/A	2017/03/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8587509	N/A	2017/03/25	
Nitrite (N) (low level)	TRAA/COL	8587510	N/A	2017/03/25	
Nitrogen - Nitrate (as N)	CALC	8586856	N/A	2017/03/28	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/03/24	
pH Water	AT/ALK	8587290	N/A	2017/03/25	
Sulphate by Automated Colourimetry	KONE/COL	8589597	N/A	2017/03/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8587657	2017/03/27	2017/03/27	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8587658	N/A	2017/03/27	
Total Suspended Solids-Low Level	BAL/BAL	8587819	2017/03/27	2017/03/28	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QT8607 Dup
Sample ID: KZ-13
Matrix: Water

Collected: 2017/03/20
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8587283	2017/03/25	2017/03/25	Name Redacted
Conductance - water	AT/ALK	8587289	N/A	2017/03/25	
Sulphate by Automated Colourimetry	KONE/COL	8589597	N/A	2017/03/28	

Maxxam ID: QT8608
Sample ID: KZ-37
Matrix: Water

Collected: 2017/03/21
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8587259	N/A	2017/03/25	Name Redacted
Alkalinity - Water	AT/ALK	8587275	2017/03/25	2017/03/25	
Chloride by Automated Colourimetry	KONE/COL	8589097	N/A	2017/03/27	
Cyanide SAD (strong acid dissociable)	TECH/COL	8588301	N/A	2017/03/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8588304	N/A	2017/03/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8588398	N/A	2017/03/27	
Conductance - water	AT/ALK	8587274	N/A	2017/03/25	
Fluoride	ISE/ISE	8589370	N/A	2017/03/27	
Hardness Total (calculated as CaCO3)	CALC	8586237	N/A	2017/03/29	
Hardness (calculated as CaCO3)	CALC	8586339	N/A	2017/03/28	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8588277	N/A	2017/03/27	
Mercury (Total-LowLevel) by CVAF	CV/AF	8588895	2017/03/28	2017/03/28	
Ion Balance (as Cations/Anions Ratio)	CALC	8586748	N/A	2017/03/28	
Sum of cations, anions	CALC	8586855	N/A	2017/03/28	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8586916	N/A	2017/03/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8588092	N/A	2017/03/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8586917	N/A	2017/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8588888	N/A	2017/03/28	
Ammonia-N (Preserved)	KONE/COL	8587353	N/A	2017/03/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8587507	N/A	2017/03/25	
Nitrite (N) (low level)	TRAA/COL	8587508	N/A	2017/03/25	
Nitrogen - Nitrate (as N)	CALC	8586856	N/A	2017/03/28	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/03/24	
pH Water	AT/ALK	8587273	N/A	2017/03/25	
Sulphate by Automated Colourimetry	KONE/COL	8589098	N/A	2017/03/27	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8587422	2017/03/25	2017/03/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8587423	N/A	2017/03/25	
Total Suspended Solids-Low Level	BAL/BAL	8587819	2017/03/27	2017/03/28	

Maxxam ID: QT8608 Dup
Sample ID: KZ-37
Matrix: Water

Collected: 2017/03/21
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8589097	N/A	2017/03/27	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QT8608 Dup
Sample ID: KZ-37
Matrix: Water

Collected: 2017/03/21
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate by Automated Colourimetry	KONE/COL	8589098	N/A	2017/03/27	Name Redacted

Maxxam ID: QT8618
Sample ID: KZ-15
Matrix: Water

Collected: 2017/03/21
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8587259	N/A	2017/03/25	Name Redacted
Alkalinity - Water	AT/ALK	8587275	2017/03/25	2017/03/25	
Chloride by Automated Colourimetry	KONE/COL	8589097	N/A	2017/03/27	
Cyanide SAD (strong acid dissociable)	TECH/COL	8588301	N/A	2017/03/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8588304	N/A	2017/03/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8588400	N/A	2017/03/27	
Conductance - water	AT/ALK	8587274	N/A	2017/03/25	
Fluoride	ISE/ISE	8589370	N/A	2017/03/27	
Hardness Total (calculated as CaCO3)	CALC	8586237	N/A	2017/03/29	
Hardness (calculated as CaCO3)	CALC	8586339	N/A	2017/03/28	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8588277	N/A	2017/03/27	
Mercury (Total-LowLevel) by CVAF	CV/AF	8588895	2017/03/28	2017/03/28	
Ion Balance (as Cations/Anions Ratio)	CALC	8586748	N/A	2017/03/28	
Sum of cations, anions	CALC	8586855	N/A	2017/03/28	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8586916	N/A	2017/03/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8588092	N/A	2017/03/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8586917	N/A	2017/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8588888	N/A	2017/03/28	
Ammonia-N (Preserved)	KONE/COL	8587354	N/A	2017/03/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8587507	N/A	2017/03/25	
Nitrite (N) (low level)	TRAA/COL	8587508	N/A	2017/03/25	
Nitrogen - Nitrate (as N)	CALC	8586856	N/A	2017/03/28	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/03/24	
pH Water	AT/ALK	8587273	N/A	2017/03/25	
Sulphate by Automated Colourimetry	KONE/COL	8589098	N/A	2017/03/27	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8587422	2017/03/25	2017/03/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8587423	N/A	2017/03/25	
Total Suspended Solids-Low Level	BAL/BAL	8587819	2017/03/27	2017/03/28	

Maxxam ID: QT8618 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2017/03/21
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8587354	N/A	2017/03/25	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QT8620
Sample ID: KZ-18
Matrix: Water

Collected: 2017/03/21
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8587259	N/A	2017/03/25	Name Redacted
Alkalinity - Water	AT/ALK	8587275	2017/03/25	2017/03/25	
Chloride by Automated Colourimetry	KONE/COL	8589097	N/A	2017/03/27	
Cyanide SAD (strong acid dissociable)	TECH/COL	8588301	N/A	2017/03/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8588304	N/A	2017/03/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8588400	N/A	2017/03/27	
Conductance - water	AT/ALK	8587274	N/A	2017/03/25	
Fluoride	ISE/ISE	8589370	N/A	2017/03/27	
Hardness Total (calculated as CaCO3)	CALC	8586237	N/A	2017/03/29	
Hardness (calculated as CaCO3)	CALC	8586339	N/A	2017/03/28	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8588277	N/A	2017/03/27	
Mercury (Total-LowLevel) by CVAF	CV/AF	8588895	2017/03/28	2017/03/28	
Ion Balance (as Cations/Anions Ratio)	CALC	8586748	N/A	2017/03/28	
Sum of cations, anions	CALC	8586855	N/A	2017/03/28	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8586916	N/A	2017/03/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8588092	N/A	2017/03/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8586917	N/A	2017/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8588888	N/A	2017/03/28	
Ammonia-N (Preserved)	KONE/COL	8587355	N/A	2017/03/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8587507	N/A	2017/03/25	
Nitrite (N) (low level)	TRAA/COL	8587508	N/A	2017/03/25	
Nitrogen - Nitrate (as N)	CALC	8586856	N/A	2017/03/28	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/03/24	
pH Water	AT/ALK	8587273	N/A	2017/03/25	
Sulphate by Automated Colourimetry	KONE/COL	8589098	N/A	2017/03/27	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8587422	2017/03/25	2017/03/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8587423	N/A	2017/03/25	
Total Suspended Solids-Low Level	BAL/BAL	8587819	2017/03/27	2017/03/28	

Maxxam ID: QT8621
Sample ID: KZ-16
Matrix: Water

Collected: 2017/03/21
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8587259	N/A	2017/03/25	Name Redacted
Alkalinity - Water	AT/ALK	8587275	2017/03/25	2017/03/25	
Chloride by Automated Colourimetry	KONE/COL	8589097	N/A	2017/03/27	
Cyanide SAD (strong acid dissociable)	TECH/COL	8588301	N/A	2017/03/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8588304	N/A	2017/03/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8588400	N/A	2017/03/27	
Conductance - water	AT/ALK	8587274	N/A	2017/03/25	
Fluoride	ISE/ISE	8589370	N/A	2017/03/27	
Hardness Total (calculated as CaCO3)	CALC	8586237	N/A	2017/03/29	
Hardness (calculated as CaCO3)	CALC	8586339	N/A	2017/03/28	

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QT8621
Sample ID: KZ-16
Matrix: Water

Collected: 2017/03/21
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8588277	N/A	2017/03/27	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8588895	2017/03/28	2017/03/28	
Ion Balance (as Cations/Anions Ratio)	CALC	8586748	N/A	2017/03/28	
Sum of cations, anions	CALC	8586855	N/A	2017/03/28	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8586916	N/A	2017/03/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8588092	N/A	2017/03/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8586917	N/A	2017/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8588888	N/A	2017/03/28	
Ammonia-N (Preserved)	KONE/COL	8587355	N/A	2017/03/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8587507	N/A	2017/03/25	
Nitrite (N) (low level)	TRAA/COL	8587508	N/A	2017/03/25	
Nitrogen - Nitrate (as N)	CALC	8586856	N/A	2017/03/28	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/03/24	
pH Water	AT/ALK	8587273	N/A	2017/03/25	
Sulphate by Automated Colourimetry	KONE/COL	8589098	N/A	2017/03/27	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8587422	2017/03/25	2017/03/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8587423	N/A	2017/03/25	
Total Suspended Solids-Low Level	BAL/BAL	8587819	2017/03/27	2017/03/28	

Maxxam ID: QT8622
Sample ID: KZ-17
Matrix: Water

Collected: 2017/03/21
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8587259	N/A	2017/03/25	Name Redacted
Alkalinity - Water	AT/ALK	8587275	2017/03/25	2017/03/25	
Chloride by Automated Colourimetry	KONE/COL	8589097	N/A	2017/03/27	
Cyanide SAD (strong acid dissociable)	TECH/COL	8588301	N/A	2017/03/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8588304	N/A	2017/03/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8588398	N/A	2017/03/27	
Conductance - water	AT/ALK	8587274	N/A	2017/03/25	
Fluoride	ISE/ISE	8589370	N/A	2017/03/27	
Hardness Total (calculated as CaCO3)	CALC	8586237	N/A	2017/03/29	
Hardness (calculated as CaCO3)	CALC	8586339	N/A	2017/03/28	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8588277	N/A	2017/03/27	
Mercury (Total-LowLevel) by CVAF	CV/AF	8588895	2017/03/28	2017/03/28	
Ion Balance (as Cations/Anions Ratio)	CALC	8586748	N/A	2017/03/28	
Sum of cations, anions	CALC	8586855	N/A	2017/03/28	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8586916	N/A	2017/03/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8588092	N/A	2017/03/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8586917	N/A	2017/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8588888	N/A	2017/03/28	
Ammonia-N (Preserved)	KONE/COL	8587354	N/A	2017/03/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8587507	N/A	2017/03/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QT8622
Sample ID: KZ-17
Matrix: Water

Collected: 2017/03/21
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8587508	N/A	2017/03/25	Name Redacted
Nitrogen - Nitrate (as N)	CALC	8586856	N/A	2017/03/28	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/03/24	
pH Water	AT/ALK	8587273	N/A	2017/03/25	
Sulphate by Automated Colourimetry	KONE/COL	8589098	N/A	2017/03/27	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8587422	2017/03/25	2017/03/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8587423	N/A	2017/03/25	
Total Suspended Solids-Low Level	BAL/BAL	8587819	2017/03/27	2017/03/28	

Maxxam ID: QT8623
Sample ID: KZ-19
Matrix: Water

Collected: 2017/03/20
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8587260	N/A	2017/03/25	Name Redacted
Alkalinity - Water	AT/ALK	8587283	2017/03/25	2017/03/25	
Chloride by Automated Colourimetry	KONE/COL	8589100	N/A	2017/03/27	
Cyanide SAD (strong acid dissociable)	TECH/COL	8588301	N/A	2017/03/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8588304	N/A	2017/03/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8588400	N/A	2017/03/27	
Conductance - water	AT/ALK	8587289	N/A	2017/03/25	
Fluoride	ISE/ISE	8589741	N/A	2017/03/28	
Hardness Total (calculated as CaCO3)	CALC	8586237	N/A	2017/03/29	
Hardness (calculated as CaCO3)	CALC	8586339	N/A	2017/03/28	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8588277	N/A	2017/03/27	
Mercury (Total-LowLevel) by CVAF	CV/AF	8588895	2017/03/28	2017/03/28	
Ion Balance (as Cations/Anions Ratio)	CALC	8586748	N/A	2017/03/28	
Sum of cations, anions	CALC	8586855	N/A	2017/03/28	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8586916	N/A	2017/03/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8588092	N/A	2017/03/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8586917	N/A	2017/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8588888	N/A	2017/03/28	
Ammonia-N (Preserved)	KONE/COL	8591567	N/A	2017/03/30	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8587509	N/A	2017/03/25	
Nitrite (N) (low level)	TRAA/COL	8587510	N/A	2017/03/25	
Nitrogen - Nitrate (as N)	CALC	8586856	N/A	2017/03/28	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/03/24	
pH Water	AT/ALK	8587290	N/A	2017/03/25	
Sulphate by Automated Colourimetry	KONE/COL	8589104	N/A	2017/03/27	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8587657	2017/03/27	2017/03/27	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8587658	N/A	2017/03/27	
Total Suspended Solids-Low Level	BAL/BAL	8587819	2017/03/27	2017/03/28	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QT8624
Sample ID: KZ-21
Matrix: Water

Collected: 2017/03/20
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8587260	N/A	2017/03/25	Name Redacted
Alkalinity - Water	AT/ALK	8587283	2017/03/25	2017/03/25	
Chloride by Automated Colourimetry	KONE/COL	8589108	N/A	2017/03/27	
Cyanide SAD (strong acid dissociable)	TECH/COL	8588301	N/A	2017/03/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8588304	N/A	2017/03/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8588400	N/A	2017/03/27	
Conductance - water	AT/ALK	8587289	N/A	2017/03/25	
Fluoride	ISE/ISE	8589743	N/A	2017/03/28	
Hardness Total (calculated as CaCO3)	CALC	8586237	N/A	2017/03/29	
Hardness (calculated as CaCO3)	CALC	8586339	N/A	2017/03/28	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8588277	N/A	2017/03/27	
Mercury (Total-LowLevel) by CVAF	CV/AF	8588895	2017/03/28	2017/03/28	
Ion Balance (as Cations/Anions Ratio)	CALC	8586748	N/A	2017/03/28	
Sum of cations, anions	CALC	8586855	N/A	2017/03/28	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8586916	N/A	2017/03/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8588092	N/A	2017/03/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8586917	N/A	2017/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8588888	N/A	2017/03/28	
Ammonia-N (Preserved)	KONE/COL	8587354	N/A	2017/03/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8587509	N/A	2017/03/25	
Nitrite (N) (low level)	TRAA/COL	8587510	N/A	2017/03/25	
Nitrogen - Nitrate (as N)	CALC	8586856	N/A	2017/03/28	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/03/24	
pH Water	AT/ALK	8587290	N/A	2017/03/25	
Sulphate by Automated Colourimetry	KONE/COL	8589597	N/A	2017/03/28	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8587657	2017/03/27	2017/03/27	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8587658	N/A	2017/03/27	
Total Suspended Solids-Low Level	BAL/BAL	8587819	2017/03/27	2017/03/28	

Maxxam ID: QT8625
Sample ID: KZ-22
Matrix: Water

Collected: 2017/03/20
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8587260	N/A	2017/03/25	Name Redacted
Alkalinity - Water	AT/ALK	8587283	2017/03/25	2017/03/25	
Chloride by Automated Colourimetry	KONE/COL	8589108	N/A	2017/03/27	
Cyanide SAD (strong acid dissociable)	TECH/COL	8588301	N/A	2017/03/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8588304	N/A	2017/03/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8588400	N/A	2017/03/27	
Conductance - water	AT/ALK	8587289	N/A	2017/03/25	
Fluoride	ISE/ISE	8589743	N/A	2017/03/28	
Hardness Total (calculated as CaCO3)	CALC	8586237	N/A	2017/03/29	
Hardness (calculated as CaCO3)	CALC	8586339	N/A	2017/03/28	

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QT8625
Sample ID: KZ-22
Matrix: Water

Collected: 2017/03/20
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8588277	N/A	2017/03/27	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8588895	2017/03/28	2017/03/28	
Ion Balance (as Cations/Anions Ratio)	CALC	8586748	N/A	2017/03/28	
Sum of cations, anions	CALC	8586855	N/A	2017/03/28	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8586916	N/A	2017/03/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8588092	N/A	2017/03/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8586917	N/A	2017/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8588888	N/A	2017/03/28	
Ammonia-N (Preserved)	KONE/COL	8587355	N/A	2017/03/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8587509	N/A	2017/03/25	
Nitrite (N) (low level)	TRAA/COL	8587510	N/A	2017/03/25	
Nitrogen - Nitrate (as N)	CALC	8586856	N/A	2017/03/28	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/03/24	
pH Water	AT/ALK	8587290	N/A	2017/03/25	
Sulphate by Automated Colourimetry	KONE/COL	8589110	N/A	2017/03/27	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8587657	2017/03/27	2017/03/27	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8587658	N/A	2017/03/27	
Total Suspended Solids-Low Level	BAL/BAL	8587819	2017/03/27	2017/03/28	

Maxxam ID: QT8625 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2017/03/20
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8589108	N/A	2017/03/27	Name Redacted
Fluoride	ISE/ISE	8589743	N/A	2017/03/28	
Sulphate by Automated Colourimetry	KONE/COL	8589110	N/A	2017/03/27	

Maxxam ID: QT8626
Sample ID: KZ-26
Matrix: Water

Collected: 2017/03/20
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8587260	N/A	2017/03/25	Name Redacted
Alkalinity - Water	AT/ALK	8587283	2017/03/25	2017/03/25	
Chloride by Automated Colourimetry	KONE/COL	8589100	N/A	2017/03/27	
Cyanide SAD (strong acid dissociable)	TECH/COL	8588301	N/A	2017/03/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8588304	N/A	2017/03/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8588400	N/A	2017/03/27	
Conductance - water	AT/ALK	8587289	N/A	2017/03/25	
Fluoride	ISE/ISE	8589741	N/A	2017/03/28	
Hardness Total (calculated as CaCO3)	CALC	8586237	N/A	2017/03/29	
Hardness (calculated as CaCO3)	CALC	8586339	N/A	2017/03/28	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8588277	N/A	2017/03/27	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QT8626
Sample ID: KZ-26
Matrix: Water

Collected: 2017/03/20
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8588895	2017/03/28	2017/03/28	Name Redacted
Ion Balance (as Cations/Anions Ratio)	CALC	8586748	N/A	2017/03/28	
Sum of cations, anions	CALC	8586855	N/A	2017/03/28	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8586916	N/A	2017/03/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8588092	N/A	2017/03/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8586917	N/A	2017/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8588888	N/A	2017/03/28	
Ammonia-N (Preserved)	KONE/COL	8587355	N/A	2017/03/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8587509	N/A	2017/03/25	
Nitrite (N) (low level)	TRAA/COL	8587510	N/A	2017/03/25	
Nitrogen - Nitrate (as N)	CALC	8586856	N/A	2017/03/28	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/03/24	
pH Water	AT/ALK	8587290	N/A	2017/03/25	
Sulphate by Automated Colourimetry	KONE/COL	8589104	N/A	2017/03/27	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8587657	2017/03/27	2017/03/27	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8587658	N/A	2017/03/27	
Total Suspended Solids-Low Level	BAL/BAL	8587819	2017/03/27	2017/03/28	

Maxxam ID: QT8626 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2017/03/20
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8587657	2017/03/27	2017/03/27	Name Redacted
Total Phosphorus - Low Level Unpreserved	KONE/COL	8587658	N/A	2017/03/27	

Maxxam ID: QT8627
Sample ID: KZ-28
Matrix: Water

Collected: 2017/03/21
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8587259	N/A	2017/03/25	Name Redacted
Alkalinity - Water	AT/ALK	8587276	2017/03/25	2017/03/25	
Chloride by Automated Colourimetry	KONE/COL	8589097	N/A	2017/03/27	
Cyanide SAD (strong acid dissociable)	TECH/COL	8588301	N/A	2017/03/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8588304	N/A	2017/03/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8588400	N/A	2017/03/27	
Conductance - water	AT/ALK	8587277	N/A	2017/03/25	
Fluoride	ISE/ISE	8589370	N/A	2017/03/27	
Hardness Total (calculated as CaCO3)	CALC	8586237	N/A	2017/03/29	
Hardness (calculated as CaCO3)	CALC	8586339	N/A	2017/03/28	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8588277	N/A	2017/03/27	
Mercury (Total-LowLevel) by CVAF	CV/AF	8588895	2017/03/28	2017/03/28	
Ion Balance (as Cations/Anions Ratio)	CALC	8586748	N/A	2017/03/28	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QT8627
Sample ID: KZ-28
Matrix: Water

Collected: 2017/03/21
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sum of cations, anions	CALC	8586855	N/A	2017/03/28	Name Redacted
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8586916	N/A	2017/03/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8588092	N/A	2017/03/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8586917	N/A	2017/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8588888	N/A	2017/03/28	
Ammonia-N (Preserved)	KONE/COL	8587355	N/A	2017/03/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8587507	N/A	2017/03/25	
Nitrite (N) (low level)	TRAA/COL	8587508	N/A	2017/03/25	
Nitrogen - Nitrate (as N)	CALC	8586856	N/A	2017/03/28	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/03/24	
pH Water	AT/ALK	8587278	N/A	2017/03/25	
Sulphate by Automated Colourimetry	KONE/COL	8589098	N/A	2017/03/27	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8587422	2017/03/25	2017/03/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8587423	N/A	2017/03/25	
Total Suspended Solids-Low Level	BAL/BAL	8587819	2017/03/27	2017/03/28	

Maxxam ID: QT8628
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/03/23
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8587260	N/A	2017/03/25	Name Redacted
Alkalinity - Water	AT/ALK	8587283	2017/03/25	2017/03/25	
Chloride by Automated Colourimetry	KONE/COL	8589108	N/A	2017/03/27	
Cyanide SAD (strong acid dissociable)	TECH/COL	8588301	N/A	2017/03/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8588304	N/A	2017/03/27	
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8587387	N/A	2017/03/25	
Conductance - water	AT/ALK	8587289	N/A	2017/03/25	
Fluoride	ISE/ISE	8589743	N/A	2017/03/28	
Hardness Total (calculated as CaCO3)	CALC	8586237	N/A	2017/03/29	
Hardness (calculated as CaCO3)	CALC	8586339	N/A	2017/03/28	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8588277	N/A	2017/03/27	
Mercury (Total-LowLevel) by CVAF	CV/AF	8588895	2017/03/28	2017/03/28	
Ion Balance (as Cations/Anions Ratio)	CALC	8586748	N/A	2017/03/28	
Sum of cations, anions	CALC	8586855	N/A	2017/03/28	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8586916	N/A	2017/03/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8588092	N/A	2017/03/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8586917	N/A	2017/03/29	
Elements by ICPMS Low Level (total)	ICP/CRCM	8588888	N/A	2017/03/29	
Ammonia-N (Preserved)	KONE/COL	8587355	N/A	2017/03/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8587509	N/A	2017/03/25	
Nitrite (N) (low level)	TRAA/COL	8587510	N/A	2017/03/25	
Nitrogen - Nitrate (as N)	CALC	8586856	N/A	2017/03/28	
pH Water	AT/ALK	8587290	N/A	2017/03/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: QT8628
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/03/23
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate by Automated Colourimetry	KONE/COL	8589110	N/A	2017/03/27	Name Redacted
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8587657	2017/03/27	2017/03/27	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8587658	N/A	2017/03/27	
Total Suspended Solids-Low Level	BAL/BAL	8587819	2017/03/27	2017/03/28	

Maxxam ID: QT8628 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/03/23
Shipped:
Received: 2017/03/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8587387	N/A	2017/03/25	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	2.3°C
Package 2	6.0°C
Package 3	1.7°C
Package 4	1.0°C
Package 5	1.0°C
Package 6	1.0°C
Package 7	1.0°C

Revised Report V2 (M_S, 2017/04/06): Sample KZ-37 Total Titanium value revised due to rework.
All samples were received at analytical lab past recommended hold time or on day of expiry for nitrate and nitrite.

Sample QT8623 [KZ-19] : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Sample QT8628 [TRIP BLANK] : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8587259	Acidity (pH 4.5)	2017/03/25					<0.50	mg/L	NC	20
8587259	Acidity (pH 8.3)	2017/03/25			97	80 - 120	<0.50	mg/L	3.0	20
8587260	Acidity (pH 4.5)	2017/03/25					<0.50	mg/L	NC	20
8587260	Acidity (pH 8.3)	2017/03/25			96	80 - 120	<0.50	mg/L	4.6	20
8587273	pH	2017/03/25			102	97 - 103			0.13	N/A
8587274	Conductivity	2017/03/25			99	80 - 120	<1.0	uS/cm	0.67	20
8587275	Alkalinity (PP as CaCO3)	2017/03/25					<0.50	mg/L	NC	20
8587275	Alkalinity (Total as CaCO3)	2017/03/25	NC	80 - 120	96	80 - 120	<0.50	mg/L	0.38	20
8587275	Bicarbonate (HCO3)	2017/03/25					<0.50	mg/L	0.38	20
8587275	Carbonate (CO3)	2017/03/25					<0.50	mg/L	NC	20
8587275	Hydroxide (OH)	2017/03/25					<0.50	mg/L	NC	20
8587276	Alkalinity (PP as CaCO3)	2017/03/25					<0.50	mg/L	NC	20
8587276	Alkalinity (Total as CaCO3)	2017/03/25	NC	80 - 120	97	80 - 120	<0.50	mg/L	0.15	20
8587276	Bicarbonate (HCO3)	2017/03/25					<0.50	mg/L	0.15	20
8587276	Carbonate (CO3)	2017/03/25					<0.50	mg/L	NC	20
8587276	Hydroxide (OH)	2017/03/25					<0.50	mg/L	NC	20
8587277	Conductivity	2017/03/25			100	80 - 120	<1.0	uS/cm	0	20
8587278	pH	2017/03/25			102	97 - 103			0.12	N/A
8587283	Alkalinity (PP as CaCO3)	2017/03/25					<0.50	mg/L	NC	20
8587283	Alkalinity (Total as CaCO3)	2017/03/25	NC	80 - 120	97	80 - 120	<0.50	mg/L	0.30	20
8587283	Bicarbonate (HCO3)	2017/03/25					<0.50	mg/L	0.30	20
8587283	Carbonate (CO3)	2017/03/25					<0.50	mg/L	NC	20
8587283	Hydroxide (OH)	2017/03/25					<0.50	mg/L	NC	20
8587289	Conductivity	2017/03/25			100	80 - 120	<1.0	uS/cm	0.41	20
8587290	pH	2017/03/25			102	97 - 103				
8587353	Total Ammonia (N)	2017/03/25	NC	80 - 120	104	80 - 120	<0.0050	mg/L	2.1	20
8587354	Total Ammonia (N)	2017/03/25	111	80 - 120	109	80 - 120	<0.0050	mg/L	16	20
8587355	Total Ammonia (N)	2017/03/25	105	80 - 120	106	80 - 120	<0.0050	mg/L	6.2	20
8587387	Dissolved Organic Carbon (C)	2017/03/25	120	80 - 120	102	80 - 120	<0.50	mg/L	NC	20
8587422	Dissolved Phosphorus (P)	2017/03/25	95	80 - 120	92	80 - 120	<0.0020	mg/L	14	20
8587423	Total Phosphorus (P)	2017/03/25	97	80 - 120	92	80 - 120	<0.0020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8587425	Dissolved Phosphorus (P)	2017/03/25	NC	80 - 120	93	80 - 120	<0.0020	mg/L	0.83	20
8587427	Total Phosphorus (P)	2017/03/25	NC	80 - 120	93	80 - 120	<0.0020	mg/L	0.59	20
8587433	Total Phosphorus (P)	2017/03/25	96	80 - 120	98	80 - 120	<0.0020	mg/L	0.73	20
8587507	Nitrate plus Nitrite (N)	2017/03/25	104	80 - 120	104	80 - 120	<0.0020	mg/L	0.88	25
8587508	Nitrite (N)	2017/03/25	99	80 - 120	99	80 - 120	<0.0020	mg/L	18	25
8587509	Nitrate plus Nitrite (N)	2017/03/25	NC	80 - 120	104	80 - 120	<0.0020	mg/L	0.51	25
8587510	Nitrite (N)	2017/03/25	99	80 - 120	101	80 - 120	<0.0020	mg/L	NC	25
8587657	Dissolved Phosphorus (P)	2017/03/27	115	80 - 120	96	80 - 120	<0.0020	mg/L	NC	20
8587658	Total Phosphorus (P)	2017/03/27	102	80 - 120	96	80 - 120	<0.0020	mg/L	1.2	20
8587819	Total Suspended Solids	2017/03/28			102	80 - 120	<1.0	mg/L		
8588092	Dissolved Aluminum (Al)	2017/03/27	95	80 - 120	101	80 - 120	<0.00050	mg/L	0.45	20
8588092	Dissolved Antimony (Sb)	2017/03/27	100	80 - 120	104	80 - 120	<0.000020	mg/L	4.8	20
8588092	Dissolved Arsenic (As)	2017/03/27	102	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8588092	Dissolved Barium (Ba)	2017/03/27	NC	80 - 120	101	80 - 120	<0.000020	mg/L	0.38	20
8588092	Dissolved Beryllium (Be)	2017/03/27	95	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8588092	Dissolved Bismuth (Bi)	2017/03/27	93	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8588092	Dissolved Boron (B)	2017/03/27	95	80 - 120	101	80 - 120	<0.010	mg/L	NC	20
8588092	Dissolved Cadmium (Cd)	2017/03/27	98	80 - 120	102	80 - 120	<0.0000050	mg/L	8.5	20
8588092	Dissolved Chromium (Cr)	2017/03/27	97	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
8588092	Dissolved Cobalt (Co)	2017/03/27	96	80 - 120	102	80 - 120	<0.0000050	mg/L	15	20
8588092	Dissolved Copper (Cu)	2017/03/27	95	80 - 120	102	80 - 120	<0.000050	mg/L	1.4	20
8588092	Dissolved Iron (Fe)	2017/03/27	107	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20
8588092	Dissolved Lead (Pb)	2017/03/27	94	80 - 120	99	80 - 120	<0.0000050	mg/L	11	20
8588092	Dissolved Lithium (Li)	2017/03/27	95	80 - 120	103	80 - 120	<0.00050	mg/L	0.69	20
8588092	Dissolved Manganese (Mn)	2017/03/27	98	80 - 120	99	80 - 120	<0.000050	mg/L	1.9	20
8588092	Dissolved Molybdenum (Mo)	2017/03/27	98	80 - 120	103	80 - 120	<0.000050	mg/L	1.3	20
8588092	Dissolved Nickel (Ni)	2017/03/27	96	80 - 120	101	80 - 120	<0.000020	mg/L	3.9	20
8588092	Dissolved Phosphorus (P)	2017/03/27					<0.0020	mg/L	NC	20
8588092	Dissolved Selenium (Se)	2017/03/27	100	80 - 120	101	80 - 120	<0.000040	mg/L	0.49	20
8588092	Dissolved Silicon (Si)	2017/03/27					<0.050	mg/L	0.45	20
8588092	Dissolved Silver (Ag)	2017/03/27	99	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8588092	Dissolved Strontium (Sr)	2017/03/27	NC	80 - 120	98	80 - 120	<0.000050	mg/L	0.45	20
8588092	Dissolved Thallium (Tl)	2017/03/27	96	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8588092	Dissolved Tin (Sn)	2017/03/27	101	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
8588092	Dissolved Titanium (Ti)	2017/03/27	94	80 - 120	109	80 - 120	<0.00050	mg/L	NC	20
8588092	Dissolved Uranium (U)	2017/03/27	99	80 - 120	99	80 - 120	<0.0000020	mg/L	2.5	20
8588092	Dissolved Vanadium (V)	2017/03/27	100	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8588092	Dissolved Zinc (Zn)	2017/03/27	NC	80 - 120	103	80 - 120	<0.00010	mg/L	2.2	20
8588092	Dissolved Zirconium (Zr)	2017/03/27					<0.00010	mg/L	NC	20
8588277	Dissolved Mercury (Hg)	2017/03/27	94	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8588301	Strong Acid Dissoc. Cyanide (CN)	2017/03/27	109	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8588304	Weak Acid Dissoc. Cyanide (CN)	2017/03/27	109	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8588398	Dissolved Organic Carbon (C)	2017/03/27	106	80 - 120	108	80 - 120	<0.50	mg/L	8.9	20
8588400	Dissolved Organic Carbon (C)	2017/03/27	106	80 - 120	105	80 - 120	<0.50	mg/L	NC	20
8588888	Total Aluminum (Al)	2017/03/29	100	80 - 120	96	80 - 120	<0.00050	mg/L	12	20
8588888	Total Antimony (Sb)	2017/03/29	101	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8588888	Total Arsenic (As)	2017/03/29	102	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8588888	Total Barium (Ba)	2017/03/29	103	80 - 120	96	80 - 120	<0.000020	mg/L	NC	20
8588888	Total Beryllium (Be)	2017/03/29	92	80 - 120	89	80 - 120	<0.000010	mg/L	NC	20
8588888	Total Bismuth (Bi)	2017/03/29	102	80 - 120	95	80 - 120	<0.0000050	mg/L	NC	20
8588888	Total Boron (B)	2017/03/29	92	80 - 120	88	80 - 120	<0.010	mg/L	NC	20
8588888	Total Cadmium (Cd)	2017/03/29	100	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8588888	Total Chromium (Cr)	2017/03/29	99	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8588888	Total Cobalt (Co)	2017/03/29	98	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8588888	Total Copper (Cu)	2017/03/29	97	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8588888	Total Iron (Fe)	2017/03/29	106	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
8588888	Total Lead (Pb)	2017/03/29	96	80 - 120	92	80 - 120	<0.0000050	mg/L	11	20
8588888	Total Lithium (Li)	2017/03/29	91	80 - 120	87	80 - 120	<0.00050	mg/L	NC	20
8588888	Total Manganese (Mn)	2017/03/29	102	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8588888	Total Molybdenum (Mo)	2017/03/29	100	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8588888	Total Nickel (Ni)	2017/03/29	99	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8588888	Total Phosphorus (P)	2017/03/29					<0.0020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8588888	Total Selenium (Se)	2017/03/29	103	80 - 120	104	80 - 120	<0.000040	mg/L	NC	20
8588888	Total Silicon (Si)	2017/03/29					<0.050	mg/L	NC	20
8588888	Total Silver (Ag)	2017/03/29	99	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8588888	Total Strontium (Sr)	2017/03/29	102	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8588888	Total Thallium (Tl)	2017/03/29	99	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8588888	Total Tin (Sn)	2017/03/29	102	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
8588888	Total Titanium (Ti)	2017/03/29	108	80 - 120	95	80 - 120	<0.00050	mg/L	NC	20
8588888	Total Uranium (U)	2017/03/29	95	80 - 120	93	80 - 120	<0.0000020	mg/L	NC	20
8588888	Total Vanadium (V)	2017/03/29	96	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8588888	Total Zinc (Zn)	2017/03/29	103	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8588888	Total Zirconium (Zr)	2017/03/29					<0.00010	mg/L	NC	20
8588895	Total Mercury (Hg)	2017/03/28	91	80 - 120	92	80 - 120	<0.0000020	mg/L	NC	20
8589097	Dissolved Chloride (Cl)	2017/03/27	103	80 - 120	105	80 - 120	<0.50	mg/L	2.1	20
8589098	Dissolved Sulphate (SO4)	2017/03/27	NC	80 - 120	103	80 - 120	0.52, RDL=0.50	mg/L	1.3	20
8589100	Dissolved Chloride (Cl)	2017/03/27	109	80 - 120	99	80 - 120	<0.50	mg/L	4.4	20
8589104	Dissolved Sulphate (SO4)	2017/03/27	107	80 - 120	98	80 - 120	<0.50	mg/L	NC	20
8589108	Dissolved Chloride (Cl)	2017/03/27	114	80 - 120	101	80 - 120	<0.50	mg/L	0.38	20
8589110	Dissolved Sulphate (SO4)	2017/03/27	NC	80 - 120	99	80 - 120	<0.50	mg/L	1.1	20
8589370	Fluoride (F)	2017/03/27	99	80 - 120	100	80 - 120	0.014, RDL=0.010	mg/L	5.5	20
8589597	Dissolved Sulphate (SO4)	2017/03/28	119	80 - 120	104	80 - 120	<0.50	mg/L	0.57	20
8589741	Fluoride (F)	2017/03/28	100	80 - 120	102	80 - 120	0.019, RDL=0.010	mg/L	13	20
8589743	Fluoride (F)	2017/03/28	96	80 - 120	100	80 - 120	0.014, RDL=0.010	mg/L	0	20
8591567	Total Ammonia (N)	2017/03/30	NC	80 - 120	102	80 - 120	<0.0050	mg/L	0.53	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8595517	Total Titanium (Ti)	2017/04/04			110	80 - 120	<0.00050	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B721739
Report Date: 2017/04/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Name Redacted Scientific Services Manager
Redacted

Signature Redacted

Name Redacted ientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

BBY FCD-00077/05

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08437329

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[X] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:
						Rush Confirmation #:

Regulatory Criteria

[ ] BC CSR Soil [ ] BC CSR Water
[ ] CCME (Specify) [ ] Other (Specify)
[ ] Drinking Water [ ] BC Water Quality

Special Instructions

[ ] Return Cooler
[ ] Ship Sample Bottles (Please Specify)
USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (CL F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		21-Mar-17	17:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
2	KZ-6		21-Mar-17	15:10	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3	KZ-7		21-Mar-17	13:50	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
4	KZ-9		21-Mar-17	12:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5	KZ-13		20-Mar-17	15:45	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
6	KZ-37		21-Mar-17	11:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
7	KZ-15		21-Mar-17	8:05	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
8	KZ-18		21-Mar-17	12:35	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
9	KZ-16		21-Mar-17	9:20	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
10	KZ-17		21-Mar-17	10:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
11	KZ-19		20-Mar-17	16:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		112/222
NA		312/221
NA		111/131/223

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Signature @1150
2017-03-23
TEMP: 3 6 1 0 / 3 6 1 0 / 0 0 0 0 / 0 0 0 0 / 0 0 0 1

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	23/03/2017	12:00	Signature Redacted	2017/03/24	13:45

B721739_COC

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC #: B4437330

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-21		20-Mar-17	13:35	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
2	KZ-22		20-Mar-17	13:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3	KZ-26		20-Mar-17	11:40	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
4	KZ-28		21-Mar-17	11:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
6																						
7																						
8																						
9																						
10																						

B721739_COC

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
NA		1.2/22.2
NA		3.2/22.1
NA		1.1/3.1/22.3

COOLING MEDIA PRESENT Y / N

COMMENTS 223

RECEIVED IN WHITEHORSE

BY: Signature Redacted

2017-03-23

TEMP: 3.6 / 3.6 / 3.6

MAXXAM JOB # B721739

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	23/03/2017	12:00	Signature Redacted	2017/03/24	13:45

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08438261, 08438262

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/05/09
Report #: R2380317
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B732524
Received: 2017/05/01, 10:30

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	15	N/A	2017/05/03	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	1	2017/05/03	2017/05/03	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	13	2017/05/03	2017/05/04	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	1	2017/05/04	2017/05/04	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	14	N/A	2017/05/02	BBY6SOP-00011	SM 22 4500-Cl- E m
Chloride by Automated Colourimetry	1	N/A	2017/05/03	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	15	N/A	2017/05/02	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	15	N/A	2017/05/02	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	15	N/A	2017/05/03	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	1	N/A	2017/05/03	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	14	N/A	2017/05/04	BBY6SOP-00026	SM 22 2510 B m
Fluoride	15	N/A	2017/05/03	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	15	N/A	2017/05/04	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	12	N/A	2017/05/03	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	3	N/A	2017/05/05	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	15	N/A	2017/05/03	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	15	2017/05/03	2017/05/03	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance (as Cations/Anions Ratio)	12	N/A	2017/05/04	BBY WI-00033	Auto Calc
Ion Balance (as Cations/Anions Ratio)	3	N/A	2017/05/08	BBY WI-00033	Auto Calc
Ion Balance	12	N/A	2017/05/04	BBY WI-00033	SM 22 1030E
Ion Balance	3	N/A	2017/05/08	BBY WI-00033	SM 22 1030E
Sum of cations, anions	12	N/A	2017/05/03	Calc	
Sum of cations, anions	3	N/A	2017/05/05	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	12	N/A	2017/05/03	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	3	N/A	2017/05/05	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	15	N/A	2017/05/03	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	6	2017/05/03	2017/05/04	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	15	N/A	2017/05/04	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	8	N/A	2017/05/03	BBY7SOP-00003,	BCLM2005,EPA6020bR2m

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08438261, 08438262

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/05/09
Report #: R2380317
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B732524
Received: 2017/05/01, 10:30

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Elements by ICPMS Low Level (total)	1	N/A	2017/05/04	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	14	N/A	2017/05/02	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	1	N/A	2017/05/05	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	15	N/A	2017/05/02	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	15	N/A	2017/05/02	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N) Low Level Calc	15	N/A	2017/05/04	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	14	N/A	2017/05/03	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	1	N/A	2017/05/03	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (2)	14	N/A	2017/05/04	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	15	N/A	2017/05/02	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	14	2017/05/03	2017/05/03	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2017/05/06	2017/05/06	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	14	N/A	2017/05/03	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	1	N/A	2017/05/06	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	7	2017/05/02	2017/05/03	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	8	2017/05/03	2017/05/04	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08438261, 08438262

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/05/09
Report #: R2380317
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B732524
Received: 2017/05/01, 10:30

dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QZ0411		QZ0412		QZ0413		
Sampling Date		2017/04/29 15:20		2017/04/30 09:45		2017/04/29 10:35		
COC Number		08438261		08438261		08438261		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-37	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.9	8622090	3.6	8618045	4.5	N/A	8622090
Cation Sum	meq/L	2.7	8622090	3.4	8618045	4.2	N/A	8622090
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.93	8622088	0.92	8618043	0.93	0.010	8622088
Ion Balance (% Difference)	%	3.8	8622089	4.0	8618044	3.9	N/A	8622089
Nitrate (N)	mg/L	0.111	8618048	0.204	8618048	0.187	0.0020	8618048
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8618137	0.00063	8618137	0.00059	0.00050	8618137
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8618142	<0.00050	8618142	0.00052	0.00050	8618142
Fluoride (F)	mg/L	0.051	8620795	0.077	8620790	0.096	0.010	8620790
Dissolved Organic Carbon (C)	mg/L	2.06	8619038	1.82	8619038	1.88	0.50	8619038
Acidity (pH 4.5)	mg/L	<0.50	8619428	<0.50	8619428	<0.50	0.50	8619428
Alkalinity (Total as CaCO3)	mg/L	89.0	8619688	154	8619685	191	0.50	8619688
Acidity (pH 8.3)	mg/L	0.87	8619428	<0.50	8619428	7.30	0.50	8619428
Alkalinity (PP as CaCO3)	mg/L	<0.50	8619688	<0.50	8619685	<0.50	0.50	8619688
Bicarbonate (HCO3)	mg/L	109	8619688	188	8619685	232	0.50	8619688
Carbonate (CO3)	mg/L	<0.50	8619688	<0.50	8619685	<0.50	0.50	8619688
Hydroxide (OH)	mg/L	<0.50	8619688	<0.50	8619685	<0.50	0.50	8619688
Anions								
Dissolved Sulphate (SO4)	mg/L	50.9	8618877	24.4	8618877	31.7	0.50	8618877
Dissolved Chloride (Cl)	mg/L	0.61	8618835	0.99	8618835	0.85	0.50	8618835
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0024 (1)	8619384	0.0048	8619384	0.0205 (1)	0.0020	8619384
Total Ammonia (N)	mg/L	0.024	8618497	0.024	8618497	0.030	0.0050	8618497
Nitrate plus Nitrite (N)	mg/L	0.111	8619132	0.204	8619132	0.190	0.0020	8619132
Nitrite (N)	mg/L	<0.0020	8619136	<0.0020	8619136	0.0027	0.0020	8619136
Total Phosphorus (P)	mg/L	0.0025 (1)	8619386	0.0047	8619386	0.0188 (1)	0.0020	8619386
Physical Properties								
Conductivity	uS/cm	280	8619689	323	8619686	404	1.0	8619689
pH	pH	8.10	8619690	8.26	8619687	8.27		8619690

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QZ0411		QZ0412		QZ0413		
Sampling Date		2017/04/29 15:20		2017/04/30 09:45		2017/04/29 10:35		
COC Number		08438261		08438261		08438261		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-37	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8618056	1.0	8618056	<1.0	1.0	8618056
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QZ0414		QZ0415		QZ0416	QZ0417		
Sampling Date		2017/04/29 11:55		2017/04/30 11:30		2017/04/28 14:15	2017/04/28 15:25		
COC Number		08438261		08438261		08438261	08438261		
	UNITS	KZ-9	QC Batch	KZ-13	QC Batch	KZ-15	KZ-16	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	4.4	8618045	2.6	8618045	5.5	5.4	N/A	8618045
Cation Sum	meq/L	4.0	8618045	2.4	8618045	5.1	5.1	N/A	8618045
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD	FIELD		ONSITE
Ion Balance	N/A	0.91	8618043	0.92	8618043	0.93	0.94	0.010	8618043
Ion Balance (% Difference)	%	4.7	8618044	4.1	8618044	3.9	2.9	N/A	8618044
Nitrate (N)	mg/L	0.167	8618048	0.142	8618048	0.203	0.249	0.0020	8618048
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00067	8618137	0.00068	8618137	0.00064	0.00057	0.00050	8618137
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00066	8618142	0.00063	8618142	0.00058	0.00050	0.00050	8618142
Fluoride (F)	mg/L	0.097	8620790	0.061	8620795	0.120	0.089	0.010	8620790
Dissolved Organic Carbon (C)	mg/L	2.16	8619038	3.39	8619038	1.30	1.46	0.50	8619038
Acidity (pH 4.5)	mg/L	<0.50	8619428	<0.50	8619428	<0.50	<0.50	0.50	8619428
Alkalinity (Total as CaCO3)	mg/L	183	8619688	109	8619688	236	229	0.50	8619688
Acidity (pH 8.3)	mg/L	11.8	8619428	<0.50	8619428	1.07	11.0	0.50	8619428
Alkalinity (PP as CaCO3)	mg/L	<0.50	8619688	<0.50	8619688	3.73	1.97	0.50	8619688
Bicarbonate (HCO3)	mg/L	224	8619688	133	8619688	279	274	0.50	8619688
Carbonate (CO3)	mg/L	<0.50	8619688	<0.50	8619688	4.48	2.36	0.50	8619688
Hydroxide (OH)	mg/L	<0.50	8619688	<0.50	8619688	<0.50	<0.50	0.50	8619688
Anions									
Dissolved Sulphate (SO4)	mg/L	35.2	8618877	18.0	8618877	37.1	36.9	0.50	8618877
Dissolved Chloride (Cl)	mg/L	0.75	8620097	0.59	8618835	0.61	0.51	0.50	8618835
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0043 (1)	8619384	0.0068	8619384	0.0054 (2)	0.0038 (2)	0.0020	8619384
Total Ammonia (N)	mg/L	0.028	8618497	0.042	8618497	0.059	0.040	0.0050	8618497
Nitrate plus Nitrite (N)	mg/L	0.167	8619129	0.142	8619132	0.203 (2)	0.249 (2)	0.0020	8619132
Nitrite (N)	mg/L	<0.0020	8619130	<0.0020	8619136	<0.0020 (2)	<0.0020 (2)	0.0020	8619136
Total Phosphorus (P)	mg/L	0.0069 (1)	8619386	0.0052	8619386	0.0054 (2)	0.0039 (2)	0.0020	8619386
Physical Properties									
Conductivity	uS/cm	399	8619689	240	8619689	480	474	1.0	8619689

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.
(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QZ0414		QZ0415		QZ0416	QZ0417		
Sampling Date		2017/04/29 11:55		2017/04/30 11:30		2017/04/28 14:15	2017/04/28 15:25		
COC Number		08438261		08438261		08438261	08438261		
	UNITS	KZ-9	QC Batch	KZ-13	QC Batch	KZ-15	KZ-16	RDL	QC Batch
pH	pH	8.07	8619690	8.20	8619690	8.40	8.33		8619690
Physical Properties									
Total Suspended Solids	mg/L	3.3	8618056	<1.0	8618056	<1.0	<1.0	1.0	8618056
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QZ0418		QZ0419			QZ0425		
Sampling Date		2017/04/28 16:18		2017/04/28 13:45			2017/04/28 13:20		
COC Number		08438261		08438261			08438262		
	UNITS	KZ-17	QC Batch	KZ-19	RDL	QC Batch	KZ-21	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	5.9	8622090	0.019	N/A	8618045	7.1	N/A	8618045
Cation Sum	meq/L	5.7	8622090	0.0048	N/A	8618045	6.6	N/A	8618045
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD		ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.96	8622088	0.25	0.010	8618043	0.94	0.010	8618043
Ion Balance (% Difference)	%	1.9	8622089	60	N/A	8618044	3.2	N/A	8618044
Nitrate (N)	mg/L	0.291	8618048	<0.0020	0.0020	8618048	0.137	0.0020	8618048
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00053	8618137	0.00056	0.00050	8618137	0.00076	0.00050	8618137
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00062	8618142	0.00051	0.00050	8618142	0.00078	0.00050	8618142
Fluoride (F)	mg/L	0.073	8620790	0.011	0.010	8620795	0.240	0.010	8620790
Dissolved Organic Carbon (C)	mg/L	0.73	8619038	<0.50	0.50	8619038	6.46	0.50	8619038
Acidity (pH 4.5)	mg/L	<0.50	8619428	<0.50	0.50	8619428	<0.50	0.50	8619428
Alkalinity (Total as CaCO3)	mg/L	250	8619688	0.92	0.50	8619688	279	0.50	8619688
Acidity (pH 8.3)	mg/L	11.3	8619428	<0.50	0.50	8619428	14.6	0.50	8619428
Alkalinity (PP as CaCO3)	mg/L	<0.50	8619688	<0.50	0.50	8619688	3.12	0.50	8619688
Bicarbonate (HCO3)	mg/L	305	8619688	1.12	0.50	8619688	333	0.50	8619688
Carbonate (CO3)	mg/L	<0.50	8619688	<0.50	0.50	8619688	3.74	0.50	8619688
Hydroxide (OH)	mg/L	<0.50	8619688	<0.50	0.50	8619688	<0.50	0.50	8619688
Anions									
Dissolved Sulphate (SO4)	mg/L	40.0	8618877	<0.50	0.50	8618877	69.7	0.50	8618877
Dissolved Chloride (Cl)	mg/L	0.72	8618835	<0.50	0.50	8618835	1.1	0.50	8618835
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020 (1)	8619384	<0.0020 (1)	0.0020	8619384	0.0844 (1)	0.0020	8619384
Total Ammonia (N)	mg/L	0.038	8618497	0.020	0.0050	8621442	0.10	0.0050	8618497
Nitrate plus Nitrite (N)	mg/L	0.291 (1)	8619132	<0.0020 (1)	0.0020	8619132	0.140 (1)	0.0020	8619132
Nitrite (N)	mg/L	<0.0020 (1)	8619136	<0.0020 (1)	0.0020	8619136	0.0029 (1)	0.0020	8619136
Total Phosphorus (P)	mg/L	<0.0020 (1)	8619386	<0.0020 (1)	0.0020	8619386	0.0804 (1)	0.0020	8619386
Physical Properties									
Conductivity	uS/cm	512	8619689	1.6	1.0	8619689	610	1.0	8619689
pH	pH	8.23	8619690	5.86		8619690	8.34		8619690

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QZ0418		QZ0419			QZ0425		
Sampling Date		2017/04/28 16:18		2017/04/28 13:45			2017/04/28 13:20		
COC Number		08438261		08438261			08438262		
	UNITS	KZ-17	QC Batch	KZ-19	RDL	QC Batch	KZ-21	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8619255	<1.0	1.0	8619255	9.8 (1)	2.5	8619255

RDL = Reportable Detection Limit
(1) RDL raised due to sample matrix interference.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QZ0426		QZ0427		QZ0428		
Sampling Date		2017/04/28 12:25		2017/04/28 10:45		2017/04/29 09:30		
COC Number		08438262		08438262		08438262		
	UNITS	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	6.5	8618045	6.4	8618045	4.5	N/A	8618045
Cation Sum	meq/L	6.0	8618045	6.1	8618045	4.1	N/A	8618045
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.91	8618043	0.95	8618043	0.91	0.010	8618043
Ion Balance (% Difference)	%	4.5	8618044	2.4	8618044	4.6	N/A	8618044
Nitrate (N)	mg/L	0.210	8618048	0.267	8618048	0.186	0.0020	8618048
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00068	8618137	0.00059	8618137	0.00063	0.00050	8618141
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00066	8618142	<0.00050	8618142	0.00071	0.00050	8618142
Fluoride (F)	mg/L	0.170	8620790	0.130	8620790	0.096	0.010	8620790
Dissolved Organic Carbon (C)	mg/L	3.36	8619038	1.78	8619038	1.67	0.50	8619038
Acidity (pH 4.5)	mg/L	<0.50	8619428	<0.50	8619428	<0.50	0.50	8619428
Alkalinity (Total as CaCO3)	mg/L	272	8619688	270	8619688	191	0.50	8619688
Acidity (pH 8.3)	mg/L	9.30	8619428	<0.50	8619428	8.09	0.50	8619428
Alkalinity (PP as CaCO3)	mg/L	<0.50	8619688	7.26	8619688	<0.50	0.50	8619688
Bicarbonate (HCO3)	mg/L	332	8619688	311	8619688	233	0.50	8619688
Carbonate (CO3)	mg/L	<0.50	8619688	8.71	8619688	<0.50	0.50	8619688
Hydroxide (OH)	mg/L	<0.50	8619688	<0.50	8619688	<0.50	0.50	8619688
Anions								
Dissolved Sulphate (SO4)	mg/L	51.1	8618877	47.5	8618877	31.8	0.50	8618877
Dissolved Chloride (Cl)	mg/L	0.92	8618835	1.3	8618835	0.80	0.50	8618835
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0308 (1)	8619384	0.0052 (1)	8619384	0.0209 (2)	0.0020	8622774
Total Ammonia (N)	mg/L	0.063	8618497	0.021	8618497	0.027	0.0050	8618497
Nitrate plus Nitrite (N)	mg/L	0.210 (1)	8619132	0.267 (1)	8619129	0.189	0.0020	8619132
Nitrite (N)	mg/L	<0.0020 (1)	8619136	<0.0020 (1)	8619130	0.0029	0.0020	8619136
Total Phosphorus (P)	mg/L	0.0319 (1)	8619386	0.0073 (1)	8619386	0.0222 (2)	0.0020	8622724

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Sample analysed past recommended hold time.

(2) Sample was originally analysed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QZ0426		QZ0427		QZ0428		
Sampling Date		2017/04/28 12:25		2017/04/28 10:45		2017/04/29 09:30		
COC Number		08438262		08438262		08438262		
	UNITS	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Physical Properties								
Conductivity	uS/cm	566	8619689	550	8619689	403	1.0	8619689
pH	pH	8.28	8619690	8.48	8619690	8.20		8619690
Physical Properties								
Total Suspended Solids	mg/L	3.1	8619255	<1.0	8619255	<1.0	1.0	8619261
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QZ0429		QZ0430		
Sampling Date		2017/05/01 10:30		2017/04/29 12:40		
COC Number		08438262		08438262		
	UNITS	TRIP BLANK	QC Batch	KZ-18	RDL	QC Batch
Calculated Parameters						
Anion Sum	meq/L	0.00060	8618045	4.8	N/A	8618045
Cation Sum	meq/L	0.0030	8618045	4.5	N/A	8618045
Filter and HNO3 Preservation	N/A		ONSITE	FIELD		ONSITE
Ion Balance	N/A	NC	8618043	0.95	0.010	8618043
Ion Balance (% Difference)	%	67	8618044	2.7	N/A	8618044
Nitrate (N)	mg/L	<0.0020	8618048	0.245	0.0020	8618048
Misc. Inorganics						
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8618141	<0.00050	0.00050	8618141
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8618142	<0.00050	0.00050	8618142
Fluoride (F)	mg/L	0.011	8620795	0.089	0.010	8620795
Dissolved Organic Carbon (C)	mg/L	<0.50	8619038	1.10	0.50	8619038
Acidity (pH 4.5)	mg/L	<0.50	8619430	<0.50	0.50	8619428
Alkalinity (Total as CaCO3)	mg/L	<0.50	8619688	212	0.50	8619677
Acidity (pH 8.3)	mg/L	<0.50	8619430	8.60	0.50	8619428
Alkalinity (PP as CaCO3)	mg/L	<0.50	8619688	<0.50	0.50	8619677
Bicarbonate (HCO3)	mg/L	<0.50	8619688	259	0.50	8619677
Carbonate (CO3)	mg/L	<0.50	8619688	<0.50	0.50	8619677
Hydroxide (OH)	mg/L	<0.50	8619688	<0.50	0.50	8619677
Anions						
Dissolved Sulphate (SO4)	mg/L	<0.50	8618877	22.9	0.50	8618877
Dissolved Chloride (Cl)	mg/L	<0.50	8618835	0.74	0.50	8618835
Nutrients						
Dissolved Phosphorus (P)	mg/L	<0.0020	8619384	0.0781 (1)	0.0020	8619384
Total Ammonia (N)	mg/L	<0.0050	8618497	0.030	0.0050	8618497
Nitrate plus Nitrite (N)	mg/L	<0.0020	8619132	0.245	0.0020	8619132
Nitrite (N)	mg/L	<0.0020	8619136	<0.0020	0.0020	8619136
Total Phosphorus (P)	mg/L	<0.0020	8619386	0.0759 (1)	0.0020	8619386
Physical Properties						
Conductivity	uS/cm	1.4	8619689	418	1.0	8619678
pH	pH	5.53	8619690	8.17		8619679

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		QZ0429		QZ0430		
Sampling Date		2017/05/01 10:30		2017/04/29 12:40		
COC Number		08438262		08438262		
	UNITS	TRIP BLANK	QC Batch	KZ-18	RDL	QC Batch
Physical Properties						
Total Suspended Solids	mg/L	<1.0	8619261	1.5	1.0	8619261
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QZ0411		QZ0412		QZ0413		
Sampling Date		2017/04/29 15:20		2017/04/30 09:45		2017/04/29 10:35		
COC Number		08438261		08438261		08438261		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-37	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	128	8621033	165	8618008	202	0.50	8621033
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8619338	<0.0000020	8619338	<0.0000020	0.0000020	8619338
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00527	8618445	0.00702	8618445	0.00273	0.00050	8618445
Dissolved Antimony (Sb)	mg/L	0.000070	8618445	<0.000020	8618445	0.000026	0.000020	8618445
Dissolved Arsenic (As)	mg/L	0.000135	8622068	0.000049	8618445	0.000395	0.000020	8618445
Dissolved Barium (Ba)	mg/L	0.0730	8618445	0.0529	8618445	0.0911	0.000020	8618445
Dissolved Beryllium (Be)	mg/L	<0.000010	8618445	<0.000010	8618445	<0.000010	0.000010	8618445
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8618445	<0.0000050	8618445	<0.0000050	0.0000050	8618445
Dissolved Boron (B)	mg/L	<0.010	8618445	<0.010	8618445	<0.010	0.010	8618445
Dissolved Cadmium (Cd)	mg/L	0.000252	8618445	0.0000190	8618445	0.0000630	0.0000050	8618445
Dissolved Chromium (Cr)	mg/L	<0.00010	8618445	<0.00010	8618445	<0.00010	0.00010	8618445
Dissolved Cobalt (Co)	mg/L	0.0000150	8618445	0.0000160	8618445	0.000124	0.0000050	8618445
Dissolved Copper (Cu)	mg/L	0.00199	8618445	0.000245	8618445	0.000257	0.000050	8618445
Dissolved Iron (Fe)	mg/L	0.0074	8618445	0.0089	8618445	0.225	0.0010	8618445
Dissolved Lead (Pb)	mg/L	0.0000400	8618445	<0.0000050	8618445	<0.0000050	0.0000050	8618445
Dissolved Lithium (Li)	mg/L	0.00143	8618445	0.00082	8618445	0.00464	0.00050	8618445
Dissolved Manganese (Mn)	mg/L	0.000256	8618445	0.00181	8618445	0.0994	0.000050	8618445
Dissolved Molybdenum (Mo)	mg/L	0.000628	8618445	0.000713	8618445	0.000935	0.000050	8618445
Dissolved Nickel (Ni)	mg/L	0.000474	8618445	0.000228	8618445	0.000545	0.000020	8618445
Dissolved Phosphorus (P)	mg/L	0.0032	8618445	0.0043	8618445	0.0204	0.0020	8618445
Dissolved Selenium (Se)	mg/L	0.00258	8618445	0.00133	8618445	0.00112	0.000040	8622068
Dissolved Silicon (Si)	mg/L	2.23	8618445	3.12	8618445	4.05	0.050	8618445
Dissolved Silver (Ag)	mg/L	<0.0000050	8618445	<0.0000050	8618445	<0.0000050	0.0000050	8618445
Dissolved Strontium (Sr)	mg/L	0.131	8618445	0.172	8618445	0.224	0.000050	8618445
Dissolved Thallium (Tl)	mg/L	0.0000050	8618445	<0.0000020	8618445	<0.0000020	0.0000020	8618445
Dissolved Tin (Sn)	mg/L	<0.00020	8618445	<0.00020	8618445	<0.00020	0.00020	8618445
Dissolved Titanium (Ti)	mg/L	<0.00050	8618445	<0.00050	8618445	<0.00050	0.00050	8618445
Dissolved Uranium (U)	mg/L	0.00437	8618445	0.00137	8618445	0.00200	0.0000020	8618445
Dissolved Vanadium (V)	mg/L	<0.00020	8618445	<0.00020	8618445	<0.00020	0.00020	8618445
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QZ0411		QZ0412		QZ0413		
Sampling Date		2017/04/29 15:20		2017/04/30 09:45		2017/04/29 10:35		
COC Number		08438261		08438261		08438261		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-37	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0345	8618445	0.00059	8618445	0.0121	0.00010	8618445
Dissolved Zirconium (Zr)	mg/L	<0.00010	8618445	<0.00010	8618445	<0.00010	0.00010	8618445
Dissolved Calcium (Ca)	mg/L	40.6	8621489	55.0	8618046	63.7	0.050	8621489
Dissolved Magnesium (Mg)	mg/L	6.44	8621489	6.75	8618046	10.5	0.050	8621489
Dissolved Potassium (K)	mg/L	2.38	8621489	1.15	8618046	1.94	0.050	8621489
Dissolved Sodium (Na)	mg/L	0.818	8621489	0.727	8618046	1.42	0.050	8621489
Dissolved Sulphur (S)	mg/L	16.3	8621489	7.8	8618046	10.7	3.0	8621489
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QZ0414	QZ0415	QZ0416	QZ0417		
Sampling Date		2017/04/29 11:55	2017/04/30 11:30	2017/04/28 14:15	2017/04/28 15:25		
COC Number		08438261	08438261	08438261	08438261		
	UNITS	KZ-9	KZ-13	KZ-15	KZ-16	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	195	112	251	248	0.50	8618008
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8619338
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00316	0.00325	0.00086	0.00116	0.00050	8618445
Dissolved Antimony (Sb)	mg/L	0.000065	0.000029	0.000027	0.000020	0.000020	8618445
Dissolved Arsenic (As)	mg/L	0.000242	0.000179	0.000373	0.000162	0.000020	8618445
Dissolved Barium (Ba)	mg/L	0.0979	0.131	0.0949	0.0948	0.000020	8618445
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8618445
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8618445
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8618445
Dissolved Cadmium (Cd)	mg/L	0.0000720	0.0000200	0.0000450	0.0000320	0.0000050	8618445
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8618445
Dissolved Cobalt (Co)	mg/L	0.000147	0.0000430	0.0000280	0.0000860	0.0000050	8618445
Dissolved Copper (Cu)	mg/L	0.000349	0.000268	0.000222	0.000253	0.000050	8618445
Dissolved Iron (Fe)	mg/L	0.321	0.0644	0.0168	0.0176	0.0010	8618445
Dissolved Lead (Pb)	mg/L	0.0000060	<0.0000050	<0.0000050	<0.0000050	0.0000050	8618445
Dissolved Lithium (Li)	mg/L	0.00495	0.00225	0.00417	0.00367	0.00050	8618445
Dissolved Manganese (Mn)	mg/L	0.110	0.102	0.0356	0.0349	0.000050	8618445
Dissolved Molybdenum (Mo)	mg/L	0.000675	0.000854	0.00137	0.000525	0.000050	8618445
Dissolved Nickel (Ni)	mg/L	0.000522	0.000393	0.000944	0.00101	0.000020	8618445
Dissolved Phosphorus (P)	mg/L	0.0038	0.0048	0.0044	0.0047	0.0020	8618445
Dissolved Selenium (Se)	mg/L	0.000932	0.000359	0.00134	0.00117	0.000040	8618445
Dissolved Silicon (Si)	mg/L	3.80	4.75	4.11	3.78	0.050	8618445
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8618445
Dissolved Strontium (Sr)	mg/L	0.222	0.116	0.248	0.254	0.000050	8618445
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8618445
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8618445
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8618445
Dissolved Uranium (U)	mg/L	0.00159	0.00184	0.00472	0.00272	0.0000020	8618445
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8618445
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QZ0414	QZ0415	QZ0416	QZ0417		
Sampling Date		2017/04/29 11:55	2017/04/30 11:30	2017/04/28 14:15	2017/04/28 15:25		
COC Number		08438261	08438261	08438261	08438261		
	UNITS	KZ-9	KZ-13	KZ-15	KZ-16	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0143	0.00265	0.00588	0.00107	0.00010	8618445
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8618445
Dissolved Calcium (Ca)	mg/L	64.5	38.1	73.1	73.0	0.050	8618046
Dissolved Magnesium (Mg)	mg/L	8.19	4.22	16.6	16.0	0.050	8618046
Dissolved Potassium (K)	mg/L	2.25	2.87	1.64	1.54	0.050	8618046
Dissolved Sodium (Na)	mg/L	1.60	1.19	1.43	1.39	0.050	8618046
Dissolved Sulphur (S)	mg/L	10.7	5.8	12.6	11.3	3.0	8618046
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QZ0418		QZ0419	QZ0425	QZ0426		
Sampling Date		2017/04/28 16:18		2017/04/28 13:45	2017/04/28 13:20	2017/04/28 12:25		
COC Number		08438261		08438261	08438262	08438262		
	UNITS	KZ-17	QC Batch	KZ-19	KZ-21	KZ-22	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	278	8621033	<0.50	323	291	0.50	8618008
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8619338	<0.0000020	<0.0000020	<0.0000020	0.0000020	8619338
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00067	8618445	<0.00050	0.00132	0.00083	0.00050	8618445
Dissolved Antimony (Sb)	mg/L	0.000022	8618445	<0.000020	0.000069	0.000036	0.000020	8618445
Dissolved Arsenic (As)	mg/L	0.000180	8618445	<0.000020	0.00130	0.000923	0.000020	8618445
Dissolved Barium (Ba)	mg/L	0.104	8618445	<0.000020	0.0727	0.0816	0.000020	8618445
Dissolved Beryllium (Be)	mg/L	<0.000010	8618445	<0.000010	<0.000010	<0.000010	0.000010	8618445
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8618445	<0.0000050	<0.0000050	<0.0000050	0.0000050	8618445
Dissolved Boron (B)	mg/L	<0.010	8618445	<0.010	<0.010	<0.010	0.010	8618445
Dissolved Cadmium (Cd)	mg/L	0.0000320	8622068	<0.0000050	0.0000190	0.0000160	0.0000050	8618445
Dissolved Chromium (Cr)	mg/L	<0.00010	8618445	<0.00010	<0.00010	<0.00010	0.00010	8618445
Dissolved Cobalt (Co)	mg/L	0.0000070	8618445	<0.0000050	0.000287	0.000148	0.0000050	8618445
Dissolved Copper (Cu)	mg/L	0.000238	8618445	<0.000050	0.000293	0.000254	0.000050	8618445
Dissolved Iron (Fe)	mg/L	0.0011	8618445	<0.0010	0.299	0.141	0.0010	8618445
Dissolved Lead (Pb)	mg/L	0.0000050	8618445	<0.0000050	<0.0000050	<0.0000050	0.0000050	8618445
Dissolved Lithium (Li)	mg/L	0.00341	8618445	<0.00050	0.00773	0.00666	0.00050	8618445
Dissolved Manganese (Mn)	mg/L	0.00201	8618445	<0.000050	0.288	0.123	0.000050	8618445
Dissolved Molybdenum (Mo)	mg/L	0.000513	8618445	<0.000050	0.00184	0.00143	0.000050	8618445
Dissolved Nickel (Ni)	mg/L	0.000578	8618445	<0.000020	0.00310	0.00166	0.000020	8618445
Dissolved Phosphorus (P)	mg/L	0.0037	8618445	0.0022	0.0171	0.0073	0.0020	8618445
Dissolved Selenium (Se)	mg/L	0.00132	8618445	<0.000040	0.000424	0.000914	0.000040	8618445
Dissolved Silicon (Si)	mg/L	3.88	8618445	<0.050	6.28	5.29	0.050	8618445
Dissolved Silver (Ag)	mg/L	<0.0000050	8618445	<0.0000050	<0.0000050	<0.0000050	0.0000050	8618445
Dissolved Strontium (Sr)	mg/L	0.274	8618445	<0.000050	0.243	0.256	0.000050	8618445
Dissolved Thallium (Tl)	mg/L	<0.0000020	8618445	<0.0000020	<0.0000020	<0.0000020	0.0000020	8618445
Dissolved Tin (Sn)	mg/L	<0.00020	8618445	<0.00020	<0.00020	<0.00020	0.00020	8618445
Dissolved Titanium (Ti)	mg/L	<0.00050	8618445	<0.00050	<0.00050	<0.00050	0.00050	8618445
Dissolved Uranium (U)	mg/L	0.00324	8618445	0.0000050	0.00392	0.00418	0.0000020	8618445
Dissolved Vanadium (V)	mg/L	<0.00020	8618445	<0.00020	<0.00020	<0.00020	0.00020	8618445

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QZ0418		QZ0419	QZ0425	QZ0426		
Sampling Date		2017/04/28 16:18		2017/04/28 13:45	2017/04/28 13:20	2017/04/28 12:25		
COC Number		08438261		08438261	08438262	08438262		
	UNITS	KZ-17	QC Batch	KZ-19	KZ-21	KZ-22	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00175	8618445	<0.00010	0.00203	0.00149	0.00010	8618445
Dissolved Zirconium (Zr)	mg/L	<0.00010	8618445	<0.00010	0.00023	0.00013	0.00010	8618445
Dissolved Calcium (Ca)	mg/L	84.9	8621489	<0.050	76.2	75.4	0.050	8618046
Dissolved Magnesium (Mg)	mg/L	16.0	8621489	<0.050	32.2	25.1	0.050	8618046
Dissolved Potassium (K)	mg/L	1.39	8621489	<0.050	2.94	2.31	0.050	8618046
Dissolved Sodium (Na)	mg/L	1.43	8621489	<0.050	2.12	1.95	0.050	8618046
Dissolved Sulphur (S)	mg/L	12.0	8621489	<3.0	24.3	17.7	3.0	8618046
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QZ0427	QZ0428	QZ0429	QZ0430		
Sampling Date		2017/04/28 10:45	2017/04/29 09:30	2017/05/01 10:30	2017/04/29 12:40		
COC Number		08438262	08438262	08438262	08438262		
	UNITS	KZ-26	KZ-28	TRIP BLANK	KZ-18	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	301	200	<0.50	222	0.50	8618008
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8619338
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00064	0.00277	0.00062	0.00289	0.00050	8618445
Dissolved Antimony (Sb)	mg/L	0.000052	0.000029	<0.000020	0.000031	0.000020	8618445
Dissolved Arsenic (As)	mg/L	0.000419	0.000395	<0.000020	0.00115	0.000020	8618445
Dissolved Barium (Ba)	mg/L	0.0929	0.0950	<0.000020	0.0592	0.000020	8618445
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8618445
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8618445
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8618445
Dissolved Cadmium (Cd)	mg/L	0.0000140	0.0000640	<0.0000050	0.0000550	0.0000050	8618445
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00015	0.00010	8618445
Dissolved Cobalt (Co)	mg/L	0.0000180	0.000130	<0.0000050	0.0000500	0.0000050	8618445
Dissolved Copper (Cu)	mg/L	0.000290	0.000250	<0.000050	0.000152	0.000050	8618445
Dissolved Iron (Fe)	mg/L	0.0162	0.219	<0.0010	0.0875	0.0010	8618445
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8618445
Dissolved Lithium (Li)	mg/L	0.00744	0.00462	<0.00050	0.00264	0.00050	8618445
Dissolved Manganese (Mn)	mg/L	0.00673	0.103	<0.000050	0.0271	0.000050	8618445
Dissolved Molybdenum (Mo)	mg/L	0.000981	0.000930	<0.000050	0.00184	0.000050	8618445
Dissolved Nickel (Ni)	mg/L	0.000824	0.000528	<0.000020	0.000496	0.000020	8618445
Dissolved Phosphorus (P)	mg/L	0.0025	0.0204	<0.0020	0.0827	0.0020	8618445
Dissolved Selenium (Se)	mg/L	0.000942	0.00107	<0.000040	0.00133	0.000040	8618445
Dissolved Silicon (Si)	mg/L	4.95	4.09	<0.050	3.65	0.050	8618445
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8618445
Dissolved Strontium (Sr)	mg/L	0.267	0.234	<0.000050	0.196	0.000050	8618445
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8618445
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8618445
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8618445
Dissolved Uranium (U)	mg/L	0.00365	0.00195	<0.0000020	0.00316	0.0000020	8618445
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8618445
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		QZ0427	QZ0428	QZ0429	QZ0430		
Sampling Date		2017/04/28 10:45	2017/04/29 09:30	2017/05/01 10:30	2017/04/29 12:40		
COC Number		08438262	08438262	08438262	08438262		
	UNITS	KZ-26	KZ-28	TRIP BLANK	KZ-18	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00063	0.0119	<0.00010 (1)	0.00208	0.00010	8618445
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8618445
Dissolved Calcium (Ca)	mg/L	82.0	61.9	<0.050	58.3	0.050	8618046
Dissolved Magnesium (Mg)	mg/L	23.3	11.0	<0.050	18.6	0.050	8618046
Dissolved Potassium (K)	mg/L	1.70	1.99	<0.050	0.891	0.050	8618046
Dissolved Sodium (Na)	mg/L	2.10	1.40	<0.050	0.974	0.050	8618046
Dissolved Sulphur (S)	mg/L	15.5	11.1	<3.0	7.5	3.0	8618046

RDL = Reportable Detection Limit
(1) Matrix Spike for (Zinc) outside acceptance criteria (10% of analytes failure allowed).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QZ0411	QZ0413	QZ0415	QZ0416	QZ0417		
Sampling Date		2017/04/29 15:20	2017/04/29 10:35	2017/04/30 11:30	2017/04/28 14:15	2017/04/28 15:25		
COC Number		08438261	08438261	08438261	08438261	08438261		
	UNITS	KZ-2	KZ-37	KZ-13	KZ-15	KZ-16	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	125	196	112	243	245	0.50	8617727
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8619128
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0174	0.0101	0.00792	0.0111	0.00186	0.00050	8619005
Total Antimony (Sb)	mg/L	0.000053	0.000048	0.000054	0.000049	0.000038	0.000020	8619005
Total Arsenic (As)	mg/L	0.000092	0.000455	0.000212	0.000583	0.000254	0.000020	8619005
Total Barium (Ba)	mg/L	0.0765	0.0910	0.128	0.0924	0.0877	0.000020	8619005
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8619005
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8619005
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8619005
Total Cadmium (Cd)	mg/L	0.000276	0.0000640	0.0000260	0.0000520	0.0000350	0.0000050	8619005
Total Chromium (Cr)	mg/L	<0.00010	0.00010	<0.00010	<0.00010	<0.00010	0.00010	8619005
Total Cobalt (Co)	mg/L	0.0000260	0.000130	0.0000440	0.0000600	0.0000890	0.0000050	8619005
Total Copper (Cu)	mg/L	0.00200	0.000307	0.000310	0.000291	0.000235	0.000050	8619005
Total Iron (Fe)	mg/L	0.0235	0.388	0.132	0.0989	0.0391	0.0010	8619005
Total Lead (Pb)	mg/L	0.000175	0.0000250	0.0000070	0.0000300	<0.0000050	0.0000050	8619005
Total Lithium (Li)	mg/L	0.00160	0.00451	0.00218	0.00416	0.00352	0.00050	8619005
Total Manganese (Mn)	mg/L	0.000837	0.0957	0.108	0.0470	0.0358	0.000050	8619005
Total Molybdenum (Mo)	mg/L	0.000659	0.000917	0.000868	0.00136	0.000511	0.000050	8619005
Total Nickel (Ni)	mg/L	0.000496	0.000538	0.000403	0.00100	0.00100	0.000020	8619005
Total Phosphorus (P)	mg/L	0.0045	0.0209	0.0080	0.0096	0.0058	0.0020	8619005
Total Selenium (Se)	mg/L	0.00269	0.00105	0.000331	0.00119	0.00121	0.000040	8619005
Total Silicon (Si)	mg/L	2.43	3.81	4.40	3.85	3.70	0.050	8619005
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8619005
Total Strontium (Sr)	mg/L	0.141	0.209	0.112	0.232	0.240	0.000050	8619005
Total Thallium (Tl)	mg/L	0.0000050	<0.0000020	0.0000020	<0.0000020	<0.0000020	0.0000020	8619005
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8619005
Total Titanium (Ti)	mg/L	<0.00050	0.00084	0.00051	0.00078	<0.00050	0.00050	8619005
Total Uranium (U)	mg/L	0.00441	0.00201	0.00191	0.00477	0.00268	0.0000020	8619005
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8619005

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QZ0411	QZ0413	QZ0415	QZ0416	QZ0417		
Sampling Date		2017/04/29 15:20	2017/04/29 10:35	2017/04/30 11:30	2017/04/28 14:15	2017/04/28 15:25		
COC Number		08438261	08438261	08438261	08438261	08438261		
	UNITS	KZ-2	KZ-37	KZ-13	KZ-15	KZ-16	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0373	0.0113	0.00254	0.00610	0.00109	0.00010	8619005
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8619005
Total Calcium (Ca)	mg/L	39.7	61.7	38.1	71.4	72.3	0.050	8617839
Total Magnesium (Mg)	mg/L	6.38	10.2	4.16	15.8	15.6	0.050	8617839
Total Potassium (K)	mg/L	2.35	1.85	2.84	1.59	1.46	0.050	8617839
Total Sodium (Na)	mg/L	0.773	1.38	1.17	1.32	1.38	0.050	8617839
Total Sulphur (S)	mg/L	16.8	9.7	5.6	11.7	12.0	3.0	8617839

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QZ0419	QZ0426	QZ0427	QZ0429		
Sampling Date		2017/04/28 13:45	2017/04/28 12:25	2017/04/28 10:45	2017/05/01 10:30		
COC Number		08438261	08438262	08438262	08438262		
	UNITS	KZ-19	KZ-22	KZ-26	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	<0.50	296	286	<0.50	0.50	8617727
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8619128
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	<0.00050	0.00532	0.0108	<0.00050	0.00050	8619005
Total Antimony (Sb)	mg/L	<0.000020	0.000055	0.000067	<0.000020	0.000020	8619005
Total Arsenic (As)	mg/L	<0.000020	0.00396	0.000693	<0.000020	0.000020	8619005
Total Barium (Ba)	mg/L	<0.000020	0.0830	0.0920	<0.000020	0.000020	8619005
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8619005
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8619005
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8619005
Total Cadmium (Cd)	mg/L	<0.0000050	0.0000200	0.0000150	<0.0000050	0.0000050	8619005
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8619005
Total Cobalt (Co)	mg/L	<0.0000050	0.000167	0.0000360	<0.0000050	0.0000050	8619005
Total Copper (Cu)	mg/L	<0.000050	0.000284	0.000357	<0.000050	0.000050	8619005
Total Iron (Fe)	mg/L	<0.0010	1.26	0.150	<0.0010	0.0010	8619005
Total Lead (Pb)	mg/L	<0.0000050	0.0000150	0.0000190	<0.0000050	0.0000050	8619005
Total Lithium (Li)	mg/L	<0.00050	0.00651	0.00720	<0.00050	0.00050	8619005
Total Manganese (Mn)	mg/L	<0.000050	0.130	0.0130	<0.000050	0.000050	8619005
Total Molybdenum (Mo)	mg/L	<0.000050	0.00142	0.000963	<0.000050	0.000050	8619005
Total Nickel (Ni)	mg/L	<0.000020	0.00173	0.000870	<0.000020	0.000020	8619005
Total Phosphorus (P)	mg/L	0.0029	0.0382	0.0073	<0.0020	0.0020	8619005
Total Selenium (Se)	mg/L	<0.000040	0.000843	0.000848	<0.000040	0.000040	8619005
Total Silicon (Si)	mg/L	<0.050	5.33	4.70	<0.050	0.050	8619005
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8619005
Total Strontium (Sr)	mg/L	<0.000050	0.254	0.247	<0.000050	0.000050	8619005
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8619005
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8619005
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8619005
Total Uranium (U)	mg/L	<0.0000020	0.00425	0.00363	<0.0000020	0.0000020	8619005
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8619005

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		QZ0419	QZ0426	QZ0427	QZ0429		
Sampling Date		2017/04/28 13:45	2017/04/28 12:25	2017/04/28 10:45	2017/05/01 10:30		
COC Number		08438261	08438262	08438262	08438262		
	UNITS	KZ-19	KZ-22	KZ-26	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00011	0.00163	0.00096	<0.00010	0.00010	8619005
Total Zirconium (Zr)	mg/L	<0.00010	0.00018	<0.00010	<0.00010	0.00010	8619005
Total Calcium (Ca)	mg/L	<0.050	77.0	76.5	<0.050	0.050	8617839
Total Magnesium (Mg)	mg/L	<0.050	25.2	23.1	<0.050	0.050	8617839
Total Potassium (K)	mg/L	<0.050	2.11	1.65	<0.050	0.050	8617839
Total Sodium (Na)	mg/L	<0.050	1.87	2.01	<0.050	0.050	8617839
Total Sulphur (S)	mg/L	<3.0	16.7	14.7	<3.0	3.0	8617839
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		QZ0412	QZ0414	QZ0418	QZ0425	QZ0428		
Sampling Date		2017/04/30 09:45	2017/04/29 11:55	2017/04/28 16:18	2017/04/28 13:20	2017/04/29 09:30		
COC Number		08438261	08438261	08438261	08438262	08438262		
	UNITS	KZ-6	KZ-9	KZ-17	KZ-21	KZ-28	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	145	171	261	307	206	0.50	8617727
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8619128
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0123	0.0099	0.0035	0.0218	0.0114	0.0030	8619327
Total Antimony (Sb)	mg/L	0.000054	0.000077	0.000082	0.000104	0.000071	0.000020	8619327
Total Arsenic (As)	mg/L	0.000114	0.000289	0.000273	0.00916	0.000449	0.000020	8619327
Total Barium (Ba)	mg/L	0.0520	0.0994	0.100	0.0814	0.0927	0.000050	8619327
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8619327
Total Bismuth (Bi)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8619327
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8619327
Total Cadmium (Cd)	mg/L	0.0000260	0.0000750	0.0000250	0.0000280	0.0000680	0.0000050	8619327
Total Chromium (Cr)	mg/L	0.00014	0.00011	<0.00010	0.00018	<0.00010	0.00010	8619327
Total Cobalt (Co)	mg/L	0.000022	0.000152	0.000011	0.000328	0.000127	0.000010	8619327
Total Copper (Cu)	mg/L	0.00030	0.00043	0.00030	0.00046	0.00033	0.00010	8619327
Total Iron (Fe)	mg/L	0.0339	0.494	0.0231 (1)	3.30	0.401	0.0050	8619327
Total Lead (Pb)	mg/L	<0.000020	0.000051	<0.000020	0.000047	0.000070	0.000020	8619327
Total Lithium (Li)	mg/L	0.00065	0.00477	0.00334	0.00733	0.00449	0.00050	8619327
Total Manganese (Mn)	mg/L	0.00590	0.107	0.00273	0.307	0.0965	0.00010	8619327
Total Molybdenum (Mo)	mg/L	0.000685	0.000612	0.000550	0.00182	0.000905	0.000050	8619327
Total Nickel (Ni)	mg/L	0.00026	0.00049	0.00058	0.00340	0.00056	0.00010	8619327
Total Phosphorus (P)	mg/L	0.0060	0.0101	0.0092	0.0898	0.0232	0.0050	8619327
Total Selenium (Se)	mg/L	0.00106	0.000831	0.00134	0.000399	0.000984	0.000040	8619327
Total Silicon (Si)	mg/L	2.92	3.78	3.80	6.02	3.82	0.050	8619327
Total Silver (Ag)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8619327
Total Strontium (Sr)	mg/L	0.162	0.215	0.253	0.236	0.213	0.000050	8619327
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8619327
Total Tin (Sn)	mg/L	<0.00020	<0.00020	0.00062 (2)	<0.00020	<0.00020	0.00020	8619327
Total Titanium (Ti)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8619327

RDL = Reportable Detection Limit

(1) Duplicate RPD for (Iron) above control limit - Non-homogenous sample - Increased variability of results.

(2) Matrix Spike for (Tin) outside acceptance criteria due to sample matrix interference, re-analysis yields similar results.
Duplicate RPD for (Tin) above control limit - Non-homogenous sample - Increased variability of results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		QZ0412	QZ0414	QZ0418	QZ0425	QZ0428		
Sampling Date		2017/04/30 09:45	2017/04/29 11:55	2017/04/28 16:18	2017/04/28 13:20	2017/04/29 09:30		
COC Number		08438261	08438261	08438261	08438262	08438262		
	UNITS	KZ-6	KZ-9	KZ-17	KZ-21	KZ-28	RDL	QC Batch
Total Uranium (U)	mg/L	0.00137	0.00160	0.00316	0.00400	0.00203	0.0000050	8619327
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00021	<0.00020	0.00020	8619327
Total Zinc (Zn)	mg/L	<0.0010	0.0138	0.0016	0.0028	0.0101	0.0010	8619327
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00038	<0.00010	0.00010	8619327
Total Calcium (Ca)	mg/L	47.2	55.7	77.9	71.8	65.6	0.25	8617839
Total Magnesium (Mg)	mg/L	6.52	7.81	16.1	31.1	10.1	0.25	8617839
Total Potassium (K)	mg/L	1.11	2.13	1.35	2.84	1.85	0.25	8617839
Total Sodium (Na)	mg/L	0.70	1.54	1.52	2.13	1.38	0.25	8617839
Total Sulphur (S)	mg/L	6.9	10.4	12.2	21.5	9.3	3.0	8617839

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		QZ0430		
Sampling Date		2017/04/29 12:40		
COC Number		08438262		
	UNITS	KZ-18	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	209	0.50	8617727
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8619128
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.0158	0.0030	8619327
Total Antimony (Sb)	mg/L	0.000076	0.000020	8619327
Total Arsenic (As)	mg/L	0.00113	0.000020	8619327
Total Barium (Ba)	mg/L	0.0606	0.000050	8619327
Total Beryllium (Be)	mg/L	<0.000010	0.000010	8619327
Total Bismuth (Bi)	mg/L	<0.000010	0.000010	8619327
Total Boron (B)	mg/L	<0.010	0.010	8619327
Total Cadmium (Cd)	mg/L	0.0000540	0.0000050	8619327
Total Chromium (Cr)	mg/L	0.00022	0.00010	8619327
Total Cobalt (Co)	mg/L	0.000062	0.000010	8619327
Total Copper (Cu)	mg/L	0.00021	0.00010	8619327
Total Iron (Fe)	mg/L	0.149	0.0050	8619327
Total Lead (Pb)	mg/L	0.000025	0.000020	8619327
Total Lithium (Li)	mg/L	0.00240	0.00050	8619327
Total Manganese (Mn)	mg/L	0.0282	0.00010	8619327
Total Molybdenum (Mo)	mg/L	0.00178	0.000050	8619327
Total Nickel (Ni)	mg/L	0.00051	0.00010	8619327
Total Phosphorus (P)	mg/L	0.0809	0.0050	8619327
Total Selenium (Se)	mg/L	0.00113	0.000040	8619327
Total Silicon (Si)	mg/L	3.34	0.050	8619327
Total Silver (Ag)	mg/L	<0.000010	0.000010	8619327
Total Strontium (Sr)	mg/L	0.182	0.000050	8619327
Total Thallium (Tl)	mg/L	<0.0000020	0.0000020	8619327
Total Tin (Sn)	mg/L	<0.00020	0.00020	8619327
Total Titanium (Ti)	mg/L	<0.0020	0.0020	8619327
Total Uranium (U)	mg/L	0.00326	0.0000050	8619327
Total Vanadium (V)	mg/L	<0.00020	0.00020	8619327
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		QZ0430		
Sampling Date		2017/04/29 12:40		
COC Number		08438262		
	UNITS	KZ-18	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0020	0.0010	8619327
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8619327
Total Calcium (Ca)	mg/L	55.5	0.25	8617839
Total Magnesium (Mg)	mg/L	17.0	0.25	8617839
Total Potassium (K)	mg/L	0.84	0.25	8617839
Total Sodium (Na)	mg/L	0.88	0.25	8617839
Total Sulphur (S)	mg/L	6.4	3.0	8617839
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: QZ0411
Sample ID: KZ-2
Matrix: Water

Collected: 2017/04/29
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8619428	N/A	2017/05/03	Name Redacted
Alkalinity - Water	AT/ALK	8619688	2017/05/03	2017/05/04	
Chloride by Automated Colourimetry	KONE/COL	8618835	N/A	2017/05/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8618137	N/A	2017/05/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8618142	N/A	2017/05/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8619038	N/A	2017/05/03	
Conductance - water	AT/ALK	8619689	N/A	2017/05/04	
Fluoride	ISE/ISE	8620795	N/A	2017/05/03	
Hardness Total (calculated as CaCO3)	CALC	8617727	N/A	2017/05/04	
Hardness (calculated as CaCO3)	CALC	8621033	N/A	2017/05/05	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8619338	N/A	2017/05/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8619128	2017/05/03	2017/05/03	
Ion Balance (as Cations/Anions Ratio)	CALC	8622088	N/A	2017/05/08	
Ion Balance	CALC	8622089	N/A	2017/05/08	
Sum of cations, anions	CALC	8622090	N/A	2017/05/05	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8621489	N/A	2017/05/05	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8618445	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8617839	N/A	2017/05/04	
Elements by ICPMS Low Level (total)	ICP/CRCM	8619005	N/A	2017/05/03	
Ammonia-N (Preserved)	KONE/COL	8618497	N/A	2017/05/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8619132	N/A	2017/05/02	
Nitrite (N) (low level)	TRAA/COL	8619136	N/A	2017/05/02	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8618048	N/A	2017/05/04	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/02	
pH Water	AT/ALK	8619690	N/A	2017/05/04	
Sulphate by Automated Colourimetry	KONE/COL	8618877	N/A	2017/05/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8619384	2017/05/03	2017/05/03	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8619386	N/A	2017/05/03	
Total Suspended Solids-Low Level	BAL/BAL	8618056	2017/05/02	2017/05/03	

Maxxam ID: QZ0411 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2017/04/29
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8618137	N/A	2017/05/02	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8618142	N/A	2017/05/02	

Maxxam ID: QZ0412
Sample ID: KZ-6
Matrix: Water

Collected: 2017/04/30
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8619428	N/A	2017/05/03	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: QZ0412
Sample ID: KZ-6
Matrix: Water

Collected: 2017/04/30
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8619685	2017/05/03	2017/05/04	Name Redacted
Chloride by Automated Colourimetry	KONE/COL	8618835	N/A	2017/05/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8618137	N/A	2017/05/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8618142	N/A	2017/05/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8619038	N/A	2017/05/03	
Conductance - water	AT/ALK	8619686	N/A	2017/05/04	
Fluoride	ISE/ISE	8620790	N/A	2017/05/03	
Hardness Total (calculated as CaCO3)	CALC	8617727	N/A	2017/05/04	
Hardness (calculated as CaCO3)	CALC	8618008	N/A	2017/05/03	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8619338	N/A	2017/05/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8619128	2017/05/03	2017/05/03	
Ion Balance (as Cations/Anions Ratio)	CALC	8618043	N/A	2017/05/04	
Ion Balance	CALC	8618044	N/A	2017/05/04	
Sum of cations, anions	CALC	8618045	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8618046	N/A	2017/05/03	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8618445	N/A	2017/05/03	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8619327	2017/05/03	2017/05/04	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8617839	N/A	2017/05/04	
Ammonia-N (Preserved)	KONE/COL	8618497	N/A	2017/05/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8619132	N/A	2017/05/02	
Nitrite (N) (low level)	TRAA/COL	8619136	N/A	2017/05/02	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8618048	N/A	2017/05/04	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/02	
pH Water	AT/ALK	8619687	N/A	2017/05/04	
Sulphate by Automated Colourimetry	KONE/COL	8618877	N/A	2017/05/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8619384	2017/05/03	2017/05/03	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8619386	N/A	2017/05/03	
Total Suspended Solids-Low Level	BAL/BAL	8618056	2017/05/02	2017/05/03	

Maxxam ID: QZ0412 Dup
Sample ID: KZ-6
Matrix: Water

Collected: 2017/04/30
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8619428	N/A	2017/05/03	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8619132	N/A	2017/05/02	
Nitrite (N) (low level)	TRAA/COL	8619136	N/A	2017/05/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8619384	2017/05/03	2017/05/03	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8619386	N/A	2017/05/03	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: QZ0413
Sample ID: KZ-37
Matrix: Water

Collected: 2017/04/29
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8619428	N/A	2017/05/03	Name Redacted
Alkalinity - Water	AT/ALK	8619688	2017/05/03	2017/05/04	
Chloride by Automated Colourimetry	KONE/COL	8618835	N/A	2017/05/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8618137	N/A	2017/05/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8618142	N/A	2017/05/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8619038	N/A	2017/05/03	
Conductance - water	AT/ALK	8619689	N/A	2017/05/04	
Fluoride	ISE/ISE	8620790	N/A	2017/05/03	
Hardness Total (calculated as CaCO3)	CALC	8617727	N/A	2017/05/04	
Hardness (calculated as CaCO3)	CALC	8621033	N/A	2017/05/05	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8619338	N/A	2017/05/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8619128	2017/05/03	2017/05/03	
Ion Balance (as Cations/Anions Ratio)	CALC	8622088	N/A	2017/05/08	
Ion Balance	CALC	8622089	N/A	2017/05/08	
Sum of cations, anions	CALC	8622090	N/A	2017/05/05	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8621489	N/A	2017/05/05	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8618445	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8617839	N/A	2017/05/04	
Elements by ICPMS Low Level (total)	ICP/CRCM	8619005	N/A	2017/05/03	
Ammonia-N (Preserved)	KONE/COL	8618497	N/A	2017/05/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8619132	N/A	2017/05/02	
Nitrite (N) (low level)	TRAA/COL	8619136	N/A	2017/05/02	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8618048	N/A	2017/05/04	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/02	
pH Water	AT/ALK	8619690	N/A	2017/05/04	
Sulphate by Automated Colourimetry	KONE/COL	8618877	N/A	2017/05/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8619384	2017/05/03	2017/05/03	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8619386	N/A	2017/05/03	
Total Suspended Solids-Low Level	BAL/BAL	8618056	2017/05/02	2017/05/03	

Maxxam ID: QZ0414
Sample ID: KZ-9
Matrix: Water

Collected: 2017/04/29
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8619428	N/A	2017/05/03	Name Redacted
Alkalinity - Water	AT/ALK	8619688	2017/05/03	2017/05/04	
Chloride by Automated Colourimetry	KONE/COL	8620097	N/A	2017/05/03	
Cyanide SAD (strong acid dissociable)	TECH/COL	8618137	N/A	2017/05/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8618142	N/A	2017/05/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8619038	N/A	2017/05/03	
Conductance - water	AT/ALK	8619689	N/A	2017/05/04	
Fluoride	ISE/ISE	8620790	N/A	2017/05/03	
Hardness Total (calculated as CaCO3)	CALC	8617727	N/A	2017/05/04	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: QZ0414
Sample ID: KZ-9
Matrix: Water

Collected: 2017/04/29
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8618008	N/A	2017/05/03	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8619338	N/A	2017/05/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8619128	2017/05/03	2017/05/03	
Ion Balance (as Cations/Anions Ratio)	CALC	8618043	N/A	2017/05/04	
Ion Balance	CALC	8618044	N/A	2017/05/04	
Sum of cations, anions	CALC	8618045	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8618046	N/A	2017/05/03	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8618445	N/A	2017/05/03	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8619327	2017/05/03	2017/05/04	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8617839	N/A	2017/05/04	
Ammonia-N (Preserved)	KONE/COL	8618497	N/A	2017/05/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8619129	N/A	2017/05/02	
Nitrite (N) (low level)	TRAA/COL	8619130	N/A	2017/05/02	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8618048	N/A	2017/05/04	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/02	
pH Water	AT/ALK	8619690	N/A	2017/05/04	
Sulphate by Automated Colourimetry	KONE/COL	8618877	N/A	2017/05/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8619384	2017/05/03	2017/05/03	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8619386	N/A	2017/05/03	
Total Suspended Solids-Low Level	BAL/BAL	8618056	2017/05/02	2017/05/03	

Maxxam ID: QZ0414 Dup
Sample ID: KZ-9
Matrix: Water

Collected: 2017/04/29
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8620097	N/A	2017/05/03	Name Redacted
Ammonia-N (Preserved)	KONE/COL	8618497	N/A	2017/05/02	
Sulphate by Automated Colourimetry	KONE/COL	8618877	N/A	2017/05/02	

Maxxam ID: QZ0415
Sample ID: KZ-13
Matrix: Water

Collected: 2017/04/30
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8619428	N/A	2017/05/03	Name Redacted
Alkalinity - Water	AT/ALK	8619688	2017/05/04	2017/05/04	
Chloride by Automated Colourimetry	KONE/COL	8618835	N/A	2017/05/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8618137	N/A	2017/05/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8618142	N/A	2017/05/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8619038	N/A	2017/05/03	
Conductance - water	AT/ALK	8619689	N/A	2017/05/04	
Fluoride	ISE/ISE	8620795	N/A	2017/05/03	
Hardness Total (calculated as CaCO3)	CALC	8617727	N/A	2017/05/04	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: QZ0415
Sample ID: KZ-13
Matrix: Water

Collected: 2017/04/30
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8618008	N/A	2017/05/03	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8619338	N/A	2017/05/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8619128	2017/05/03	2017/05/03	
Ion Balance (as Cations/Anions Ratio)	CALC	8618043	N/A	2017/05/04	
Ion Balance	CALC	8618044	N/A	2017/05/04	
Sum of cations, anions	CALC	8618045	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8618046	N/A	2017/05/03	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8618445	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8617839	N/A	2017/05/04	
Elements by ICPMS Low Level (total)	ICP/CRCM	8619005	N/A	2017/05/03	
Ammonia-N (Preserved)	KONE/COL	8618497	N/A	2017/05/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8619132	N/A	2017/05/02	
Nitrite (N) (low level)	TRAA/COL	8619136	N/A	2017/05/02	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8618048	N/A	2017/05/04	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/02	
pH Water	AT/ALK	8619690	N/A	2017/05/04	
Sulphate by Automated Colourimetry	KONE/COL	8618877	N/A	2017/05/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8619384	2017/05/03	2017/05/03	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8619386	N/A	2017/05/03	
Total Suspended Solids-Low Level	BAL/BAL	8618056	2017/05/02	2017/05/03	

Maxxam ID: QZ0415 Dup
Sample ID: KZ-13
Matrix: Water

Collected: 2017/04/30
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8620795	N/A	2017/05/03	Name Redacted

Maxxam ID: QZ0416
Sample ID: KZ-15
Matrix: Water

Collected: 2017/04/28
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8619428	N/A	2017/05/03	Name Redacted
Alkalinity - Water	AT/ALK	8619688	2017/05/03	2017/05/04	
Chloride by Automated Colourimetry	KONE/COL	8618835	N/A	2017/05/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8618137	N/A	2017/05/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8618142	N/A	2017/05/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8619038	N/A	2017/05/03	
Conductance - water	AT/ALK	8619689	N/A	2017/05/04	
Fluoride	ISE/ISE	8620790	N/A	2017/05/03	
Hardness Total (calculated as CaCO3)	CALC	8617727	N/A	2017/05/04	
Hardness (calculated as CaCO3)	CALC	8618008	N/A	2017/05/03	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8619338	N/A	2017/05/03	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: QZ0416
Sample ID: KZ-15
Matrix: Water

Collected: 2017/04/28
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8619128	2017/05/03	2017/05/03	Name Redacted
Ion Balance (as Cations/Anions Ratio)	CALC	8618043	N/A	2017/05/04	
Ion Balance	CALC	8618044	N/A	2017/05/04	
Sum of cations, anions	CALC	8618045	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8618046	N/A	2017/05/03	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8618445	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8617839	N/A	2017/05/04	
Elements by ICPMS Low Level (total)	ICP/CRCM	8619005	N/A	2017/05/03	
Ammonia-N (Preserved)	KONE/COL	8618497	N/A	2017/05/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8619132	N/A	2017/05/02	
Nitrite (N) (low level)	TRAA/COL	8619136	N/A	2017/05/02	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8618048	N/A	2017/05/04	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/02	
pH Water	AT/ALK	8619690	N/A	2017/05/04	
Sulphate by Automated Colourimetry	KONE/COL	8618877	N/A	2017/05/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8619384	2017/05/03	2017/05/03	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8619386	N/A	2017/05/03	
Total Suspended Solids-Low Level	BAL/BAL	8618056	2017/05/02	2017/05/03	

Maxxam ID: QZ0417
Sample ID: KZ-16
Matrix: Water

Collected: 2017/04/28
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8619428	N/A	2017/05/03	Name Redacted
Alkalinity - Water	AT/ALK	8619688	2017/05/03	2017/05/04	
Chloride by Automated Colourimetry	KONE/COL	8618835	N/A	2017/05/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8618137	N/A	2017/05/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8618142	N/A	2017/05/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8619038	N/A	2017/05/03	
Conductance - water	AT/ALK	8619689	N/A	2017/05/04	
Fluoride	ISE/ISE	8620790	N/A	2017/05/03	
Hardness Total (calculated as CaCO3)	CALC	8617727	N/A	2017/05/04	
Hardness (calculated as CaCO3)	CALC	8618008	N/A	2017/05/03	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8619338	N/A	2017/05/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8619128	2017/05/03	2017/05/03	
Ion Balance (as Cations/Anions Ratio)	CALC	8618043	N/A	2017/05/04	
Ion Balance	CALC	8618044	N/A	2017/05/04	
Sum of cations, anions	CALC	8618045	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8618046	N/A	2017/05/03	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8618445	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8617839	N/A	2017/05/04	
Elements by ICPMS Low Level (total)	ICP/CRCM	8619005	N/A	2017/05/03	
Ammonia-N (Preserved)	KONE/COL	8618497	N/A	2017/05/02	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: QZ0417
Sample ID: KZ-16
Matrix: Water

Collected: 2017/04/28
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8619132	N/A	2017/05/02	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8619136	N/A	2017/05/02	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8618048	N/A	2017/05/04	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/02	
pH Water	AT/ALK	8619690	N/A	2017/05/04	
Sulphate by Automated Colourimetry	KONE/COL	8618877	N/A	2017/05/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8619384	2017/05/03	2017/05/03	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8619386	N/A	2017/05/03	
Total Suspended Solids-Low Level	BAL/BAL	8618056	2017/05/02	2017/05/03	

Maxxam ID: QZ0418
Sample ID: KZ-17
Matrix: Water

Collected: 2017/04/28
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8619428	N/A	2017/05/03	Name Redacted
Alkalinity - Water	AT/ALK	8619688	2017/05/03	2017/05/04	
Chloride by Automated Colourimetry	KONE/COL	8618835	N/A	2017/05/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8618137	N/A	2017/05/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8618142	N/A	2017/05/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8619038	N/A	2017/05/03	
Conductance - water	AT/ALK	8619689	N/A	2017/05/04	
Fluoride	ISE/ISE	8620790	N/A	2017/05/03	
Hardness Total (calculated as CaCO3)	CALC	8617727	N/A	2017/05/04	
Hardness (calculated as CaCO3)	CALC	8621033	N/A	2017/05/05	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8619338	N/A	2017/05/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8619128	2017/05/03	2017/05/03	
Ion Balance (as Cations/Anions Ratio)	CALC	8622088	N/A	2017/05/08	
Ion Balance	CALC	8622089	N/A	2017/05/08	
Sum of cations, anions	CALC	8622090	N/A	2017/05/05	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8621489	N/A	2017/05/05	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8618445	N/A	2017/05/03	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8619327	2017/05/03	2017/05/04	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8617839	N/A	2017/05/04	
Ammonia-N (Preserved)	KONE/COL	8618497	N/A	2017/05/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8619132	N/A	2017/05/02	
Nitrite (N) (low level)	TRAA/COL	8619136	N/A	2017/05/02	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8618048	N/A	2017/05/04	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/02	
pH Water	AT/ALK	8619690	N/A	2017/05/04	
Sulphate by Automated Colourimetry	KONE/COL	8618877	N/A	2017/05/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8619384	2017/05/03	2017/05/03	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8619386	N/A	2017/05/03	
Total Suspended Solids-Low Level	BAL/BAL	8619255	2017/05/03	2017/05/04	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: QZ0418 Dup
Sample ID: KZ-17
Matrix: Water

Collected: 2017/04/28
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Digested LL (total)	ICP/CRCM	8619327	2017/05/03	2017/05/04	Name Redacted

Maxxam ID: QZ0419
Sample ID: KZ-19
Matrix: Water

Collected: 2017/04/28
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8619428	N/A	2017/05/03	Name Redacted
Alkalinity - Water	AT/ALK	8619688	2017/05/03	2017/05/04	
Chloride by Automated Colourimetry	KONE/COL	8618835	N/A	2017/05/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8618137	N/A	2017/05/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8618142	N/A	2017/05/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8619038	N/A	2017/05/03	
Conductance - water	AT/ALK	8619689	N/A	2017/05/04	
Fluoride	ISE/ISE	8620795	N/A	2017/05/03	
Hardness Total (calculated as CaCO3)	CALC	8617727	N/A	2017/05/04	
Hardness (calculated as CaCO3)	CALC	8618008	N/A	2017/05/03	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8619338	N/A	2017/05/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8619128	2017/05/03	2017/05/03	
Ion Balance (as Cations/Anions Ratio)	CALC	8618043	N/A	2017/05/04	
Ion Balance	CALC	8618044	N/A	2017/05/04	
Sum of cations, anions	CALC	8618045	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8618046	N/A	2017/05/03	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8618445	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8617839	N/A	2017/05/04	
Elements by ICPMS Low Level (total)	ICP/CRCM	8619005	N/A	2017/05/03	
Ammonia-N (Preserved)	KONE/COL	8621442	N/A	2017/05/05	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8619132	N/A	2017/05/02	
Nitrite (N) (low level)	TRAA/COL	8619136	N/A	2017/05/02	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8618048	N/A	2017/05/04	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/02	
pH Water	AT/ALK	8619690	N/A	2017/05/04	
Sulphate by Automated Colourimetry	KONE/COL	8618877	N/A	2017/05/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8619384	2017/05/03	2017/05/03	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8619386	N/A	2017/05/03	
Total Suspended Solids-Low Level	BAL/BAL	8619255	2017/05/03	2017/05/04	

Maxxam ID: QZ0425
Sample ID: KZ-21
Matrix: Water

Collected: 2017/04/28
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8619428	N/A	2017/05/03	Name Redacted
Alkalinity - Water	AT/ALK	8619688	2017/05/03	2017/05/04	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: QZ0425
Sample ID: KZ-21
Matrix: Water

Collected: 2017/04/28
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8618835	N/A	2017/05/02	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8618137	N/A	2017/05/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8618142	N/A	2017/05/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8619038	N/A	2017/05/03	
Conductance - water	AT/ALK	8619689	N/A	2017/05/04	
Fluoride	ISE/ISE	8620790	N/A	2017/05/03	
Hardness Total (calculated as CaCO3)	CALC	8617727	N/A	2017/05/04	
Hardness (calculated as CaCO3)	CALC	8618008	N/A	2017/05/03	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8619338	N/A	2017/05/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8619128	2017/05/03	2017/05/03	
Ion Balance (as Cations/Anions Ratio)	CALC	8618043	N/A	2017/05/04	
Ion Balance	CALC	8618044	N/A	2017/05/04	
Sum of cations, anions	CALC	8618045	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8618046	N/A	2017/05/03	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8618445	N/A	2017/05/03	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8619327	2017/05/03	2017/05/04	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8617839	N/A	2017/05/04	
Ammonia-N (Preserved)	KONE/COL	8618497	N/A	2017/05/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8619132	N/A	2017/05/02	
Nitrite (N) (low level)	TRAA/COL	8619136	N/A	2017/05/02	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8618048	N/A	2017/05/04	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/02	
pH Water	AT/ALK	8619690	N/A	2017/05/04	
Sulphate by Automated Colourimetry	KONE/COL	8618877	N/A	2017/05/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8619384	2017/05/03	2017/05/03	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8619386	N/A	2017/05/03	
Total Suspended Solids-Low Level	BAL/BAL	8619255	2017/05/03	2017/05/04	

Maxxam ID: QZ0426
Sample ID: KZ-22
Matrix: Water

Collected: 2017/04/28
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8619428	N/A	2017/05/03	Name Redacted
Alkalinity - Water	AT/ALK	8619688	2017/05/03	2017/05/04	
Chloride by Automated Colourimetry	KONE/COL	8618835	N/A	2017/05/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8618137	N/A	2017/05/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8618142	N/A	2017/05/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8619038	N/A	2017/05/03	
Conductance - water	AT/ALK	8619689	N/A	2017/05/04	
Fluoride	ISE/ISE	8620790	N/A	2017/05/03	
Hardness Total (calculated as CaCO3)	CALC	8617727	N/A	2017/05/04	
Hardness (calculated as CaCO3)	CALC	8618008	N/A	2017/05/03	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8619338	N/A	2017/05/03	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: QZ0426
Sample ID: KZ-22
Matrix: Water

Collected: 2017/04/28
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8619128	2017/05/03	2017/05/03	Name Redacted
Ion Balance (as Cations/Anions Ratio)	CALC	8618043	N/A	2017/05/04	
Ion Balance	CALC	8618044	N/A	2017/05/04	
Sum of cations, anions	CALC	8618045	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8618046	N/A	2017/05/03	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8618445	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8617839	N/A	2017/05/04	
Elements by ICPMS Low Level (total)	ICP/CRCM	8619005	N/A	2017/05/03	
Ammonia-N (Preserved)	KONE/COL	8618497	N/A	2017/05/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8619132	N/A	2017/05/02	
Nitrite (N) (low level)	TRAA/COL	8619136	N/A	2017/05/02	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8618048	N/A	2017/05/04	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/02	
pH Water	AT/ALK	8619690	N/A	2017/05/04	
Sulphate by Automated Colourimetry	KONE/COL	8618877	N/A	2017/05/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8619384	2017/05/03	2017/05/03	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8619386	N/A	2017/05/03	
Total Suspended Solids-Low Level	BAL/BAL	8619255	2017/05/03	2017/05/04	

Maxxam ID: QZ0427
Sample ID: KZ-26
Matrix: Water

Collected: 2017/04/28
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8619428	N/A	2017/05/03	Name Redacted
Alkalinity - Water	AT/ALK	8619688	2017/05/03	2017/05/04	
Chloride by Automated Colourimetry	KONE/COL	8618835	N/A	2017/05/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8618137	N/A	2017/05/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8618142	N/A	2017/05/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8619038	N/A	2017/05/03	
Conductance - water	AT/ALK	8619689	N/A	2017/05/04	
Fluoride	ISE/ISE	8620790	N/A	2017/05/03	
Hardness Total (calculated as CaCO3)	CALC	8617727	N/A	2017/05/04	
Hardness (calculated as CaCO3)	CALC	8618008	N/A	2017/05/03	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8619338	N/A	2017/05/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8619128	2017/05/03	2017/05/03	
Ion Balance (as Cations/Anions Ratio)	CALC	8618043	N/A	2017/05/04	
Ion Balance	CALC	8618044	N/A	2017/05/04	
Sum of cations, anions	CALC	8618045	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8618046	N/A	2017/05/03	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8618445	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8617839	N/A	2017/05/04	
Elements by ICPMS Low Level (total)	ICP/CRCM	8619005	N/A	2017/05/03	
Ammonia-N (Preserved)	KONE/COL	8618497	N/A	2017/05/02	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: QZ0427
Sample ID: KZ-26
Matrix: Water

Collected: 2017/04/28
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8619129	N/A	2017/05/02	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8619130	N/A	2017/05/02	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8618048	N/A	2017/05/04	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/02	
pH Water	AT/ALK	8619690	N/A	2017/05/04	
Sulphate by Automated Colourimetry	KONE/COL	8618877	N/A	2017/05/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8619384	2017/05/03	2017/05/03	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8619386	N/A	2017/05/03	
Total Suspended Solids-Low Level	BAL/BAL	8619255	2017/05/03	2017/05/04	

Maxxam ID: QZ0428
Sample ID: KZ-28
Matrix: Water

Collected: 2017/04/29
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8619428	N/A	2017/05/03	Name Redacted
Alkalinity - Water	AT/ALK	8619688	2017/05/03	2017/05/04	
Chloride by Automated Colourimetry	KONE/COL	8618835	N/A	2017/05/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8618141	N/A	2017/05/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8618142	N/A	2017/05/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8619038	N/A	2017/05/03	
Conductance - water	AT/ALK	8619689	N/A	2017/05/04	
Fluoride	ISE/ISE	8620790	N/A	2017/05/03	
Hardness Total (calculated as CaCO3)	CALC	8617727	N/A	2017/05/04	
Hardness (calculated as CaCO3)	CALC	8618008	N/A	2017/05/03	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8619338	N/A	2017/05/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8619128	2017/05/03	2017/05/03	
Ion Balance (as Cations/Anions Ratio)	CALC	8618043	N/A	2017/05/04	
Ion Balance	CALC	8618044	N/A	2017/05/04	
Sum of cations, anions	CALC	8618045	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8618046	N/A	2017/05/03	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8618445	N/A	2017/05/03	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8619327	2017/05/03	2017/05/04	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8617839	N/A	2017/05/04	
Ammonia-N (Preserved)	KONE/COL	8618497	N/A	2017/05/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8619132	N/A	2017/05/02	
Nitrite (N) (low level)	TRAA/COL	8619136	N/A	2017/05/02	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8618048	N/A	2017/05/04	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/02	
pH Water	AT/ALK	8619690	N/A	2017/05/04	
Sulphate by Automated Colourimetry	KONE/COL	8618877	N/A	2017/05/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8622774	2017/05/06	2017/05/06	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8622724	N/A	2017/05/06	
Total Suspended Solids-Low Level	BAL/BAL	8619261	2017/05/03	2017/05/04	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: QZ0428 Dup
Sample ID: KZ-28
Matrix: Water

Collected: 2017/04/29
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8619038	N/A	2017/05/03	Name Redacted

Maxxam ID: QZ0429
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/05/01
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8619430	N/A	2017/05/03	Name Redacted
Alkalinity - Water	AT/ALK	8619688	2017/05/03	2017/05/04	
Chloride by Automated Colourimetry	KONE/COL	8618835	N/A	2017/05/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8618141	N/A	2017/05/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8618142	N/A	2017/05/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8619038	N/A	2017/05/03	
Conductance - water	AT/ALK	8619689	N/A	2017/05/04	
Fluoride	ISE/ISE	8620795	N/A	2017/05/03	
Hardness Total (calculated as CaCO3)	CALC	8617727	N/A	2017/05/04	
Hardness (calculated as CaCO3)	CALC	8618008	N/A	2017/05/03	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8619338	N/A	2017/05/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8619128	2017/05/03	2017/05/03	
Ion Balance (as Cations/Anions Ratio)	CALC	8618043	N/A	2017/05/04	
Ion Balance	CALC	8618044	N/A	2017/05/04	
Sum of cations, anions	CALC	8618045	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8618046	N/A	2017/05/03	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8618445	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8617839	N/A	2017/05/04	
Elements by ICPMS Low Level (total)	ICP/CRCM	8619005	N/A	2017/05/04	
Ammonia-N (Preserved)	KONE/COL	8618497	N/A	2017/05/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8619132	N/A	2017/05/02	
Nitrite (N) (low level)	TRAA/COL	8619136	N/A	2017/05/02	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8618048	N/A	2017/05/04	
pH Water	AT/ALK	8619690	N/A	2017/05/04	
Sulphate by Automated Colourimetry	KONE/COL	8618877	N/A	2017/05/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8619384	2017/05/03	2017/05/03	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8619386	N/A	2017/05/03	
Total Suspended Solids-Low Level	BAL/BAL	8619261	2017/05/03	2017/05/04	

Maxxam ID: QZ0429 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/05/01
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8618835	N/A	2017/05/02	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8619338	N/A	2017/05/03	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8618445	N/A	2017/05/03	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: QZ0429 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/05/01
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8619005	N/A	2017/05/04	Name Redacted
Sulphate by Automated Colourimetry	KONE/COL	8618877	N/A	2017/05/02	

Maxxam ID: QZ0430
Sample ID: KZ-18
Matrix: Water

Collected: 2017/04/29
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8619428	N/A	2017/05/03	Name Redacted
Alkalinity - Water	AT/ALK	8619677	2017/05/03	2017/05/03	
Chloride by Automated Colourimetry	KONE/COL	8618835	N/A	2017/05/02	
Cyanide SAD (strong acid dissociable)	TECH/COL	8618141	N/A	2017/05/02	
Cyanide WAD (weak acid dissociable)	TECH/COL	8618142	N/A	2017/05/02	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8619038	N/A	2017/05/03	
Conductance - water	AT/ALK	8619678	N/A	2017/05/03	
Fluoride	ISE/ISE	8620795	N/A	2017/05/03	
Hardness Total (calculated as CaCO3)	CALC	8617727	N/A	2017/05/04	
Hardness (calculated as CaCO3)	CALC	8618008	N/A	2017/05/03	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8619338	N/A	2017/05/03	
Mercury (Total-LowLevel) by CVAF	CV/AF	8619128	2017/05/03	2017/05/03	
Ion Balance (as Cations/Anions Ratio)	CALC	8618043	N/A	2017/05/04	
Ion Balance	CALC	8618044	N/A	2017/05/04	
Sum of cations, anions	CALC	8618045	N/A	2017/05/03	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8618046	N/A	2017/05/03	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8618445	N/A	2017/05/03	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8619327	2017/05/03	2017/05/04	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8617839	N/A	2017/05/04	
Ammonia-N (Preserved)	KONE/COL	8618497	N/A	2017/05/02	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8619132	N/A	2017/05/02	
Nitrite (N) (low level)	TRAA/COL	8619136	N/A	2017/05/02	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8618048	N/A	2017/05/04	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/02	
pH Water	AT/ALK	8619679	N/A	2017/05/03	
Sulphate by Automated Colourimetry	KONE/COL	8618877	N/A	2017/05/02	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8619384	2017/05/03	2017/05/03	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8619386	N/A	2017/05/03	
Total Suspended Solids-Low Level	BAL/BAL	8619261	2017/05/03	2017/05/04	

Maxxam ID: QZ0430 Dup
Sample ID: KZ-18
Matrix: Water

Collected: 2017/04/29
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8619677	2017/05/03	2017/05/03	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: QZ0430 Dup
Sample ID: KZ-18
Matrix: Water

Collected: 2017/04/29
Shipped:
Received: 2017/05/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8618141	N/A	2017/05/02	Name Redacted
Conductance - water	AT/ALK	8619678	N/A	2017/05/03	
pH Water	AT/ALK	8619679	N/A	2017/05/03	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	5.3°C
Package 2	3.0°C
Package 3	4.7°C
Package 4	4.7°C

Samples collected on April 28th were received at analytical lab past recommended hold time for Nitrate, Nitrite, Total Phosphorus and Dissolved Phosphorus.

Sample QZ0412 [KZ-6] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample QZ0414 [KZ-9] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample QZ0418 [KZ-17] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample QZ0425 [KZ-21] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample QZ0428 [KZ-28] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample QZ0429 [TRIP BLANK] : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Sample QZ0430 [KZ-18] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

LL TOTAL METALS (DIGESTED) WITH CV HG Comments

Method Blank Elements by ICPMS Digested LL (total): (Antimony) blank outside within 2X RDL

Sample QZ0411, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample QZ0413, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample QZ0418, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8618056	Total Suspended Solids	2017/05/03			96	80 - 120	<1.0	mg/L		
8618137	Strong Acid Dissoc. Cyanide (CN)	2017/05/02	105	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8618141	Strong Acid Dissoc. Cyanide (CN)	2017/05/02	109	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8618142	Weak Acid Dissoc. Cyanide (CN)	2017/05/02	109	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8618445	Dissolved Aluminum (Al)	2017/05/03	106	80 - 120	102	80 - 120	<0.00050	mg/L	4.1	20
8618445	Dissolved Antimony (Sb)	2017/05/03	105	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8618445	Dissolved Arsenic (As)	2017/05/03	103	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8618445	Dissolved Barium (Ba)	2017/05/03	101	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8618445	Dissolved Beryllium (Be)	2017/05/03	105	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
8618445	Dissolved Bismuth (Bi)	2017/05/03	93	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8618445	Dissolved Boron (B)	2017/05/03	99	80 - 120	95	80 - 120	<0.010	mg/L	NC	20
8618445	Dissolved Cadmium (Cd)	2017/05/03	107	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8618445	Dissolved Chromium (Cr)	2017/05/03	99	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8618445	Dissolved Cobalt (Co)	2017/05/03	99	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8618445	Dissolved Copper (Cu)	2017/05/03	100	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8618445	Dissolved Iron (Fe)	2017/05/03	110	80 - 120	113	80 - 120	<0.0010	mg/L	NC	20
8618445	Dissolved Lead (Pb)	2017/05/03	102	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8618445	Dissolved Lithium (Li)	2017/05/03	103	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8618445	Dissolved Manganese (Mn)	2017/05/03	101	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8618445	Dissolved Molybdenum (Mo)	2017/05/03	101	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8618445	Dissolved Nickel (Ni)	2017/05/03	101	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8618445	Dissolved Phosphorus (P)	2017/05/03					<0.0020	mg/L	NC	20
8618445	Dissolved Selenium (Se)	2017/05/03	100	80 - 120	93	80 - 120	<0.000040	mg/L	NC	20
8618445	Dissolved Silicon (Si)	2017/05/03					<0.050	mg/L	NC	20
8618445	Dissolved Silver (Ag)	2017/05/03	105	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8618445	Dissolved Strontium (Sr)	2017/05/03	99	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8618445	Dissolved Thallium (Tl)	2017/05/03	101	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8618445	Dissolved Tin (Sn)	2017/05/03	105	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
8618445	Dissolved Titanium (Ti)	2017/05/03	105	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8618445	Dissolved Uranium (U)	2017/05/03	102	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8618445	Dissolved Vanadium (V)	2017/05/03	98	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8618445	Dissolved Zinc (Zn)	2017/05/03	124 (1)	80 - 120	113	80 - 120	<0.00010	mg/L	NC	20
8618445	Dissolved Zirconium (Zr)	2017/05/03					<0.00010	mg/L	NC	20
8618497	Total Ammonia (N)	2017/05/02	103	80 - 120	98	80 - 120	<0.0050	mg/L	2.9	20
8618835	Dissolved Chloride (Cl)	2017/05/02			100	80 - 120	<0.50	mg/L	NC	20
8618877	Dissolved Sulphate (SO4)	2017/05/02	NC	80 - 120	101	80 - 120	<0.50	mg/L	NC	20
8619005	Total Aluminum (Al)	2017/05/04	95	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8619005	Total Antimony (Sb)	2017/05/04	99	80 - 120	95	80 - 120	<0.000020	mg/L	NC	20
8619005	Total Arsenic (As)	2017/05/04	98	80 - 120	96	80 - 120	<0.000020	mg/L	NC	20
8619005	Total Barium (Ba)	2017/05/04	99	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8619005	Total Beryllium (Be)	2017/05/04	98	80 - 120	95	80 - 120	<0.000010	mg/L	NC	20
8619005	Total Bismuth (Bi)	2017/05/04	96	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8619005	Total Boron (B)	2017/05/04	91	80 - 120	90	80 - 120	<0.010	mg/L	NC	20
8619005	Total Cadmium (Cd)	2017/05/04	104	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8619005	Total Chromium (Cr)	2017/05/04	97	80 - 120	95	80 - 120	<0.00010	mg/L	NC	20
8619005	Total Cobalt (Co)	2017/05/04	96	80 - 120	95	80 - 120	<0.0000050	mg/L	NC	20
8619005	Total Copper (Cu)	2017/05/04	96	80 - 120	95	80 - 120	<0.000050	mg/L	NC	20
8619005	Total Iron (Fe)	2017/05/04	106	80 - 120	108	80 - 120	<0.0010	mg/L	NC	20
8619005	Total Lead (Pb)	2017/05/04	100	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8619005	Total Lithium (Li)	2017/05/04	97	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8619005	Total Manganese (Mn)	2017/05/04	99	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8619005	Total Molybdenum (Mo)	2017/05/04	94	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8619005	Total Nickel (Ni)	2017/05/04	98	80 - 120	96	80 - 120	<0.000020	mg/L	NC	20
8619005	Total Phosphorus (P)	2017/05/04					<0.0020	mg/L	NC	20
8619005	Total Selenium (Se)	2017/05/04	96	80 - 120	92	80 - 120	<0.000040	mg/L	NC	20
8619005	Total Silicon (Si)	2017/05/04					<0.050	mg/L	NC	20
8619005	Total Silver (Ag)	2017/05/04	99	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8619005	Total Strontium (Sr)	2017/05/04	96	80 - 120	95	80 - 120	<0.000050	mg/L	NC	20
8619005	Total Thallium (Tl)	2017/05/04	98	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8619005	Total Tin (Sn)	2017/05/04	103	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
8619005	Total Titanium (Ti)	2017/05/04	105	80 - 120	92	80 - 120	<0.00050	mg/L	NC	20
8619005	Total Uranium (U)	2017/05/04	102	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8619005	Total Vanadium (V)	2017/05/04	96	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
8619005	Total Zinc (Zn)	2017/05/04	112	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8619005	Total Zirconium (Zr)	2017/05/04					<0.00010	mg/L	NC	20
8619038	Dissolved Organic Carbon (C)	2017/05/03	105	80 - 120	107	80 - 120	<0.50	mg/L	13	20
8619128	Total Mercury (Hg)	2017/05/03	87	80 - 120	90	80 - 120	<0.0000020	mg/L	NC	20
8619129	Nitrate plus Nitrite (N)	2017/05/02	99	80 - 120	95	80 - 120	<0.0020	mg/L	NC	25
8619130	Nitrite (N)	2017/05/02	91	80 - 120	93	80 - 120	<0.0020	mg/L	NC	25
8619132	Nitrate plus Nitrite (N)	2017/05/02	104	80 - 120	99	80 - 120	<0.0020	mg/L	0.74	25
8619136	Nitrite (N)	2017/05/02	96	80 - 120	94	80 - 120	<0.0020	mg/L	NC	25
8619255	Total Suspended Solids	2017/05/04			104	80 - 120	<1.0	mg/L		
8619261	Total Suspended Solids	2017/05/04			103	80 - 120	<1.0	mg/L		
8619327	Total Aluminum (Al)	2017/05/04	108	80 - 120	101	80 - 120	<0.0030	mg/L	16	20
8619327	Total Antimony (Sb)	2017/05/04	97	80 - 120	97	80 - 120	0.000020, RDL=0.000020	mg/L	NC	20
8619327	Total Arsenic (As)	2017/05/04	102	80 - 120	98	80 - 120	<0.000020	mg/L	8.4	20
8619327	Total Barium (Ba)	2017/05/04	NC	80 - 120	100	80 - 120	<0.000050	mg/L	1.6	20
8619327	Total Beryllium (Be)	2017/05/04	97	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8619327	Total Bismuth (Bi)	2017/05/04	95	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8619327	Total Boron (B)	2017/05/04	96	80 - 120	96	80 - 120	<0.010	mg/L	NC	20
8619327	Total Cadmium (Cd)	2017/05/04	94	80 - 120	98	80 - 120	<0.0000050	mg/L	18	20
8619327	Total Chromium (Cr)	2017/05/04	100	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8619327	Total Cobalt (Co)	2017/05/04	98	80 - 120	100	80 - 120	<0.000010	mg/L	9.5	20
8619327	Total Copper (Cu)	2017/05/04	92	80 - 120	101	80 - 120	<0.00010	mg/L	0.66	20
8619327	Total Iron (Fe)	2017/05/04	82	80 - 120	109	80 - 120	<0.0050	mg/L	121 (1)	20
8619327	Total Lead (Pb)	2017/05/04	99	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8619327	Total Lithium (Li)	2017/05/04	100	80 - 120	99	80 - 120	<0.00050	mg/L	6.0	20
8619327	Total Manganese (Mn)	2017/05/04	98	80 - 120	99	80 - 120	<0.00010	mg/L	8.4	20
8619327	Total Molybdenum (Mo)	2017/05/04	112	80 - 120	97	80 - 120	<0.000050	mg/L	2.7	20
8619327	Total Nickel (Ni)	2017/05/04	97	80 - 120	101	80 - 120	<0.00010	mg/L	3.4	20
8619327	Total Phosphorus (P)	2017/05/04					<0.0050	mg/L	NC	20
8619327	Total Selenium (Se)	2017/05/04	101	80 - 120	91	80 - 120	<0.000040	mg/L	5.9	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8619327	Total Silicon (Si)	2017/05/04					<0.050	mg/L	7.9	20
8619327	Total Silver (Ag)	2017/05/04	103	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8619327	Total Strontium (Sr)	2017/05/04	NC	80 - 120	96	80 - 120	<0.000050	mg/L	4.2	20
8619327	Total Thallium (Tl)	2017/05/04	100	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8619327	Total Tin (Sn)	2017/05/04	39 (1)	80 - 120	96	80 - 120	<0.00020	mg/L	103 (1)	20
8619327	Total Titanium (Ti)	2017/05/04	102	80 - 120	105	80 - 120	<0.0020	mg/L	NC	20
8619327	Total Uranium (U)	2017/05/04	106	80 - 120	102	80 - 120	<0.0000050	mg/L	1.6	20
8619327	Total Vanadium (V)	2017/05/04	102	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8619327	Total Zinc (Zn)	2017/05/04	90	80 - 120	102	80 - 120	<0.0010	mg/L	12	20
8619327	Total Zirconium (Zr)	2017/05/04					<0.00010	mg/L	NC	20
8619338	Dissolved Mercury (Hg)	2017/05/03	95	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	20
8619384	Dissolved Phosphorus (P)	2017/05/03	101	80 - 120	107	80 - 120	<0.0020	mg/L	4.5	20
8619386	Total Phosphorus (P)	2017/05/03	100	80 - 120	89	80 - 120	<0.0020	mg/L	0.042	20
8619428	Acidity (pH 4.5)	2017/05/03					<0.50	mg/L	NC	20
8619428	Acidity (pH 8.3)	2017/05/03			97	80 - 120	<0.50	mg/L	NC	20
8619430	Acidity (pH 4.5)	2017/05/03					<0.50	mg/L	NC	20
8619430	Acidity (pH 8.3)	2017/05/03			99	80 - 120	<0.50	mg/L	NC	20
8619677	Alkalinity (PP as CaCO3)	2017/05/03					<0.50	mg/L	NC	20
8619677	Alkalinity (Total as CaCO3)	2017/05/03			100	80 - 120	<0.50	mg/L	0.55	20
8619677	Bicarbonate (HCO3)	2017/05/03					<0.50	mg/L	0.55	20
8619677	Carbonate (CO3)	2017/05/03					<0.50	mg/L	NC	20
8619677	Hydroxide (OH)	2017/05/03					<0.50	mg/L	NC	20
8619678	Conductivity	2017/05/03			99	80 - 120	<1.0	uS/cm	0.48	20
8619679	pH	2017/05/03			101	97 - 103			0.24	N/A
8619685	Alkalinity (PP as CaCO3)	2017/05/04					<0.50	mg/L	NC	20
8619685	Alkalinity (Total as CaCO3)	2017/05/04	NC	80 - 120	100	80 - 120	<0.50	mg/L	1.2	20
8619685	Bicarbonate (HCO3)	2017/05/04					<0.50	mg/L	1.2	20
8619685	Carbonate (CO3)	2017/05/04					<0.50	mg/L	NC	20
8619685	Hydroxide (OH)	2017/05/04					<0.50	mg/L	NC	20
8619686	Conductivity	2017/05/04			99	80 - 120	<1.0	uS/cm	1.2	20
8619687	pH	2017/05/04			102	97 - 103			0.94	N/A

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8619688	Alkalinity (PP as CaCO3)	2017/05/04					<0.50	mg/L		
8619688	Alkalinity (Total as CaCO3)	2017/05/04			102	80 - 120	<0.50	mg/L		
8619688	Bicarbonate (HCO3)	2017/05/04					<0.50	mg/L		
8619688	Carbonate (CO3)	2017/05/04					<0.50	mg/L		
8619688	Hydroxide (OH)	2017/05/04					<0.50	mg/L		
8619689	Conductivity	2017/05/04			100	80 - 120	<1.0	uS/cm		
8619690	pH	2017/05/04			102	97 - 103				
8620097	Dissolved Chloride (Cl)	2017/05/03	103	80 - 120	95	80 - 120	<0.50	mg/L	0.11	20
8620790	Fluoride (F)	2017/05/03	105	80 - 120	98	80 - 120	0.012, RDL=0.010	mg/L	5.4	20
8620795	Fluoride (F)	2017/05/03	112	80 - 120	104	80 - 120	0.011, RDL=0.010	mg/L	0	20
8621442	Total Ammonia (N)	2017/05/05	103	80 - 120	110	80 - 120	<0.0050	mg/L	NC	20
8622068	Dissolved Arsenic (As)	2017/05/08	104	80 - 120	100	80 - 120	<0.000020	mg/L	15	20
8622068	Dissolved Cadmium (Cd)	2017/05/08	98	80 - 120	98	80 - 120	<0.0000050	mg/L	8.7	20
8622068	Dissolved Selenium (Se)	2017/05/08	101	80 - 120	100	80 - 120	<0.000040	mg/L	7.2	20
8622724	Total Phosphorus (P)	2017/05/06			112	80 - 120	<0.0020	mg/L		
8622774	Dissolved Phosphorus (P)	2017/05/06	85	80 - 120	112	80 - 120	<0.0020	mg/L	3.7	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B732524
Report Date: 2017/05/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Name Redacted Scientific Services Manager

Signature Redacted

Name Redacted Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

08438261

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)	
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:	
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah
Phone:		Phone:	(867) 668-6463	Site #:	
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled by:	Signature

Turnaround Time (TAT) Required

[x] Regular TAT 5 days (Most analyses)

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Rush TAT (Surcharges will be applied)

[ ] Same Day [ ] 2 Days
[ ] 1 Day [ ] 3 Days

Date Required:

Rush Confirmation #:

Regulatory Criteria

[ ] BC CSR Soil [ ] BC CSR Water
[ ] CCME (Specify) [ ] Other (Specify)
[ ] Drinking Water [ ] BC Water Quality

Special Instructions

[ ] Return Cooler
[ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		29-Apr-17	15:20	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3	KZ-6		30-Apr-17	9:45	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
4	KZ-37		29-Apr-17	10:35	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5	KZ-9		29-Apr-17	11:55	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
6	KZ-13		30-Apr-17	11:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
7	KZ-15		28-Apr-17	14:15	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
8	KZ-16		28-Apr-17	15:25	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
9	KZ-17		28-Apr-17	16:18	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
10	KZ-19		28-Apr-17	13:45	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	

LABORATORY USE ONLY

CUSTODY SEAL Y / N Present	Intact	COOLER TEMPERATURES
NA		111
NA		121
NA		111 / 111

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Signature Redacted @1030
2017-05-01
TEMP: 4 / 6 / 6
4 2 3
4 5 5
5 4 5

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	2017/05/01	9.30	Signature Redacted	2017/05/02	08.00

B732524_COC

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUST[illegible]

08438262

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature	Date Required:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL Y / N Present	Intact	COOLER TEMPERATURES
NA		111
NA		121
NA		111/111

COOLING MEDIA PRESENT Y / N

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-21		28-Apr-17	13:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		RECEIVED IN WHITEHORSE
2	KZ-22		28-Apr-17	12:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		BY: Suyono @ 1030
3	KZ-26		28-Apr-17	10:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		2017-05-01
4	KZ-28		29-Apr-17	9:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		
5	Trip Blank		n/a	n/a	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		TEMP: 4 / 6 / 6
6	KZ-18		29-Apr-17	12:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		4 2 3
7																				4 5 5
8																				5 4 5
9																				
10																				

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	2017/05/01	9:30	Signature Redacted	2017/05/02	08:00

B732524_COC

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08438773, 08438774

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/05/30
Report #: R2389900
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B739122
Received: 2017/05/19, 12:50

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	15	N/A	2017/05/23	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	15	2017/05/24	2017/05/24	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	15	N/A	2017/05/23	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	15	N/A	2017/05/23	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	15	N/A	2017/05/23	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	14	N/A	2017/05/24	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - field filtered/preserved (1)	1	N/A	2017/05/29	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	15	N/A	2017/05/24	BBY6SOP-00026	SM 22 2510 B m
Fluoride	1	N/A	2017/05/23	BBY6SOP-00048	SM 22 4500-F C m
Fluoride	14	N/A	2017/05/24	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	15	N/A	2017/05/26	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	15	N/A	2017/05/25	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	15	N/A	2017/05/25	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	15	2017/05/25	2017/05/25	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance (as Cations/Anions Ratio)	15	N/A	2017/05/25	BBY WI-00033	Auto Calc
Ion Balance	15	N/A	2017/05/25	BBY WI-00033	SM 22 1030E
Sum of cations, anions	15	N/A	2017/05/25	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	15	N/A	2017/05/25	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	15	N/A	2017/05/25	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	13	2017/05/25	2017/05/26	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	15	N/A	2017/05/26	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	2	N/A	2017/05/26	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	14	N/A	2017/05/25	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	1	N/A	2017/05/29	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	14	N/A	2017/05/20	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrate+Nitrite (N) (low level)	1	N/A	2017/05/24	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	14	N/A	2017/05/20	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	1	N/A	2017/05/24	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N) Low Level Calc	15	N/A	2017/05/25	BBY6SOP-00010	SM 22 4500-NO3- I m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08438773, 08438774

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/05/30
Report #: R2389900
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B739122
Received: 2017/05/19, 12:50

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Filter and HNO3 Preserve for Metals	14	N/A	2017/05/26	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	15	N/A	2017/05/24	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	12	N/A	2017/05/23	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	3	N/A	2017/05/24	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	14	2017/05/23	2017/05/23	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2017/05/25	2017/05/25	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	14	N/A	2017/05/23	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	1	N/A	2017/05/25	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	14	2017/05/23	2017/05/24	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	1	2017/05/24	2017/05/25	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08438773, 08438774

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/05/30
Report #: R2389900
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B739122
Received: 2017/05/19, 12:50

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RC4498		RC4499		RC4500		RC4501		
Sampling Date		2017/05/18 11:40		2017/05/18 09:25		2017/05/17 11:40		2017/05/17 16:45		
COC Number		08438773		08438773		08438773		08438773		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Calculated Parameters										
Anion Sum	meq/L	1.8	8637028	0.88	8637028	1.1	8637028	0.91	N/A	8637028
Cation Sum	meq/L	1.6	8637028	1.0	8637028	1.2	8637028	0.86	N/A	8637028
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.85	8637025	1.2	8637025	1.1	8637025	0.95	0.010	8637025
Ion Balance (% Difference)	%	7.9	8637027	8.1	8637027	5.0	8637027	2.5	N/A	8637027
Nitrate (N)	mg/L	0.0449	8637000	0.0209	8637000	0.0112	8637000	0.0046	0.0020	8637000
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00074	8638118	0.00130	8638118	0.00138	8638118	0.00105	0.00050	8638118
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8638127	0.00094	8638127	0.00103	8638127	0.00099	0.00050	8638127
Fluoride (F)	mg/L	0.043	8639666	0.029	8639666	0.038	8639666	0.036	0.010	8639665
Dissolved Organic Carbon (C)	mg/L	6.73	8639378	13.4	8639379	15.2	8639378	9.68	0.50	8639378
Acidity (pH 4.5)	mg/L	<0.50	8637976	<0.50	8637976	<0.50	8637976	<0.50	0.50	8637976
Alkalinity (Total as CaCO3)	mg/L	57.2	8639614	42.3	8639627	52.4	8639533	44.5	0.50	8639614
Acidity (pH 8.3)	mg/L	<0.50	8637976	<0.50	8637976	<0.50	8637976	<0.50	0.50	8637976
Alkalinity (PP as CaCO3)	mg/L	<0.50	8639614	<0.50	8639627	<0.50	8639533	<0.50	0.50	8639614
Bicarbonate (HCO3)	mg/L	69.8	8639614	51.6	8639627	63.9	8639533	54.3	0.50	8639614
Carbonate (CO3)	mg/L	<0.50	8639614	<0.50	8639627	<0.50	8639533	<0.50	0.50	8639614
Hydroxide (OH)	mg/L	<0.50	8639614	<0.50	8639627	<0.50	8639533	<0.50	0.50	8639614
Anions										
Dissolved Sulphate (SO4)	mg/L	31.8	8638498	<0.50	8638498	<0.50	8638498	<0.50	0.50	8640224
Dissolved Chloride (Cl)	mg/L	0.76	8638491	1.2	8638491	1.2	8638491	0.59	0.50	8638489
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0056 (1)	8638405	0.0178 (1)	8638405	0.0324 (1)	8638405	0.0193 (1)	0.0020	8638405
Total Ammonia (N)	mg/L	0.021	8641046	0.029	8641048	0.038	8641046	0.039	0.0050	8641046
Nitrate plus Nitrite (N)	mg/L	0.0449	8637070	0.0232	8637070	0.0133	8637070	0.0067	0.0020	8637070
Nitrite (N)	mg/L	<0.0020	8637071	0.0023	8637071	0.0021	8637071	0.0021	0.0020	8637071
Total Phosphorus (P)	mg/L	0.0067 (1)	8638403	0.0246 (1)	8638403	0.0351 (1)	8638403	0.0237 (1)	0.0020	8638403
Physical Properties										
Conductivity	uS/cm	175	8639624	102	8639639	120	8639528	94.6	1.0	8639624
pH	pH	7.83	8639619	7.64	8639637	7.87	8639511	7.76		8639619

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RC4498		RC4499		RC4500		RC4501		
Sampling Date		2017/05/18 11:40		2017/05/18 09:25		2017/05/17 11:40		2017/05/17 16:45		
COC Number		08438773		08438773		08438773		08438773		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Physical Properties										
Total Suspended Solids	mg/L	1.8	8637746	2.7	8637746	24.6	8637746	7.1	1.0	8637746
RDL = Reportable Detection Limit										

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RC4502		RC4503		RC4504		
Sampling Date		2017/05/16 14:40		2017/05/16 15:40		2017/05/16 16:45		
COC Number		08438773		08438773		08438773		
	UNITS	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	1.7	8637028	1.8	8637028	2.1	N/A	8637028
Cation Sum	meq/L	1.6	8637028	1.7	8637028	1.8	N/A	8637028
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.97	8637025	0.92	8637025	0.87	0.010	8637025
Ion Balance (% Difference)	%	1.7	8637027	4.4	8637027	7.2	N/A	8637027
Nitrate (N)	mg/L	0.0238	8637000	0.0260	8637000	0.0318	0.0020	8637000
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00129	8638118	0.00111	8638118	0.00103	0.00050	8638118
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00130	8638127	0.00103	8638127	0.00103	0.00050	8638127
Fluoride (F)	mg/L	0.051	8639665	0.045	8639666	0.049	0.010	8639666
Dissolved Organic Carbon (C)	mg/L	14.1	8639378	9.53	8639379	8.17	0.50	8639379
Acidity (pH 4.5)	mg/L	<0.50	8637976	<0.50	8637976	<0.50	0.50	8637976
Alkalinity (Total as CaCO3)	mg/L	79.3	8639614	81.1	8639614	88.8	0.50	8639627
Acidity (pH 8.3)	mg/L	<0.50	8637976	<0.50	8637976	<0.50	0.50	8637976
Alkalinity (PP as CaCO3)	mg/L	<0.50	8639614	<0.50	8639614	<0.50	0.50	8639627
Bicarbonate (HCO3)	mg/L	96.7	8639614	98.9	8639614	108	0.50	8639627
Carbonate (CO3)	mg/L	<0.50	8639614	<0.50	8639614	<0.50	0.50	8639627
Hydroxide (OH)	mg/L	<0.50	8639614	<0.50	8639614	<0.50	0.50	8639627
Anions								
Dissolved Sulphate (SO4)	mg/L	3.82	8638490	7.83	8638490	11.9	0.50	8638498
Dissolved Chloride (Cl)	mg/L	0.97	8638489	0.87	8638489	0.93	0.50	8638491
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0236 (1)	8638405	0.0125 (1)	8638405	0.0105 (1)	0.0020	8638405
Total Ammonia (N)	mg/L	0.039	8641046	0.051	8641048	0.036	0.0050	8641048
Nitrate plus Nitrite (N)	mg/L	0.0238 (1)	8637070	0.0260 (1)	8637070	0.0318 (1)	0.0020	8637070
Nitrite (N)	mg/L	<0.0020 (1)	8637071	<0.0020 (1)	8637071	<0.0020 (1)	0.0020	8637071
Total Phosphorus (P)	mg/L	0.0349 (1)	8638403	0.0222 (1)	8638403	0.0110 (1)	0.0020	8638403
Physical Properties								
Conductivity	uS/cm	167	8639624	169	8639624	187	1.0	8639639
pH	pH	7.98	8639619	8.00	8639619	7.97		8639637

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RC4502		RC4503		RC4504		
Sampling Date		2017/05/16 14:40		2017/05/16 15:40		2017/05/16 16:45		
COC Number		08438773		08438773		08438773		
	UNITS	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	12.2	8637746	4.9	8637746	6.3	1.0	8637746
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RC4505			RC4506		RC4507		
Sampling Date		2017/05/17 12:25			2017/05/16 12:30		2017/05/16 13:20		
COC Number		08438773			08438773		08438774		
	UNITS	KZ-18	RDL	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	0.76	N/A	8637028	0.020	8637028	2.4	N/A	8637028
Cation Sum	meq/L	0.88	N/A	8637028	0.00090	8637028	2.2	N/A	8637028
Filter and HNO3 Preservation	N/A	FIELD		ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	1.2	0.010	8637025	0.044 (1)	8637025	0.92	0.010	8637025
Ion Balance (% Difference)	%	7.0	N/A	8637027	92	8637027	4.4	N/A	8637027
Nitrate (N)	mg/L	<0.020	0.020	8637000	<0.0020	8637000	<0.0020	0.0020	8637000
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00168	0.00050	8638118	<0.00050	8638118	0.00115	0.00050	8638118
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00135	0.00050	8638127	<0.00050	8638127	0.00115	0.00050	8638127
Fluoride (F)	mg/L	0.027	0.010	8639666	<0.010	8639666	0.120	0.010	8639666
Dissolved Organic Carbon (C)	mg/L	24.6	0.50	8639378	<0.50	8644810	14.5	0.50	8639378
Acidity (pH 4.5)	mg/L	<0.50	0.50	8637976	<0.50	8637976	<0.50	0.50	8637976
Alkalinity (Total as CaCO3)	mg/L	35.7	0.50	8639627	1.02	8639614	97.4	0.50	8639614
Acidity (pH 8.3)	mg/L	<0.50	0.50	8637976	<0.50	8637976	<0.50	0.50	8637976
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8639627	<0.50	8639614	<0.50	0.50	8639614
Bicarbonate (HCO3)	mg/L	43.5	0.50	8639627	1.24	8639614	119	0.50	8639614
Carbonate (CO3)	mg/L	<0.50	0.50	8639627	<0.50	8639614	<0.50	0.50	8639614
Hydroxide (OH)	mg/L	<0.50	0.50	8639627	<0.50	8639614	<0.50	0.50	8639614
Anions									
Dissolved Sulphate (SO4)	mg/L	<5.0 (2)	5.0	8640224	<0.50	8638490	19.1	0.50	8638490
Dissolved Chloride (Cl)	mg/L	1.8	0.50	8638491	<0.50	8638489	1.1	0.50	8638489
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0349 (3)	0.0020	8638405	<0.0020 (4)	8638405	0.0462 (4)	0.0020	8638405
Total Ammonia (N)	mg/L	0.048	0.0050	8641046	<0.0050	8644760	0.059	0.0050	8641048
Nitrate plus Nitrite (N)	mg/L	<0.020 (2)	0.020	8637070	<0.0020 (4)	8637070	0.0021 (4)	0.0020	8637070
Nitrite (N)	mg/L	<0.020 (2)	0.020	8637071	<0.0020 (4)	8637071	0.0022 (4)	0.0020	8637071

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).
(2) RDL raised due to sample matrix interference.
(3) Sample preserved to extend hold time.
(4) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RC4505			RC4506		RC4507		
Sampling Date		2017/05/17 12:25			2017/05/16 12:30		2017/05/16 13:20		
COC Number		08438773			08438773		08438774		
	UNITS	KZ-18	RDL	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Total Phosphorus (P)	mg/L	0.0410 (1)	0.0020	8638403	<0.0020 (2)	8638403	0.0550 (2)	0.0020	8638403
Physical Properties									
Conductivity	uS/cm	70.6	1.0	8639639	1.3	8639624	214	1.0	8639624
pH	pH	7.55		8639637	6.07	8639619	8.06		8639619
Physical Properties									
Total Suspended Solids	mg/L	2.0	1.0	8638425	<1.0	8638425	10.5	1.0	8638425

RDL = Reportable Detection Limit
(1) Sample preserved to extend hold time.
(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RC4508		RC4509			RC4510		
Sampling Date		2017/05/16 12:00		2017/05/16 10:30			2017/05/17 13:30		
COC Number		08438774		08438774			08438774		
	UNITS	KZ-22	QC Batch	KZ-26	RDL	QC Batch	KZ-28	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	2.4	8637028	2.7	N/A	8637028	0.75	N/A	8637028
Cation Sum	meq/L	2.1	8637028	2.4	N/A	8637028	0.85	N/A	8637028
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD		ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.90	8637025	0.90	0.010	8637025	1.1	0.010	8637025
Ion Balance (% Difference)	%	5.5	8637027	5.2	N/A	8637027	6.5	N/A	8637027
Nitrate (N)	mg/L	0.0183	8637000	0.0310	0.0020	8637000	<0.020	0.020	8637000
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00115	8638118	0.00103	0.00050	8638118	0.00169	0.00050	8638118
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00108	8638127	0.00108	0.00050	8638127	0.00159	0.00050	8638127
Fluoride (F)	mg/L	0.088	8639665	0.082	0.010	8639665	0.027	0.010	8639666
Dissolved Organic Carbon (C)	mg/L	11.3	8639379	10.7	0.50	8639379	24.1	0.50	8639378
Acidity (pH 4.5)	mg/L	<0.50	8637976	<0.50	0.50	8637976	<0.50	0.50	8637976
Alkalinity (Total as CaCO3)	mg/L	101	8639614	113	0.50	8639614	35.0	0.50	8639627
Acidity (pH 8.3)	mg/L	<0.50	8637976	<0.50	0.50	8637976	0.52	0.50	8637976
Alkalinity (PP as CaCO3)	mg/L	<0.50	8639614	<0.50	0.50	8639614	<0.50	0.50	8639627
Bicarbonate (HCO3)	mg/L	123	8639614	138	0.50	8639614	42.7	0.50	8639627
Carbonate (CO3)	mg/L	<0.50	8639614	<0.50	0.50	8639614	<0.50	0.50	8639627
Hydroxide (OH)	mg/L	<0.50	8639614	<0.50	0.50	8639614	<0.50	0.50	8639627
Anions									
Dissolved Sulphate (SO4)	mg/L	15.3	8638490	16.9	0.50	8638490	<5.0 (1)	5.0	8640224
Dissolved Chloride (Cl)	mg/L	1.1	8638489	1.1	0.50	8638489	1.8	0.50	8638491
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0313 (2)	8638405	0.0230 (2)	0.0020	8638405	0.0328 (3)	0.0020	8638405
Total Ammonia (N)	mg/L	0.045	8641046	0.042	0.0050	8641048	0.038	0.0050	8641046
Nitrate plus Nitrite (N)	mg/L	0.0183 (2)	8637070	0.0310 (2)	0.0020	8637070	<0.020 (1)	0.020	8637070
Nitrite (N)	mg/L	<0.0020 (2)	8637071	<0.0020 (2)	0.0020	8637071	<0.020 (1)	0.020	8637071
Total Phosphorus (P)	mg/L	0.0430 (2)	8638403	0.0325 (2)	0.0020	8638403	0.0397 (3)	0.0020	8638403

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) RDL raised due to sample matrix interference.
(2) Sample analysed past recommended hold time.
(3) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RC4508		RC4509			RC4510		
Sampling Date		2017/05/16 12:00		2017/05/16 10:30			2017/05/17 13:30		
COC Number		08438774		08438774			08438774		
	UNITS	KZ-22	QC Batch	KZ-26	RDL	QC Batch	KZ-28	RDL	QC Batch
Physical Properties									
Conductivity	uS/cm	214	8639624	236	1.0	8639624	70.9	1.0	8639639
pH	pH	8.07	8639619	8.14		8639619	7.53		8639637
Physical Properties									
Total Suspended Solids	mg/L	6.8	8638425	8.1	1.0	8638425	2.4	1.0	8638425
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RC4511			RC4512		
Sampling Date		2017/05/17 10:50			2017/05/19 12:50		
COC Number		08438774			08438774		
	UNITS	KZ-37	RDL	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Anion Sum	meq/L	1.0	N/A	8637028	0.0000	N/A	8637028
Cation Sum	meq/L	1.1	N/A	8637028	0.0022	N/A	8637028
Filter and HNO3 Preservation	N/A	FIELD		ONSITE			ONSITE
Ion Balance	N/A	1.1	0.010	8637025	NC	0.010	8637025
Ion Balance (% Difference)	%	2.8	N/A	8637027	NC	N/A	8637027
Nitrate (N)	mg/L	<0.020	0.020	8637000	<0.0020	0.0020	8637000
Misc. Inorganics							
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00182	0.00050	8638126	0.00071	0.00050	8638126
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00163	0.00050	8638127	0.00079	0.00050	8638130
Fluoride (F)	mg/L	0.034	0.010	8639666	<0.010	0.010	8638611
Dissolved Organic Carbon (C)	mg/L	18.5	0.50	8639378	<0.50	0.50	8639378
Acidity (pH 4.5)	mg/L	<0.50	0.50	8637976	<0.50	0.50	8638493
Alkalinity (Total as CaCO3)	mg/L	49.8	0.50	8639627	<0.50	0.50	8639533
Acidity (pH 8.3)	mg/L	<0.50	0.50	8637976	<0.50	0.50	8638493
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8639627	<0.50	0.50	8639533
Bicarbonate (HCO3)	mg/L	60.8	0.50	8639627	<0.50	0.50	8639533
Carbonate (CO3)	mg/L	<0.50	0.50	8639627	<0.50	0.50	8639533
Hydroxide (OH)	mg/L	<0.50	0.50	8639627	<0.50	0.50	8639533
Anions							
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8638498	<0.50	0.50	8638511
Dissolved Chloride (Cl)	mg/L	1.4	0.50	8638491	<0.50	0.50	8638508
Nutrients							
Dissolved Phosphorus (P)	mg/L	0.0439 (1)	0.0020	8638405	<0.0020 (2)	0.0020	8641117
Total Ammonia (N)	mg/L	0.049	0.0050	8641046	<0.0050	0.0050	8641046
Nitrate plus Nitrite (N)	mg/L	<0.020 (3)	0.020	8637070	<0.0020 (2)	0.0020	8640539
Nitrite (N)	mg/L	<0.020 (3)	0.020	8637071	<0.0020 (2)	0.0020	8640540
Total Phosphorus (P)	mg/L	0.0452 (1)	0.0020	8638403	<0.0020 (2)	0.0020	8641118

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.
(2) Sample analysed past recommended hold time.
(3) RDL raised due to sample matrix interference.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RC4511			RC4512		
Sampling Date		2017/05/17 10:50			2017/05/19 12:50		
COC Number		08438774			08438774		
	UNITS	KZ-37	RDL	QC Batch	TRIP BLANK	RDL	QC Batch
Physical Properties							
Conductivity	uS/cm	106	1.0	8639639	1.1	1.0	8639528
pH	pH	7.73		8639637	5.65		8639511
Physical Properties							
Total Suspended Solids	mg/L	22.7	1.0	8638425	<1.0	1.0	8639115
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RC4498	RC4499	RC4500	RC4501	RC4502		
Sampling Date		2017/05/18 11:40	2017/05/18 09:25	2017/05/17 11:40	2017/05/17 16:45	2017/05/16 14:40		
COC Number		08438773	08438773	08438773	08438773	08438773		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	73.9	47.6	55.3	38.3	77.9	0.50	8636997
Elements								
Dissolved Mercury (Hg)	mg/L	0.0000058	0.0000069	0.0000058	0.0000031	0.0000047	0.0000020	8640146
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0314	0.138	0.100	0.0356	0.0702	0.00050	8639482
Dissolved Antimony (Sb)	mg/L	0.000044	<0.000020	0.000038	<0.000020	0.000027	0.000020	8639482
Dissolved Arsenic (As)	mg/L	0.000118	0.000102	0.000333	0.000209	0.000477	0.000020	8639482
Dissolved Barium (Ba)	mg/L	0.0484	0.0213	0.0367	0.0532	0.0378	0.000020	8639482
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000012	0.000011	<0.000010	<0.000010	0.000010	8639482
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8639482
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8639482
Dissolved Cadmium (Cd)	mg/L	0.000195	0.0000731	0.000121	0.0000342	0.0000610	0.0000050	8639482
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00013	0.00015	<0.00010	0.00011	0.00010	8639482
Dissolved Cobalt (Co)	mg/L	0.0000313	0.0000970	0.000126	0.0000479	0.0000940	0.0000050	8639482
Dissolved Copper (Cu)	mg/L	0.00618	0.00108	0.00218	0.000850	0.00170	0.000050	8639482
Dissolved Iron (Fe)	mg/L	0.0309	0.137	0.278	0.103	0.139	0.0010	8639482
Dissolved Lead (Pb)	mg/L	0.000176	0.0000187	0.000116	0.0000158	0.0000424	0.0000050	8639482
Dissolved Lithium (Li)	mg/L	0.00117	<0.00050	0.00111	0.00096	0.00133	0.00050	8639482
Dissolved Manganese (Mn)	mg/L	0.000953	0.0236	0.0504	0.0583	0.0331	0.000050	8639482
Dissolved Molybdenum (Mo)	mg/L	0.000475	0.000156	0.000267	0.000432	0.000486	0.000050	8639482
Dissolved Nickel (Ni)	mg/L	0.000771	0.000772	0.00125	0.000740	0.00138	0.000020	8639482
Dissolved Phosphorus (P)	mg/L	0.0067	0.0213	0.0188	0.0122	0.0166	0.0020	8639482
Dissolved Selenium (Se)	mg/L	0.00166	0.000403	0.000390	0.000148	0.000445	0.000040	8639482
Dissolved Silicon (Si)	mg/L	1.89	1.75	1.78	2.11	2.06	0.050	8639482
Dissolved Silver (Ag)	mg/L	0.0000099	0.0000067	0.0000069	<0.0000050	<0.0000050	0.0000050	8639482
Dissolved Strontium (Sr)	mg/L	0.0856	0.0497	0.0680	0.0397	0.0849	0.000050	8639482
Dissolved Thallium (Tl)	mg/L	0.0000098	<0.0000020	0.0000027	0.0000020	<0.0000020	0.0000020	8639482
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8639482
Dissolved Titanium (Ti)	mg/L	0.00069	0.00131	0.00130	0.00063	0.00097	0.00050	8639482
Dissolved Uranium (U)	mg/L	0.00189	0.000167	0.000270	0.000326	0.000812	0.0000020	8639482
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8639482

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RC4498	RC4499	RC4500	RC4501	RC4502		
Sampling Date		2017/05/18 11:40	2017/05/18 09:25	2017/05/17 11:40	2017/05/17 16:45	2017/05/16 14:40		
COC Number		08438773	08438773	08438773	08438773	08438773		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0276	0.00302	0.0299	0.00390	0.00823	0.00010	8639482
Dissolved Zirconium (Zr)	mg/L	0.00020	0.00015	0.00023	0.00011	0.00015	0.00010	8639482
Dissolved Calcium (Ca)	mg/L	22.6	15.0	17.5	12.5	22.9	0.050	8636998
Dissolved Magnesium (Mg)	mg/L	4.21	2.45	2.80	1.70	5.05	0.050	8636998
Dissolved Potassium (K)	mg/L	2.22	1.99	1.87	2.58	1.59	0.050	8636998
Dissolved Sodium (Na)	mg/L	0.572	0.287	0.476	0.494	0.543	0.050	8636998
Dissolved Sulphur (S)	mg/L	10.2	3.0	3.1	<3.0	3.6	3.0	8636998
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RC4503	RC4504	RC4505	RC4506	RC4507		
Sampling Date		2017/05/16 15:40	2017/05/16 16:45	2017/05/17 12:25	2017/05/16 12:30	2017/05/16 13:20		
COC Number		08438773	08438773	08438773	08438773	08438774		
	UNITS	KZ-16	KZ-17	KZ-18	KZ-19	KZ-21	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	79.3	85.2	40.4	<0.50	104	0.50	8636997
Elements								
Dissolved Mercury (Hg)	mg/L	0.0000036	0.0000033	0.0000116	<0.0000020	0.0000026	0.0000020	8640146
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0393	0.0304	0.260	<0.00050	0.0153	0.00050	8639482
Dissolved Antimony (Sb)	mg/L	<0.000020	<0.000020	<0.000020	<0.000020	0.000108	0.000020	8639482
Dissolved Arsenic (As)	mg/L	0.000353	0.000351	0.000258	<0.000020	0.00248	0.000020	8639482
Dissolved Barium (Ba)	mg/L	0.0371	0.0394	0.0138	<0.000020	0.0329	0.000020	8639482
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000023	<0.000010	<0.000010	0.000010	8639482
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8639482
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8639482
Dissolved Cadmium (Cd)	mg/L	0.0000329	0.0000372	0.0000419	<0.0000050	0.0000230	0.0000050	8639482
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00036	<0.00010	0.00010	0.00010	8639482
Dissolved Cobalt (Co)	mg/L	0.0000999	0.0000735	0.000113	<0.0000050	0.000208	0.0000050	8639482
Dissolved Copper (Cu)	mg/L	0.00146	0.00148	0.00151	<0.000050	0.000933	0.000050	8639482
Dissolved Iron (Fe)	mg/L	0.0609	0.0454	0.0971	<0.0010	0.366	0.0010	8639482
Dissolved Lead (Pb)	mg/L	0.0000178	0.0000156	0.0000122	<0.0000050	0.0000214	0.0000050	8639482
Dissolved Lithium (Li)	mg/L	0.00107	0.00128	0.00059	<0.00050	0.00186	0.00050	8639482
Dissolved Manganese (Mn)	mg/L	0.0234	0.0177	0.00392	<0.000050	0.144	0.000050	8639482
Dissolved Molybdenum (Mo)	mg/L	0.000261	0.000285	0.000236	<0.000050	0.00139	0.000050	8639482
Dissolved Nickel (Ni)	mg/L	0.000933	0.000880	0.00244	<0.000020	0.00381	0.000020	8639482
Dissolved Phosphorus (P)	mg/L	0.0136	0.0146	0.0367	0.0034	0.0323	0.0020	8639482
Dissolved Selenium (Se)	mg/L	0.000401	0.000422	0.000214	<0.000040	0.000283	0.000040	8639482
Dissolved Silicon (Si)	mg/L	1.95	2.14	1.63	<0.050	2.51	0.050	8639482
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	0.0000095	<0.0000050	<0.0000050	0.0000050	8639482
Dissolved Strontium (Sr)	mg/L	0.0831	0.0948	0.0356	<0.000050	0.0858	0.000050	8639482
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	<0.0000020	<0.0000020	0.0000020	8639482
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8639482
Dissolved Titanium (Ti)	mg/L	0.00065	0.00055	0.00167	<0.00050	0.00060	0.00050	8639482
Dissolved Uranium (U)	mg/L	0.000560	0.000619	0.000295	<0.0000020	0.00109	0.0000020	8639482
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8639482

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RC4503	RC4504	RC4505	RC4506	RC4507		
Sampling Date		2017/05/16 15:40	2017/05/16 16:45	2017/05/17 12:25	2017/05/16 12:30	2017/05/16 13:20		
COC Number		08438773	08438773	08438773	08438773	08438774		
	UNITS	KZ-16	KZ-17	KZ-18	KZ-19	KZ-21	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00146	0.00196	0.00350	<0.00010	0.00215	0.00010	8639482
Dissolved Zirconium (Zr)	mg/L	0.00010	<0.00010	0.00030	<0.00010	0.00013	0.00010	8639482
Dissolved Calcium (Ca)	mg/L	23.6	24.8	10.1	<0.050	23.6	0.050	8636998
Dissolved Magnesium (Mg)	mg/L	4.94	5.64	3.69	<0.050	10.9	0.050	8636998
Dissolved Potassium (K)	mg/L	1.53	1.50	0.978	<0.050	1.88	0.050	8636998
Dissolved Sodium (Na)	mg/L	0.562	0.629	0.267	<0.050	0.707	0.050	8636998
Dissolved Sulphur (S)	mg/L	3.9	4.4	<3.0	<3.0	7.3	3.0	8636998

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RC4508	RC4509	RC4510	RC4511	RC4512		
Sampling Date		2017/05/16 12:00	2017/05/16 10:30	2017/05/17 13:30	2017/05/17 10:50	2017/05/19 12:50		
COC Number		08438774	08438774	08438774	08438774	08438774		
	UNITS	KZ-22	KZ-26	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	102	115	39.1	50.5	<0.50	0.50	8636997
Elements								
Dissolved Mercury (Hg)	mg/L	0.0000036	0.0000028	0.0000031	0.0000072	<0.0000020	0.0000020	8640146
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0324	0.0199	0.275	0.152	<0.00050	0.00050	8639482
Dissolved Antimony (Sb)	mg/L	0.000070	0.000059	<0.000020	0.000032	<0.000020	0.000020	8639482
Dissolved Arsenic (As)	mg/L	0.00151	0.00109	0.000264	0.000301	<0.000020	0.000020	8639482
Dissolved Barium (Ba)	mg/L	0.0398	0.0396	0.0139	0.0309	<0.000020	0.000020	8639482
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000023	0.000015	<0.000010	0.000010	8639482
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8639482
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8639482
Dissolved Cadmium (Cd)	mg/L	0.0000303	0.0000280	0.0000416	0.000104	<0.0000050	0.0000050	8639482
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00034	0.00019	<0.00010	0.00010	8639482
Dissolved Cobalt (Co)	mg/L	0.000132	0.0000973	0.000111	0.000119	<0.0000050	0.0000050	8639482
Dissolved Copper (Cu)	mg/L	0.00125	0.00110	0.00146	0.00190	<0.000050	0.000050	8639482
Dissolved Iron (Fe)	mg/L	0.256	0.217	0.0950	0.240	<0.0010	0.0010	8639482
Dissolved Lead (Pb)	mg/L	0.0000313	0.0000181	0.0000132	0.0000877	<0.0000050	0.0000050	8639482
Dissolved Lithium (Li)	mg/L	0.00201	0.00260	0.00059	0.00096	<0.00050	0.00050	8639482
Dissolved Manganese (Mn)	mg/L	0.0768	0.0464	0.00383	0.0336	<0.000050	0.000050	8639482
Dissolved Molybdenum (Mo)	mg/L	0.000984	0.000794	0.000258	0.000259	<0.000050	0.000050	8639482
Dissolved Nickel (Ni)	mg/L	0.00249	0.00220	0.00244	0.00150	<0.000020	0.000020	8639482
Dissolved Phosphorus (P)	mg/L	0.0222	0.0161	0.0334	0.0228	<0.0020	0.0020	8639482
Dissolved Selenium (Se)	mg/L	0.000382	0.000377	0.000198	0.000328	<0.000040	0.000040	8639482
Dissolved Silicon (Si)	mg/L	2.40	2.62	1.64	1.73	<0.050	0.050	8639482
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	0.0000075	0.0000080	<0.0000050	0.0000050	8639482
Dissolved Strontium (Sr)	mg/L	0.0922	0.0982	0.0352	0.0571	<0.000050	0.000050	8639482
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000021	0.0000026	<0.0000020	0.0000020	8639482
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8639482
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00063	0.00177	0.00158	<0.00050	0.00050	8639482
Dissolved Uranium (U)	mg/L	0.00121	0.00111	0.000304	0.000278	<0.0000020	0.0000020	8639482
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8639482

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RC4508	RC4509	RC4510	RC4511	RC4512		
Sampling Date		2017/05/16 12:00	2017/05/16 10:30	2017/05/17 13:30	2017/05/17 10:50	2017/05/19 12:50		
COC Number		08438774	08438774	08438774	08438774	08438774		
	UNITS	KZ-22	KZ-26	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00335	0.00175	0.00348	0.0222	<0.00010	0.00010	8639482
Dissolved Zirconium (Zr)	mg/L	0.00016	0.00014	0.00026	0.00022	<0.00010	0.00010	8639482
Dissolved Calcium (Ca)	mg/L	25.7	29.7	9.80	15.7	<0.050	0.050	8636998
Dissolved Magnesium (Mg)	mg/L	9.14	9.88	3.55	2.75	<0.050	0.050	8636998
Dissolved Potassium (K)	mg/L	1.69	1.61	0.949	1.58	<0.050	0.050	8636998
Dissolved Sodium (Na)	mg/L	0.695	0.804	0.262	0.384	<0.050	0.050	8636998
Dissolved Sulphur (S)	mg/L	5.4	5.7	<3.0	<3.0	<3.0	3.0	8636998

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RC4506	RC4512		
Sampling Date		2017/05/16 12:30	2017/05/19 12:50		
COC Number		08438773	08438774		
	UNITS	KZ-19	TRIP BLANK	RDL	QC Batch
Calculated Parameters					
Total Hardness (CaCO3)	mg/L	<0.50	<0.50	0.50	8636645
Elements					
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8640347
Total Metals by ICPMS					
Total Aluminum (Al)	mg/L	<0.00050	<0.00050	0.00050	8640887
Total Antimony (Sb)	mg/L	<0.000020	<0.000020	0.000020	8640887
Total Arsenic (As)	mg/L	<0.000020	<0.000020	0.000020	8640887
Total Barium (Ba)	mg/L	<0.000020	<0.000020	0.000020	8640887
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	8640887
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	0.0000050	8640887
Total Boron (B)	mg/L	<0.010	<0.010	0.010	8640887
Total Cadmium (Cd)	mg/L	<0.0000050	<0.0000050	0.0000050	8640887
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00010	8640887
Total Cobalt (Co)	mg/L	<0.0000050	<0.0000050	0.0000050	8640887
Total Copper (Cu)	mg/L	<0.000050	<0.000050	0.000050	8640887
Total Iron (Fe)	mg/L	<0.0010	<0.0010	0.0010	8640887
Total Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000050	8640887
Total Lithium (Li)	mg/L	<0.00050	<0.00050	0.00050	8640887
Total Manganese (Mn)	mg/L	<0.000050	<0.000050	0.000050	8640887
Total Molybdenum (Mo)	mg/L	<0.000050	<0.000050	0.000050	8640887
Total Nickel (Ni)	mg/L	<0.000020	<0.000020	0.000020	8640887
Total Phosphorus (P)	mg/L	0.0030	<0.0020	0.0020	8640887
Total Selenium (Se)	mg/L	<0.000040	<0.000040	0.000040	8640887
Total Silicon (Si)	mg/L	<0.050	<0.050	0.050	8640887
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	0.0000050	8640887
Total Strontium (Sr)	mg/L	<0.000050	<0.000050	0.000050	8640887
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	8640887
Total Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8640887
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00050	8640887
Total Uranium (U)	mg/L	<0.0000020	<0.0000020	0.0000020	8640887
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00020	8640887
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RC4506	RC4512		
Sampling Date		2017/05/16 12:30	2017/05/19 12:50		
COC Number		08438773	08438774		
	UNITS	KZ-19	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	<0.00010	<0.00010	0.00010	8640887
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8640887
Total Calcium (Ca)	mg/L	<0.050	<0.050	0.050	8636999
Total Magnesium (Mg)	mg/L	<0.050	<0.050	0.050	8636999
Total Potassium (K)	mg/L	<0.050	<0.050	0.050	8636999
Total Sodium (Na)	mg/L	<0.050	<0.050	0.050	8636999
Total Sulphur (S)	mg/L	<3.0	<3.0	3.0	8636999
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RC4498	RC4499	RC4500	RC4501	RC4502		
Sampling Date		2017/05/18 11:40	2017/05/18 09:25	2017/05/17 11:40	2017/05/17 16:45	2017/05/16 14:40		
COC Number		08438773	08438773	08438773	08438773	08438773		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	68.5	52.8	60.6	43.3	93.2	0.50	8636645
Elements								
Total Mercury (Hg)	mg/L	0.0000052	0.0000067	0.0000053	0.0000032	0.0000045	0.0000020	8640347
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0851	0.179	0.463	0.143	0.168	0.0030	8640862
Total Antimony (Sb)	mg/L	0.000030	<0.000020	0.000056	<0.000020	0.000033	0.000020	8640862
Total Arsenic (As)	mg/L	0.000155	0.000142	0.00115	0.000339	0.00118	0.000020	8640862
Total Barium (Ba)	mg/L	0.0470	0.0248	0.0556	0.0630	0.0473	0.000050	8640862
Total Beryllium (Be)	mg/L	<0.000010	0.000015	0.000031	0.000011	0.000015	0.000010	8640862
Total Bismuth (Bi)	mg/L	<0.000010	<0.000010	0.000010	<0.000010	<0.000010	0.000010	8640862
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8640862
Total Cadmium (Cd)	mg/L	0.000222	0.000135	0.000306	0.0000683	0.000131	0.0000050	8640862
Total Chromium (Cr)	mg/L	0.00021	0.00019	0.00082	0.00030	0.00030	0.00010	8640862
Total Cobalt (Co)	mg/L	0.000067	0.000153	0.000545	0.000154	0.000263	0.000010	8640862
Total Copper (Cu)	mg/L	0.00586	0.00151	0.00373	0.00121	0.00239	0.00010	8640862
Total Iron (Fe)	mg/L	0.112	0.304	1.67	0.358	0.612	0.0050	8640862
Total Lead (Pb)	mg/L	0.000496	0.000086	0.00150	0.000169	0.000425	0.000020	8640862
Total Lithium (Li)	mg/L	0.00115	<0.00050	0.00162	0.00115	0.00144	0.00050	8640862
Total Manganese (Mn)	mg/L	0.00218	0.0564	0.121	0.0930	0.0847	0.00010	8640862
Total Molybdenum (Mo)	mg/L	0.000416	0.000171	0.000313	0.000493	0.000559	0.000050	8640862
Total Nickel (Ni)	mg/L	0.00077	0.00094	0.00221	0.00098	0.00192	0.00010	8640862
Total Phosphorus (P)	mg/L	0.0089	0.0359	0.0548	0.0327	0.0609	0.0050	8640862
Total Selenium (Se)	mg/L	0.00148	0.000446	0.000430	0.000175	0.000496	0.000040	8640862
Total Silicon (Si)	mg/L	2.02	1.88	2.40	2.41	2.36	0.050	8640862
Total Silver (Ag)	mg/L	<0.000010	<0.000010	0.000014	<0.000010	<0.000010	0.000010	8640862
Total Strontium (Sr)	mg/L	0.0853	0.0585	0.0730	0.0430	0.0912	0.000050	8640862
Total Thallium (Tl)	mg/L	0.0000104	0.0000033	0.0000099	0.0000047	0.0000037	0.0000020	8640862
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8640862
Total Titanium (Ti)	mg/L	0.0041	<0.0020	0.0194	0.0077	0.0055	0.0020	8640862
Total Uranium (U)	mg/L	0.00175	0.000200	0.000380	0.000401	0.000924	0.0000050	8640862
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00081	<0.00020	<0.00020	0.00020	8640862
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RC4498	RC4499	RC4500	RC4501	RC4502		
Sampling Date		2017/05/18 11:40	2017/05/18 09:25	2017/05/17 11:40	2017/05/17 16:45	2017/05/16 14:40		
COC Number		08438773	08438773	08438773	08438773	08438773		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0283	0.0051	0.0565	0.0075	0.0154	0.0010	8640862
Total Zirconium (Zr)	mg/L	0.00019	0.00012	0.00035	0.00012	0.00015	0.00010	8640862
Total Calcium (Ca)	mg/L	21.5	17.1	19.7	14.5	28.7	0.25	8636999
Total Magnesium (Mg)	mg/L	3.59	2.45	2.78	1.75	5.22	0.25	8636999
Total Potassium (K)	mg/L	2.00	2.08	1.92	2.66	1.67	0.25	8636999
Total Sodium (Na)	mg/L	0.48	0.28	0.44	0.49	0.55	0.25	8636999
Total Sulphur (S)	mg/L	9.8	3.4	3.2	<3.0	4.1	3.0	8636999
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RC4503	RC4504	RC4505	RC4507	RC4508		
Sampling Date		2017/05/16 15:40	2017/05/16 16:45	2017/05/17 12:25	2017/05/16 13:20	2017/05/16 12:00		
COC Number		08438773	08438773	08438773	08438774	08438774		
	UNITS	KZ-16	KZ-17	KZ-18	KZ-21	KZ-22	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	85.2	91.5	43.2	115	115	0.50	8636645
Elements								
Total Mercury (Hg)	mg/L	0.0000033	0.0000030	0.0000107	0.0000030	0.0000032	0.0000020	8640347
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0728	0.0795	0.301	0.131	0.0927	0.0030	8640862
Total Antimony (Sb)	mg/L	<0.000020	<0.000020	<0.000020	0.000150	0.000080	0.000020	8640862
Total Arsenic (As)	mg/L	0.00104	0.000615	0.000312	0.00540	0.00315	0.000020	8640862
Total Barium (Ba)	mg/L	0.0451	0.0456	0.0154	0.0460	0.0462	0.000050	8640862
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000025	0.000013	0.000010	0.000010	8640862
Total Bismuth (Bi)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8640862
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8640862
Total Cadmium (Cd)	mg/L	0.0000758	0.0000643	0.0000585	0.0000567	0.0000703	0.0000050	8640862
Total Chromium (Cr)	mg/L	0.00011	0.00014	0.00040	0.00041	0.00025	0.00010	8640862
Total Cobalt (Co)	mg/L	0.000244	0.000158	0.000133	0.000373	0.000253	0.000010	8640862
Total Copper (Cu)	mg/L	0.00179	0.00193	0.00166	0.00137	0.00178	0.00010	8640862
Total Iron (Fe)	mg/L	0.427	0.193	0.137	1.27	0.806	0.0050	8640862
Total Lead (Pb)	mg/L	0.000114	0.000172	0.000036	0.000178	0.000161	0.000020	8640862
Total Lithium (Li)	mg/L	0.00106	0.00137	0.00058	0.00234	0.00220	0.00050	8640862
Total Manganese (Mn)	mg/L	0.0567	0.0350	0.00598	0.193	0.130	0.00010	8640862
Total Molybdenum (Mo)	mg/L	0.000306	0.000328	0.000270	0.00161	0.00103	0.000050	8640862
Total Nickel (Ni)	mg/L	0.00115	0.00118	0.00265	0.00448	0.00306	0.00010	8640862
Total Phosphorus (P)	mg/L	0.0231	0.0318	0.0475	0.0691	0.0457	0.0050	8640862
Total Selenium (Se)	mg/L	0.000440	0.000451	0.000223	0.000361	0.000446	0.000040	8640862
Total Silicon (Si)	mg/L	2.42	2.47	1.82	2.91	2.76	0.050	8640862
Total Silver (Ag)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8640862
Total Strontium (Sr)	mg/L	0.0949	0.106	0.0397	0.0902	0.102	0.000050	8640862
Total Thallium (Tl)	mg/L	0.0000023	0.0000022	0.0000025	0.0000031	0.0000029	0.0000020	8640862
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8640862
Total Titanium (Ti)	mg/L	<0.0020	0.0033	0.0024	0.0052	0.0033	0.0020	8640862
Total Uranium (U)	mg/L	0.000634	0.000666	0.000335	0.00129	0.00117	0.0000050	8640862
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8640862
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RC4503	RC4504	RC4505	RC4507	RC4508		
Sampling Date		2017/05/16 15:40	2017/05/16 16:45	2017/05/17 12:25	2017/05/16 13:20	2017/05/16 12:00		
COC Number		08438773	08438773	08438773	08438774	08438774		
	UNITS	KZ-16	KZ-17	KZ-18	KZ-21	KZ-22	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0029	0.0047	0.0045	0.0055	0.0073	0.0010	8640862
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00027	0.00020	0.00016	0.00010	8640862
Total Calcium (Ca)	mg/L	25.9	27.4	11.2	28.8	30.6	0.25	8636999
Total Magnesium (Mg)	mg/L	4.95	5.57	3.70	10.4	9.32	0.25	8636999
Total Potassium (K)	mg/L	1.61	1.54	1.00	1.82	1.78	0.25	8636999
Total Sodium (Na)	mg/L	0.55	0.61	0.26	0.67	0.71	0.25	8636999
Total Sulphur (S)	mg/L	4.2	4.7	<3.0	6.9	6.3	3.0	8636999

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RC4509	RC4510	RC4511		
Sampling Date		2017/05/16 10:30	2017/05/17 13:30	2017/05/17 10:50		
COC Number		08438774	08438774	08438774		
	UNITS	KZ-26	KZ-28	KZ-37	RDL	QC Batch
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	124	44.6	59.0	0.50	8636645
Elements						
Total Mercury (Hg)	mg/L	0.0000029	0.0000101	0.0000064	0.0000020	8640347
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.0977	0.307	0.503	0.0030	8640862
Total Antimony (Sb)	mg/L	0.000071	<0.000020	0.000050	0.000020	8640862
Total Arsenic (As)	mg/L	0.00265	0.000314	0.00105	0.000020	8640862
Total Barium (Ba)	mg/L	0.0492	0.0162	0.0472	0.000050	8640862
Total Beryllium (Be)	mg/L	0.000010	0.000026	0.000035	0.000010	8640862
Total Bismuth (Bi)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8640862
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	8640862
Total Cadmium (Cd)	mg/L	0.0000538	0.0000603	0.000323	0.0000050	8640862
Total Chromium (Cr)	mg/L	0.00032	0.00043	0.00088	0.00010	8640862
Total Cobalt (Co)	mg/L	0.000232	0.000142	0.000555	0.000010	8640862
Total Copper (Cu)	mg/L	0.00152	0.00172	0.00346	0.00010	8640862
Total Iron (Fe)	mg/L	0.761	0.143	1.74	0.0050	8640862
Total Lead (Pb)	mg/L	0.000179	0.000035	0.00161	0.000020	8640862
Total Lithium (Li)	mg/L	0.00287	0.00058	0.00135	0.00050	8640862
Total Manganese (Mn)	mg/L	0.0969	0.00640	0.108	0.00010	8640862
Total Molybdenum (Mo)	mg/L	0.000933	0.000287	0.000314	0.000050	8640862
Total Nickel (Ni)	mg/L	0.00275	0.00275	0.00272	0.00010	8640862
Total Phosphorus (P)	mg/L	0.0421	0.0474	0.0755	0.0050	8640862
Total Selenium (Se)	mg/L	0.000401	0.000233	0.000395	0.000040	8640862
Total Silicon (Si)	mg/L	3.07	1.79	2.39	0.050	8640862
Total Silver (Ag)	mg/L	<0.000010	<0.000010	0.000011	0.000010	8640862
Total Strontium (Sr)	mg/L	0.111	0.0400	0.0638	0.000050	8640862
Total Thallium (Tl)	mg/L	0.0000030	0.0000027	0.0000093	0.0000020	8640862
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8640862
Total Titanium (Ti)	mg/L	0.0028	0.0024	0.0214	0.0020	8640862
Total Uranium (U)	mg/L	0.00120	0.000338	0.000377	0.0000050	8640862
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00079	0.00020	8640862
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RC4509	RC4510	RC4511		
Sampling Date		2017/05/16 10:30	2017/05/17 13:30	2017/05/17 10:50		
COC Number		08438774	08438774	08438774		
	UNITS	KZ-26	KZ-28	KZ-37	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0042	0.0051	0.0525	0.0010	8640862
Total Zirconium (Zr)	mg/L	0.00016	0.00024	0.00035	0.00010	8640862
Total Calcium (Ca)	mg/L	33.0	11.5	18.6	0.25	8636999
Total Magnesium (Mg)	mg/L	10.1	3.85	3.07	0.25	8636999
Total Potassium (K)	mg/L	1.67	1.04	1.67	0.25	8636999
Total Sodium (Na)	mg/L	0.80	0.27	0.39	0.25	8636999
Total Sulphur (S)	mg/L	6.0	<3.0	<3.0	3.0	8636999
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: RC4498
Sample ID: KZ-2
Matrix: Water

Collected: 2017/05/18
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8637976	N/A	2017/05/23	Name Redacted
Alkalinity - Water	AT/ALK	8639614	2017/05/24	2017/05/24	
Chloride by Automated Colourimetry	KONE/COL	8638491	N/A	2017/05/23	
Cyanide SAD (strong acid dissociable)	TECH/COL	8638118	N/A	2017/05/23	
Cyanide WAD (weak acid dissociable)	TECH/COL	8638127	N/A	2017/05/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8639378	N/A	2017/05/24	
Conductance - water	AT/ALK	8639624	N/A	2017/05/24	
Fluoride	ISE/ISE	8639666	N/A	2017/05/24	
Hardness Total (calculated as CaCO3)	CALC	8636645	N/A	2017/05/26	
Hardness (calculated as CaCO3)	CALC	8636997	N/A	2017/05/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8640146	N/A	2017/05/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8640347	2017/05/25	2017/05/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8637025	N/A	2017/05/25	
Ion Balance	CALC	8637027	N/A	2017/05/25	
Sum of cations, anions	CALC	8637028	N/A	2017/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8636998	N/A	2017/05/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8639482	N/A	2017/05/25	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8640862	2017/05/25	2017/05/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8636999	N/A	2017/05/26	
Ammonia-N (Preserved)	KONE/COL	8641046	N/A	2017/05/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8637070	N/A	2017/05/20	
Nitrite (N) (low level)	TRAA/COL	8637071	N/A	2017/05/20	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8637000	N/A	2017/05/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/20	
pH Water	AT/ALK	8639619	N/A	2017/05/24	
Sulphate by Automated Colourimetry	KONE/COL	8638498	N/A	2017/05/23	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8638405	2017/05/23	2017/05/23	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8638403	N/A	2017/05/23	
Total Suspended Solids-Low Level	BAL/BAL	8637746	2017/05/23	2017/05/24	

Maxxam ID: RC4498 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2017/05/18
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8638118	N/A	2017/05/23	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8638127	N/A	2017/05/23	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8640862	2017/05/25	2017/05/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: RC4499
Sample ID: KZ-6
Matrix: Water

Collected: 2017/05/18
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8637976	N/A	2017/05/23	Name Redacted
Alkalinity - Water	AT/ALK	8639627	2017/05/24	2017/05/24	
Chloride by Automated Colourimetry	KONE/COL	8638491	N/A	2017/05/23	
Cyanide SAD (strong acid dissociable)	TECH/COL	8638118	N/A	2017/05/23	
Cyanide WAD (weak acid dissociable)	TECH/COL	8638127	N/A	2017/05/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8639379	N/A	2017/05/24	
Conductance - water	AT/ALK	8639639	N/A	2017/05/24	
Fluoride	ISE/ISE	8639666	N/A	2017/05/24	
Hardness Total (calculated as CaCO3)	CALC	8636645	N/A	2017/05/26	
Hardness (calculated as CaCO3)	CALC	8636997	N/A	2017/05/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8640146	N/A	2017/05/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8640347	2017/05/25	2017/05/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8637025	N/A	2017/05/25	
Ion Balance	CALC	8637027	N/A	2017/05/25	
Sum of cations, anions	CALC	8637028	N/A	2017/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8636998	N/A	2017/05/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8639482	N/A	2017/05/25	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8640862	2017/05/25	2017/05/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8636999	N/A	2017/05/26	
Ammonia-N (Preserved)	KONE/COL	8641048	N/A	2017/05/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8637070	N/A	2017/05/20	
Nitrite (N) (low level)	TRAA/COL	8637071	N/A	2017/05/20	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8637000	N/A	2017/05/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/20	
pH Water	AT/ALK	8639637	N/A	2017/05/24	
Sulphate by Automated Colourimetry	KONE/COL	8638498	N/A	2017/05/23	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8638405	2017/05/23	2017/05/23	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8638403	N/A	2017/05/23	
Total Suspended Solids-Low Level	BAL/BAL	8637746	2017/05/23	2017/05/24	

Maxxam ID: RC4499 Dup
Sample ID: KZ-6
Matrix: Water

Collected: 2017/05/18
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8639627	2017/05/24	2017/05/24	Name Redacted
Conductance - water	AT/ALK	8639639	N/A	2017/05/24	
pH Water	AT/ALK	8639637	N/A	2017/05/24	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: RC4500
Sample ID: KZ-9
Matrix: Water

Collected: 2017/05/17
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8637976	N/A	2017/05/23	Name Redacted
Alkalinity - Water	AT/ALK	8639533	2017/05/24	2017/05/24	
Chloride by Automated Colourimetry	KONE/COL	8638491	N/A	2017/05/23	
Cyanide SAD (strong acid dissociable)	TECH/COL	8638118	N/A	2017/05/23	
Cyanide WAD (weak acid dissociable)	TECH/COL	8638127	N/A	2017/05/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8639378	N/A	2017/05/24	
Conductance - water	AT/ALK	8639528	N/A	2017/05/24	
Fluoride	ISE/ISE	8639666	N/A	2017/05/24	
Hardness Total (calculated as CaCO3)	CALC	8636645	N/A	2017/05/26	
Hardness (calculated as CaCO3)	CALC	8636997	N/A	2017/05/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8640146	N/A	2017/05/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8640347	2017/05/25	2017/05/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8637025	N/A	2017/05/25	
Ion Balance	CALC	8637027	N/A	2017/05/25	
Sum of cations, anions	CALC	8637028	N/A	2017/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8636998	N/A	2017/05/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8639482	N/A	2017/05/25	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8640862	2017/05/25	2017/05/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8636999	N/A	2017/05/26	
Ammonia-N (Preserved)	KONE/COL	8641046	N/A	2017/05/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8637070	N/A	2017/05/20	
Nitrite (N) (low level)	TRAA/COL	8637071	N/A	2017/05/20	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8637000	N/A	2017/05/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/20	
pH Water	AT/ALK	8639511	N/A	2017/05/24	
Sulphate by Automated Colourimetry	KONE/COL	8638498	N/A	2017/05/23	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8638405	2017/05/23	2017/05/23	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8638403	N/A	2017/05/23	
Total Suspended Solids-Low Level	BAL/BAL	8637746	2017/05/23	2017/05/24	

Maxxam ID: RC4501
Sample ID: KZ-13
Matrix: Water

Collected: 2017/05/17
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8637976	N/A	2017/05/23	Name Redacted
Alkalinity - Water	AT/ALK	8639614	2017/05/24	2017/05/24	
Chloride by Automated Colourimetry	KONE/COL	8638489	N/A	2017/05/23	
Cyanide SAD (strong acid dissociable)	TECH/COL	8638118	N/A	2017/05/23	
Cyanide WAD (weak acid dissociable)	TECH/COL	8638127	N/A	2017/05/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8639378	N/A	2017/05/24	
Conductance - water	AT/ALK	8639624	N/A	2017/05/24	
Fluoride	ISE/ISE	8639665	N/A	2017/05/24	
Hardness Total (calculated as CaCO3)	CALC	8636645	N/A	2017/05/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: RC4501 **Collected:** 2017/05/17
Sample ID: KZ-13 **Shipped:**
Matrix: Water **Received:** 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8636997	N/A	2017/05/25	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8640146	N/A	2017/05/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8640347	2017/05/25	2017/05/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8637025	N/A	2017/05/25	
Ion Balance	CALC	8637027	N/A	2017/05/25	
Sum of cations, anions	CALC	8637028	N/A	2017/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8636998	N/A	2017/05/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8639482	N/A	2017/05/25	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8640862	2017/05/25	2017/05/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8636999	N/A	2017/05/26	
Ammonia-N (Preserved)	KONE/COL	8641046	N/A	2017/05/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8637070	N/A	2017/05/20	
Nitrite (N) (low level)	TRAA/COL	8637071	N/A	2017/05/20	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8637000	N/A	2017/05/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/20	
pH Water	AT/ALK	8639619	N/A	2017/05/24	
Sulphate by Automated Colourimetry	KONE/COL	8640224	N/A	2017/05/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8638405	2017/05/23	2017/05/23	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8638403	N/A	2017/05/23	
Total Suspended Solids-Low Level	BAL/BAL	8637746	2017/05/23	2017/05/24	

Maxxam ID: RC4501 Dup **Collected:** 2017/05/17
Sample ID: KZ-13 **Shipped:**
Matrix: Water **Received:** 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8641046	N/A	2017/05/25	Name Redacted
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8638405	2017/05/23	2017/05/23	

Maxxam ID: RC4502 **Collected:** 2017/05/16
Sample ID: KZ-15 **Shipped:**
Matrix: Water **Received:** 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8637976	N/A	2017/05/23	Name Redacted
Alkalinity - Water	AT/ALK	8639614	2017/05/24	2017/05/24	
Chloride by Automated Colourimetry	KONE/COL	8638489	N/A	2017/05/23	
Cyanide SAD (strong acid dissociable)	TECH/COL	8638118	N/A	2017/05/23	
Cyanide WAD (weak acid dissociable)	TECH/COL	8638127	N/A	2017/05/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8639378	N/A	2017/05/24	
Conductance - water	AT/ALK	8639624	N/A	2017/05/24	
Fluoride	ISE/ISE	8639665	N/A	2017/05/24	
Hardness Total (calculated as CaCO3)	CALC	8636645	N/A	2017/05/26	
Hardness (calculated as CaCO3)	CALC	8636997	N/A	2017/05/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: RC4502
Sample ID: KZ-15
Matrix: Water

Collected: 2017/05/16
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8640146	N/A	2017/05/25	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8640347	2017/05/25	2017/05/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8637025	N/A	2017/05/25	
Ion Balance	CALC	8637027	N/A	2017/05/25	
Sum of cations, anions	CALC	8637028	N/A	2017/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8636998	N/A	2017/05/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8639482	N/A	2017/05/25	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8640862	2017/05/25	2017/05/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8636999	N/A	2017/05/26	
Ammonia-N (Preserved)	KONE/COL	8641046	N/A	2017/05/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8637070	N/A	2017/05/20	
Nitrite (N) (low level)	TRAA/COL	8637071	N/A	2017/05/20	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8637000	N/A	2017/05/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/20	
pH Water	AT/ALK	8639619	N/A	2017/05/24	
Sulphate by Automated Colourimetry	KONE/COL	8638490	N/A	2017/05/23	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8638405	2017/05/23	2017/05/23	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8638403	N/A	2017/05/23	
Total Suspended Solids-Low Level	BAL/BAL	8637746	2017/05/23	2017/05/24	

Maxxam ID: RC4502 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2017/05/16
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8639378	N/A	2017/05/24	Name Redacted

Maxxam ID: RC4503
Sample ID: KZ-16
Matrix: Water

Collected: 2017/05/16
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8637976	N/A	2017/05/23	Name Redacted
Alkalinity - Water	AT/ALK	8639614	2017/05/24	2017/05/24	
Chloride by Automated Colourimetry	KONE/COL	8638489	N/A	2017/05/23	
Cyanide SAD (strong acid dissociable)	TECH/COL	8638118	N/A	2017/05/23	
Cyanide WAD (weak acid dissociable)	TECH/COL	8638127	N/A	2017/05/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8639379	N/A	2017/05/24	
Conductance - water	AT/ALK	8639624	N/A	2017/05/24	
Fluoride	ISE/ISE	8639666	N/A	2017/05/24	
Hardness Total (calculated as CaCO3)	CALC	8636645	N/A	2017/05/26	
Hardness (calculated as CaCO3)	CALC	8636997	N/A	2017/05/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8640146	N/A	2017/05/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8640347	2017/05/25	2017/05/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: RC4503
Sample ID: KZ-16
Matrix: Water

Collected: 2017/05/16
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance (as Cations/Anions Ratio)	CALC	8637025	N/A	2017/05/25	Name Redacted
Ion Balance	CALC	8637027	N/A	2017/05/25	
Sum of cations, anions	CALC	8637028	N/A	2017/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8636998	N/A	2017/05/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8639482	N/A	2017/05/25	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8640862	2017/05/25	2017/05/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8636999	N/A	2017/05/26	
Ammonia-N (Preserved)	KONE/COL	8641048	N/A	2017/05/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8637070	N/A	2017/05/20	
Nitrite (N) (low level)	TRAA/COL	8637071	N/A	2017/05/20	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8637000	N/A	2017/05/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/20	
pH Water	AT/ALK	8639619	N/A	2017/05/24	
Sulphate by Automated Colourimetry	KONE/COL	8638490	N/A	2017/05/23	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8638405	2017/05/23	2017/05/23	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8638403	N/A	2017/05/23	
Total Suspended Solids-Low Level	BAL/BAL	8637746	2017/05/23	2017/05/24	

Maxxam ID: RC4503 Dup
Sample ID: KZ-16
Matrix: Water

Collected: 2017/05/16
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8638489	N/A	2017/05/23	Name Redacted

Maxxam ID: RC4504
Sample ID: KZ-17
Matrix: Water

Collected: 2017/05/16
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8637976	N/A	2017/05/23	Name Redacted
Alkalinity - Water	AT/ALK	8639627	2017/05/24	2017/05/24	
Chloride by Automated Colourimetry	KONE/COL	8638491	N/A	2017/05/23	
Cyanide SAD (strong acid dissociable)	TECH/COL	8638118	N/A	2017/05/23	
Cyanide WAD (weak acid dissociable)	TECH/COL	8638127	N/A	2017/05/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8639379	N/A	2017/05/24	
Conductance - water	AT/ALK	8639639	N/A	2017/05/24	
Fluoride	ISE/ISE	8639666	N/A	2017/05/24	
Hardness Total (calculated as CaCO3)	CALC	8636645	N/A	2017/05/26	
Hardness (calculated as CaCO3)	CALC	8636997	N/A	2017/05/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8640146	N/A	2017/05/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8640347	2017/05/25	2017/05/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8637025	N/A	2017/05/25	
Ion Balance	CALC	8637027	N/A	2017/05/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: RC4504
Sample ID: KZ-17
Matrix: Water

Collected: 2017/05/16
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sum of cations, anions	CALC	8637028	N/A	2017/05/25	Name Redacted
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8636998	N/A	2017/05/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8639482	N/A	2017/05/25	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8640862	2017/05/25	2017/05/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8636999	N/A	2017/05/26	
Ammonia-N (Preserved)	KONE/COL	8641048	N/A	2017/05/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8637070	N/A	2017/05/20	
Nitrite (N) (low level)	TRAA/COL	8637071	N/A	2017/05/20	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8637000	N/A	2017/05/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/20	
pH Water	AT/ALK	8639637	N/A	2017/05/24	
Sulphate by Automated Colourimetry	KONE/COL	8638498	N/A	2017/05/23	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8638405	2017/05/23	2017/05/23	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8638403	N/A	2017/05/23	
Total Suspended Solids-Low Level	BAL/BAL	8637746	2017/05/23	2017/05/24	

Maxxam ID: RC4504 Dup
Sample ID: KZ-17
Matrix: Water

Collected: 2017/05/16
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8639666	N/A	2017/05/24	Name Redacted

Maxxam ID: RC4505
Sample ID: KZ-18
Matrix: Water

Collected: 2017/05/17
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8637976	N/A	2017/05/23	Name Redacted
Alkalinity - Water	AT/ALK	8639627	2017/05/24	2017/05/24	
Chloride by Automated Colourimetry	KONE/COL	8638491	N/A	2017/05/23	
Cyanide SAD (strong acid dissociable)	TECH/COL	8638118	N/A	2017/05/23	
Cyanide WAD (weak acid dissociable)	TECH/COL	8638127	N/A	2017/05/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8639378	N/A	2017/05/24	
Conductance - water	AT/ALK	8639639	N/A	2017/05/24	
Fluoride	ISE/ISE	8639666	N/A	2017/05/24	
Hardness Total (calculated as CaCO3)	CALC	8636645	N/A	2017/05/26	
Hardness (calculated as CaCO3)	CALC	8636997	N/A	2017/05/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8640146	N/A	2017/05/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8640347	2017/05/25	2017/05/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8637025	N/A	2017/05/25	
Ion Balance	CALC	8637027	N/A	2017/05/25	
Sum of cations, anions	CALC	8637028	N/A	2017/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8636998	N/A	2017/05/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: RC4505
Sample ID: KZ-18
Matrix: Water

Collected: 2017/05/17
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8639482	N/A	2017/05/25	Name Redacted
Elements by ICPMS Digested LL (total)	ICP/CRCM	8640862	2017/05/25	2017/05/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8636999	N/A	2017/05/26	
Ammonia-N (Preserved)	KONE/COL	8641046	N/A	2017/05/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8637070	N/A	2017/05/20	
Nitrite (N) (low level)	TRAA/COL	8637071	N/A	2017/05/20	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8637000	N/A	2017/05/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/20	
pH Water	AT/ALK	8639637	N/A	2017/05/24	
Sulphate by Automated Colourimetry	KONE/COL	8640224	N/A	2017/05/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8638405	2017/05/23	2017/05/23	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8638403	N/A	2017/05/23	
Total Suspended Solids-Low Level	BAL/BAL	8638425	2017/05/23	2017/05/24	

Maxxam ID: RC4506
Sample ID: KZ-19
Matrix: Water

Collected: 2017/05/16
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8637976	N/A	2017/05/23	Name Redacted
Alkalinity - Water	AT/ALK	8639614	2017/05/24	2017/05/24	
Chloride by Automated Colourimetry	KONE/COL	8638489	N/A	2017/05/23	
Cyanide SAD (strong acid dissociable)	TECH/COL	8638118	N/A	2017/05/23	
Cyanide WAD (weak acid dissociable)	TECH/COL	8638127	N/A	2017/05/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8644810	N/A	2017/05/29	
Conductance - water	AT/ALK	8639624	N/A	2017/05/24	
Fluoride	ISE/ISE	8639666	N/A	2017/05/24	
Hardness Total (calculated as CaCO3)	CALC	8636645	N/A	2017/05/26	
Hardness (calculated as CaCO3)	CALC	8636997	N/A	2017/05/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8640146	N/A	2017/05/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8640347	2017/05/25	2017/05/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8637025	N/A	2017/05/25	
Ion Balance	CALC	8637027	N/A	2017/05/25	
Sum of cations, anions	CALC	8637028	N/A	2017/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8636998	N/A	2017/05/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8639482	N/A	2017/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8636999	N/A	2017/05/26	
Elements by ICPMS Low Level (total)	ICP/CRCM	8640887	N/A	2017/05/26	
Ammonia-N (Preserved)	KONE/COL	8644760	N/A	2017/05/29	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8637070	N/A	2017/05/20	
Nitrite (N) (low level)	TRAA/COL	8637071	N/A	2017/05/20	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8637000	N/A	2017/05/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/20	
pH Water	AT/ALK	8639619	N/A	2017/05/24	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: RC4506 **Collected:** 2017/05/16
Sample ID: KZ-19 **Shipped:**
Matrix: Water **Received:** 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate by Automated Colourimetry	KONE/COL	8638490	N/A	2017/05/23	Name Redacted
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8638405	2017/05/23	2017/05/23	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8638403	N/A	2017/05/23	
Total Suspended Solids-Low Level	BAL/BAL	8638425	2017/05/23	2017/05/24	

Maxxam ID: RC4506 Dup **Collected:** 2017/05/16
Sample ID: KZ-19 **Shipped:**
Matrix: Water **Received:** 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8639482	N/A	2017/05/25	Name Redacted
Sulphate by Automated Colourimetry	KONE/COL	8638490	N/A	2017/05/23	

Maxxam ID: RC4507 **Collected:** 2017/05/16
Sample ID: KZ-21 **Shipped:**
Matrix: Water **Received:** 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8637976	N/A	2017/05/23	Name Redacted
Alkalinity - Water	AT/ALK	8639614	2017/05/24	2017/05/24	
Chloride by Automated Colourimetry	KONE/COL	8638489	N/A	2017/05/23	
Cyanide SAD (strong acid dissociable)	TECH/COL	8638118	N/A	2017/05/23	
Cyanide WAD (weak acid dissociable)	TECH/COL	8638127	N/A	2017/05/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8639378	N/A	2017/05/24	
Conductance - water	AT/ALK	8639624	N/A	2017/05/24	
Fluoride	ISE/ISE	8639666	N/A	2017/05/24	
Hardness Total (calculated as CaCO3)	CALC	8636645	N/A	2017/05/26	
Hardness (calculated as CaCO3)	CALC	8636997	N/A	2017/05/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8640146	N/A	2017/05/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8640347	2017/05/25	2017/05/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8637025	N/A	2017/05/25	
Ion Balance	CALC	8637027	N/A	2017/05/25	
Sum of cations, anions	CALC	8637028	N/A	2017/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8636998	N/A	2017/05/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8639482	N/A	2017/05/25	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8640862	2017/05/25	2017/05/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8636999	N/A	2017/05/26	
Ammonia-N (Preserved)	KONE/COL	8641048	N/A	2017/05/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8637070	N/A	2017/05/20	
Nitrite (N) (low level)	TRAA/COL	8637071	N/A	2017/05/20	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8637000	N/A	2017/05/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/20	
pH Water	AT/ALK	8639619	N/A	2017/05/24	
Sulphate by Automated Colourimetry	KONE/COL	8638490	N/A	2017/05/23	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: RC4507
Sample ID: KZ-21
Matrix: Water

Collected: 2017/05/16
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8638405	2017/05/23	2017/05/23	Name Redacted
Total Phosphorus - Low Level Unpreserved	KONE/COL	8638403	N/A	2017/05/23	
Total Suspended Solids-Low Level	BAL/BAL	8638425	2017/05/23	2017/05/24	

Maxxam ID: RC4508
Sample ID: KZ-22
Matrix: Water

Collected: 2017/05/16
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8637976	N/A	2017/05/23	Name Redacted
Alkalinity - Water	AT/ALK	8639614	2017/05/24	2017/05/24	
Chloride by Automated Colourimetry	KONE/COL	8638489	N/A	2017/05/23	
Cyanide SAD (strong acid dissociable)	TECH/COL	8638118	N/A	2017/05/23	
Cyanide WAD (weak acid dissociable)	TECH/COL	8638127	N/A	2017/05/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8639379	N/A	2017/05/24	
Conductance - water	AT/ALK	8639624	N/A	2017/05/24	
Fluoride	ISE/ISE	8639665	N/A	2017/05/24	
Hardness Total (calculated as CaCO3)	CALC	8636645	N/A	2017/05/26	
Hardness (calculated as CaCO3)	CALC	8636997	N/A	2017/05/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8640146	N/A	2017/05/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8640347	2017/05/25	2017/05/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8637025	N/A	2017/05/25	
Ion Balance	CALC	8637027	N/A	2017/05/25	
Sum of cations, anions	CALC	8637028	N/A	2017/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8636998	N/A	2017/05/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8639482	N/A	2017/05/25	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8640862	2017/05/25	2017/05/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8636999	N/A	2017/05/26	
Ammonia-N (Preserved)	KONE/COL	8641046	N/A	2017/05/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8637070	N/A	2017/05/20	
Nitrite (N) (low level)	TRAA/COL	8637071	N/A	2017/05/20	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8637000	N/A	2017/05/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/20	
pH Water	AT/ALK	8639619	N/A	2017/05/24	
Sulphate by Automated Colourimetry	KONE/COL	8638490	N/A	2017/05/23	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8638405	2017/05/23	2017/05/23	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8638403	N/A	2017/05/23	
Total Suspended Solids-Low Level	BAL/BAL	8638425	2017/05/23	2017/05/24	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: RC4509
Sample ID: KZ-26
Matrix: Water

Collected: 2017/05/16
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8637976	N/A	2017/05/23	Name Redacted
Alkalinity - Water	AT/ALK	8639614	2017/05/24	2017/05/24	
Chloride by Automated Colourimetry	KONE/COL	8638489	N/A	2017/05/23	
Cyanide SAD (strong acid dissociable)	TECH/COL	8638118	N/A	2017/05/23	
Cyanide WAD (weak acid dissociable)	TECH/COL	8638127	N/A	2017/05/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8639379	N/A	2017/05/24	
Conductance - water	AT/ALK	8639624	N/A	2017/05/24	
Fluoride	ISE/ISE	8639665	N/A	2017/05/24	
Hardness Total (calculated as CaCO3)	CALC	8636645	N/A	2017/05/26	
Hardness (calculated as CaCO3)	CALC	8636997	N/A	2017/05/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8640146	N/A	2017/05/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8640347	2017/05/25	2017/05/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8637025	N/A	2017/05/25	
Ion Balance	CALC	8637027	N/A	2017/05/25	
Sum of cations, anions	CALC	8637028	N/A	2017/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8636998	N/A	2017/05/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8639482	N/A	2017/05/25	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8640862	2017/05/25	2017/05/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8636999	N/A	2017/05/26	
Ammonia-N (Preserved)	KONE/COL	8641048	N/A	2017/05/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8637070	N/A	2017/05/20	
Nitrite (N) (low level)	TRAA/COL	8637071	N/A	2017/05/20	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8637000	N/A	2017/05/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/20	
pH Water	AT/ALK	8639619	N/A	2017/05/24	
Sulphate by Automated Colourimetry	KONE/COL	8638490	N/A	2017/05/23	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8638405	2017/05/23	2017/05/23	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8638403	N/A	2017/05/23	
Total Suspended Solids-Low Level	BAL/BAL	8638425	2017/05/23	2017/05/24	

Maxxam ID: RC4509 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2017/05/16
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8637070	N/A	2017/05/20	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8637071	N/A	2017/05/20	

Maxxam ID: RC4510
Sample ID: KZ-28
Matrix: Water

Collected: 2017/05/17
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8637976	N/A	2017/05/23	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: RC4510
Sample ID: KZ-28
Matrix: Water

Collected: 2017/05/17
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8639627	2017/05/24	2017/05/24	Name Redacted
Chloride by Automated Colourimetry	KONE/COL	8638491	N/A	2017/05/23	
Cyanide SAD (strong acid dissociable)	TECH/COL	8638118	N/A	2017/05/23	
Cyanide WAD (weak acid dissociable)	TECH/COL	8638127	N/A	2017/05/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8639378	N/A	2017/05/24	
Conductance - water	AT/ALK	8639639	N/A	2017/05/24	
Fluoride	ISE/ISE	8639666	N/A	2017/05/24	
Hardness Total (calculated as CaCO3)	CALC	8636645	N/A	2017/05/26	
Hardness (calculated as CaCO3)	CALC	8636997	N/A	2017/05/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8640146	N/A	2017/05/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8640347	2017/05/25	2017/05/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8637025	N/A	2017/05/25	
Ion Balance	CALC	8637027	N/A	2017/05/25	
Sum of cations, anions	CALC	8637028	N/A	2017/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8636998	N/A	2017/05/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8639482	N/A	2017/05/25	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8640862	2017/05/25	2017/05/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8636999	N/A	2017/05/26	
Ammonia-N (Preserved)	KONE/COL	8641046	N/A	2017/05/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8637070	N/A	2017/05/20	
Nitrite (N) (low level)	TRAA/COL	8637071	N/A	2017/05/20	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8637000	N/A	2017/05/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/20	
pH Water	AT/ALK	8639637	N/A	2017/05/24	
Sulphate by Automated Colourimetry	KONE/COL	8640224	N/A	2017/05/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8638405	2017/05/23	2017/05/23	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8638403	N/A	2017/05/23	
Total Suspended Solids-Low Level	BAL/BAL	8638425	2017/05/23	2017/05/24	

Maxxam ID: RC4511
Sample ID: KZ-37
Matrix: Water

Collected: 2017/05/17
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8637976	N/A	2017/05/23	Name Redacted
Alkalinity - Water	AT/ALK	8639627	2017/05/24	2017/05/24	
Chloride by Automated Colourimetry	KONE/COL	8638491	N/A	2017/05/23	
Cyanide SAD (strong acid dissociable)	TECH/COL	8638126	N/A	2017/05/23	
Cyanide WAD (weak acid dissociable)	TECH/COL	8638127	N/A	2017/05/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8639378	N/A	2017/05/24	
Conductance - water	AT/ALK	8639639	N/A	2017/05/24	
Fluoride	ISE/ISE	8639666	N/A	2017/05/24	
Hardness Total (calculated as CaCO3)	CALC	8636645	N/A	2017/05/26	
Hardness (calculated as CaCO3)	CALC	8636997	N/A	2017/05/25	

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: RC4511
Sample ID: KZ-37
Matrix: Water

Collected: 2017/05/17
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8640146	N/A	2017/05/25	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8640347	2017/05/25	2017/05/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8637025	N/A	2017/05/25	
Ion Balance	CALC	8637027	N/A	2017/05/25	
Sum of cations, anions	CALC	8637028	N/A	2017/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8636998	N/A	2017/05/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8639482	N/A	2017/05/25	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8640862	2017/05/25	2017/05/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8636999	N/A	2017/05/26	
Ammonia-N (Preserved)	KONE/COL	8641046	N/A	2017/05/25	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8637070	N/A	2017/05/20	
Nitrite (N) (low level)	TRAA/COL	8637071	N/A	2017/05/20	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8637000	N/A	2017/05/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/20	
pH Water	AT/ALK	8639637	N/A	2017/05/24	
Sulphate by Automated Colourimetry	KONE/COL	8638498	N/A	2017/05/23	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8638405	2017/05/23	2017/05/23	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8638403	N/A	2017/05/23	
Total Suspended Solids-Low Level	BAL/BAL	8638425	2017/05/23	2017/05/24	

Maxxam ID: RC4512
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/05/19
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8638493	N/A	2017/05/23	Name Redacted
Alkalinity - Water	AT/ALK	8639533	2017/05/24	2017/05/24	
Chloride by Automated Colourimetry	KONE/COL	8638508	N/A	2017/05/23	
Cyanide SAD (strong acid dissociable)	TECH/COL	8638126	N/A	2017/05/23	
Cyanide WAD (weak acid dissociable)	TECH/COL	8638130	N/A	2017/05/23	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8639378	N/A	2017/05/24	
Conductance - water	AT/ALK	8639528	N/A	2017/05/24	
Fluoride	ISE/ISE	8638611	N/A	2017/05/23	
Hardness Total (calculated as CaCO3)	CALC	8636645	N/A	2017/05/26	
Hardness (calculated as CaCO3)	CALC	8636997	N/A	2017/05/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8640146	N/A	2017/05/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8640347	2017/05/25	2017/05/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8637025	N/A	2017/05/25	
Ion Balance	CALC	8637027	N/A	2017/05/25	
Sum of cations, anions	CALC	8637028	N/A	2017/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8636998	N/A	2017/05/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8639482	N/A	2017/05/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8636999	N/A	2017/05/26	
Elements by ICPMS Low Level (total)	ICP/CRCM	8640887	N/A	2017/05/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: RC4512
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/05/19
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8641046	N/A	2017/05/25	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8640539	N/A	2017/05/24	
Nitrite (N) (low level)	TRAA/COL	8640540	N/A	2017/05/24	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8637000	N/A	2017/05/25	
pH Water	AT/ALK	8639511	N/A	2017/05/24	
Sulphate by Automated Colourimetry	KONE/COL	8638511	N/A	2017/05/23	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8641117	2017/05/25	2017/05/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8641118	N/A	2017/05/25	
Total Suspended Solids-Low Level	BAL/BAL	8639115	2017/05/24	2017/05/25	

Maxxam ID: RC4512 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/05/19
Shipped:
Received: 2017/05/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8640146	N/A	2017/05/25	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8640347	2017/05/25	2017/05/25	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8641117	2017/05/25	2017/05/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8641118	N/A	2017/05/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.0°C
Package 2	8.7°C
Package 3	9.0°C
Package 4	5.7°C

Samples collected on May 16th were received at analytical lab past recommended hold time for Nitrate, Nitrite, Dissolved Phosphorus and total Phosphorus.

Sample RC4498 [KZ-2] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RC4499 [KZ-6] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RC4500 [KZ-9] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RC4501 [KZ-13] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RC4502 [KZ-15] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RC4503 [KZ-16] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RC4504 [KZ-17] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RC4505 [KZ-18] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RC4507 [KZ-21] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RC4508 [KZ-22] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RC4509 [KZ-26] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RC4510 [KZ-28] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RC4511 [KZ-37] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RC4512 [TRIP BLANK] : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8637070	Nitrate plus Nitrite (N)	2017/05/20	101	80 - 120	99	80 - 120	<0.0020	mg/L	0.64	25
8637071	Nitrite (N)	2017/05/20	100	80 - 120	98	80 - 120	<0.0020	mg/L	NC	25
8637746	Total Suspended Solids	2017/05/24			105	80 - 120	<1.0	mg/L		
8637976	Acidity (pH 4.5)	2017/05/23					<0.50	mg/L	NC	20
8637976	Acidity (pH 8.3)	2017/05/23			98	80 - 120	<0.50	mg/L	NC	20
8638118	Strong Acid Dissoc. Cyanide (CN)	2017/05/23	106	80 - 120	102	80 - 120	<0.00050	mg/L	5.6	20
8638126	Strong Acid Dissoc. Cyanide (CN)	2017/05/23	24 (1)	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8638127	Weak Acid Dissoc. Cyanide (CN)	2017/05/23	107	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
8638130	Weak Acid Dissoc. Cyanide (CN)	2017/05/23			103	80 - 120	<0.00050	mg/L		
8638403	Total Phosphorus (P)	2017/05/23	NC	80 - 120	104	80 - 120	<0.0020	mg/L	1.0	20
8638405	Dissolved Phosphorus (P)	2017/05/23	96	80 - 120	113	80 - 120	<0.0020	mg/L	0.42	20
8638425	Total Suspended Solids	2017/05/24			102	80 - 120	<1.0	mg/L		
8638489	Dissolved Chloride (Cl)	2017/05/23	115	80 - 120	100	80 - 120	<0.50	mg/L	6.0	20
8638490	Dissolved Sulphate (SO4)	2017/05/23	117	80 - 120	98	80 - 120	0.61, RDL=0.50	mg/L	NC	20
8638491	Dissolved Chloride (Cl)	2017/05/23			99	80 - 120	<0.50	mg/L		
8638493	Acidity (pH 4.5)	2017/05/23					<0.50	mg/L	NC	20
8638493	Acidity (pH 8.3)	2017/05/23			100	80 - 120	<0.50	mg/L	NC	20
8638498	Dissolved Sulphate (SO4)	2017/05/23	NC	80 - 120	97	80 - 120	<0.50	mg/L	1.2	20
8638508	Dissolved Chloride (Cl)	2017/05/23	102	80 - 120	100	80 - 120	<0.50	mg/L	7.0	20
8638511	Dissolved Sulphate (SO4)	2017/05/23	99	80 - 120	96	80 - 120	<0.50	mg/L	0.10	20
8638611	Fluoride (F)	2017/05/23	97	80 - 120	102	80 - 120	0.012, RDL=0.010	mg/L	NC	20
8639115	Total Suspended Solids	2017/05/25			102	80 - 120	<1.0	mg/L		
8639378	Dissolved Organic Carbon (C)	2017/05/24	101	80 - 120	105	80 - 120	<0.50	mg/L	0	20
8639379	Dissolved Organic Carbon (C)	2017/05/24	91	80 - 120	100	80 - 120	<0.50	mg/L	8.9	20
8639482	Dissolved Aluminum (Al)	2017/05/25	107	80 - 120	111	80 - 120	<0.00050	mg/L	NC	20
8639482	Dissolved Antimony (Sb)	2017/05/25	94	80 - 120	96	80 - 120	<0.000020	mg/L	NC	20
8639482	Dissolved Arsenic (As)	2017/05/25	102	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8639482	Dissolved Barium (Ba)	2017/05/25	93	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8639482	Dissolved Beryllium (Be)	2017/05/25	99	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
8639482	Dissolved Bismuth (Bi)	2017/05/25	96	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20

Maxxam Job #: B739122
Report Date: 2017/05/30

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8639482	Dissolved Boron (B)	2017/05/25	101	80 - 120	101	80 - 120	<0.010	mg/L	NC	20
8639482	Dissolved Cadmium (Cd)	2017/05/25	94	80 - 120	94	80 - 120	<0.0000050	mg/L	NC	20
8639482	Dissolved Chromium (Cr)	2017/05/25	95	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
8639482	Dissolved Cobalt (Co)	2017/05/25	95	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8639482	Dissolved Copper (Cu)	2017/05/25	95	80 - 120	96	80 - 120	<0.000050	mg/L	NC	20
8639482	Dissolved Iron (Fe)	2017/05/25	94	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
8639482	Dissolved Lead (Pb)	2017/05/25	96	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8639482	Dissolved Lithium (Li)	2017/05/25	102	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8639482	Dissolved Manganese (Mn)	2017/05/25	97	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8639482	Dissolved Molybdenum (Mo)	2017/05/25	93	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8639482	Dissolved Nickel (Ni)	2017/05/25	94	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8639482	Dissolved Phosphorus (P)	2017/05/25					<0.0020	mg/L	NC	20
8639482	Dissolved Selenium (Se)	2017/05/25	111	80 - 120	105	80 - 120	<0.000040	mg/L	NC	20
8639482	Dissolved Silicon (Si)	2017/05/25					<0.050	mg/L	NC	20
8639482	Dissolved Silver (Ag)	2017/05/25	97	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8639482	Dissolved Strontium (Sr)	2017/05/25	97	80 - 120	105	80 - 120	<0.000050	mg/L	NC	20
8639482	Dissolved Thallium (Tl)	2017/05/25	95	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8639482	Dissolved Tin (Sn)	2017/05/25	95	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8639482	Dissolved Titanium (Ti)	2017/05/25	92	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8639482	Dissolved Uranium (U)	2017/05/25	93	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8639482	Dissolved Vanadium (V)	2017/05/25	95	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
8639482	Dissolved Zinc (Zn)	2017/05/25	102	80 - 120	95	80 - 120	<0.00010	mg/L	NC	20
8639482	Dissolved Zirconium (Zr)	2017/05/25					<0.00010	mg/L	NC	20
8639511	pH	2017/05/24			101	97 - 103				
8639528	Conductivity	2017/05/24			101	80 - 120	<1.0	uS/cm		
8639533	Alkalinity (PP as CaCO3)	2017/05/24					<0.50	mg/L	NC	20
8639533	Alkalinity (Total as CaCO3)	2017/05/24	104	80 - 120	102	80 - 120	<0.50	mg/L	2.5	20
8639533	Bicarbonate (HCO3)	2017/05/24					<0.50	mg/L	2.5	20
8639533	Carbonate (CO3)	2017/05/24					<0.50	mg/L	NC	20
8639533	Hydroxide (OH)	2017/05/24					<0.50	mg/L	NC	20
8639614	Alkalinity (PP as CaCO3)	2017/05/24					<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8639614	Alkalinity (Total as CaCO3)	2017/05/24	99	80 - 120	109	80 - 120	<0.50	mg/L	0.57	20
8639614	Bicarbonate (HCO3)	2017/05/24					<0.50	mg/L	0.57	20
8639614	Carbonate (CO3)	2017/05/24					<0.50	mg/L	NC	20
8639614	Hydroxide (OH)	2017/05/24					<0.50	mg/L	NC	20
8639619	pH	2017/05/24			101	97 - 103			0.14	N/A
8639624	Conductivity	2017/05/24			101	80 - 120	<1.0	uS/cm	0.71	20
8639627	Alkalinity (PP as CaCO3)	2017/05/24					<0.50	mg/L	NC	20
8639627	Alkalinity (Total as CaCO3)	2017/05/24	98	80 - 120	101	80 - 120	<0.50	mg/L	4.2	20
8639627	Bicarbonate (HCO3)	2017/05/24					<0.50	mg/L	4.2	20
8639627	Carbonate (CO3)	2017/05/24					<0.50	mg/L	NC	20
8639627	Hydroxide (OH)	2017/05/24					<0.50	mg/L	NC	20
8639637	pH	2017/05/24			101	97 - 103			0.91	N/A
8639639	Conductivity	2017/05/24			101	80 - 120	<1.0	uS/cm	0.098	20
8639665	Fluoride (F)	2017/05/24	104	80 - 120	104	80 - 120	<0.010	mg/L	0	20
8639666	Fluoride (F)	2017/05/24	109	80 - 120	104	80 - 120	<0.010	mg/L	2.0	20
8640146	Dissolved Mercury (Hg)	2017/05/25	98	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8640224	Dissolved Sulphate (SO4)	2017/05/24	102	80 - 120	103	80 - 120	<0.50	mg/L	NC	20
8640347	Total Mercury (Hg)	2017/05/25	98	80 - 120	106	80 - 120	<0.0000020	mg/L	NC	20
8640539	Nitrate plus Nitrite (N)	2017/05/24	102	80 - 120	109	80 - 120	<0.0020	mg/L	0.69	25
8640540	Nitrite (N)	2017/05/24	97	80 - 120	103	80 - 120	<0.0020	mg/L	11	25
8640862	Total Aluminum (Al)	2017/05/26	110	80 - 120	111	80 - 120	<0.0030	mg/L	1.9	20
8640862	Total Antimony (Sb)	2017/05/26	101	80 - 120	99	80 - 120	<0.000020	mg/L	16	20
8640862	Total Arsenic (As)	2017/05/26	105	80 - 120	101	80 - 120	<0.000020	mg/L	3.5	20
8640862	Total Barium (Ba)	2017/05/26	NC	80 - 120	102	80 - 120	<0.000050	mg/L	8.0	20
8640862	Total Beryllium (Be)	2017/05/26	106	80 - 120	106	80 - 120	<0.000010	mg/L	NC	20
8640862	Total Bismuth (Bi)	2017/05/26	95	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
8640862	Total Boron (B)	2017/05/26	100	80 - 120	105	80 - 120	<0.010	mg/L	NC	20
8640862	Total Cadmium (Cd)	2017/05/26	104	80 - 120	100	80 - 120	<0.0000050	mg/L	0.41	20
8640862	Total Chromium (Cr)	2017/05/26	99	80 - 120	97	80 - 120	<0.00010	mg/L	0.047	20
8640862	Total Cobalt (Co)	2017/05/26	97	80 - 120	95	80 - 120	<0.000010	mg/L	6.4	20
8640862	Total Copper (Cu)	2017/05/26	99	80 - 120	96	80 - 120	<0.00010	mg/L	0.34	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8640862	Total Iron (Fe)	2017/05/26	NC	80 - 120	109	80 - 120	<0.0050	mg/L	3.0	20
8640862	Total Lead (Pb)	2017/05/26	104	80 - 120	103	80 - 120	<0.000020	mg/L	3.9	20
8640862	Total Lithium (Li)	2017/05/26	104	80 - 120	106	80 - 120	<0.00050	mg/L	9.1	20
8640862	Total Manganese (Mn)	2017/05/26	99	80 - 120	98	80 - 120	<0.00010	mg/L	0.25	20
8640862	Total Molybdenum (Mo)	2017/05/26	101	80 - 120	101	80 - 120	<0.000050	mg/L	4.4	20
8640862	Total Nickel (Ni)	2017/05/26	96	80 - 120	96	80 - 120	<0.00010	mg/L	1.4	20
8640862	Total Phosphorus (P)	2017/05/26					<0.0050	mg/L	4.7	20
8640862	Total Selenium (Se)	2017/05/26	104	80 - 120	108	80 - 120	<0.000040	mg/L	2.5	20
8640862	Total Silicon (Si)	2017/05/26					<0.050	mg/L	1.1	20
8640862	Total Silver (Ag)	2017/05/26	102	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20
8640862	Total Strontium (Sr)	2017/05/26	NC	80 - 120	104	80 - 120	<0.000050	mg/L	2.4	20
8640862	Total Thallium (Tl)	2017/05/26	104	80 - 120	100	80 - 120	<0.0000020	mg/L	2.9	20
8640862	Total Tin (Sn)	2017/05/26	98	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8640862	Total Titanium (Ti)	2017/05/26	103	80 - 120	99	80 - 120	<0.0020	mg/L	9.8	20
8640862	Total Uranium (U)	2017/05/26	104	80 - 120	102	80 - 120	<0.0000050	mg/L	1.6	20
8640862	Total Vanadium (V)	2017/05/26	100	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
8640862	Total Zinc (Zn)	2017/05/26	NC	80 - 120	97	80 - 120	<0.0010	mg/L	0.72	20
8640862	Total Zirconium (Zr)	2017/05/26					<0.00010	mg/L	8.0	20
8640887	Total Aluminum (Al)	2017/05/26	111	80 - 120	106	80 - 120	<0.00050	mg/L	19	20
8640887	Total Antimony (Sb)	2017/05/26	108	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8640887	Total Arsenic (As)	2017/05/26	104	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8640887	Total Barium (Ba)	2017/05/26	104	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8640887	Total Beryllium (Be)	2017/05/26	107	80 - 120	105	80 - 120	<0.000010	mg/L	NC	20
8640887	Total Bismuth (Bi)	2017/05/26	107	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8640887	Total Boron (B)	2017/05/26	106	80 - 120	102	80 - 120	<0.010	mg/L	NC	20
8640887	Total Cadmium (Cd)	2017/05/26	106	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8640887	Total Chromium (Cr)	2017/05/26	106	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20
8640887	Total Cobalt (Co)	2017/05/26	107	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8640887	Total Copper (Cu)	2017/05/26	105	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8640887	Total Iron (Fe)	2017/05/26	105	80 - 120	103	80 - 120	<0.0010	mg/L	NC	20
8640887	Total Lead (Pb)	2017/05/26	105	80 - 120	103	80 - 120	<0.0000050	mg/L	18	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8640887	Total Lithium (Li)	2017/05/26	110	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
8640887	Total Manganese (Mn)	2017/05/26	103	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8640887	Total Molybdenum (Mo)	2017/05/26	107	80 - 120	105	80 - 120	<0.000050	mg/L	NC	20
8640887	Total Nickel (Ni)	2017/05/26	108	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8640887	Total Phosphorus (P)	2017/05/26					<0.0020	mg/L	NC	20
8640887	Total Selenium (Se)	2017/05/26	108	80 - 120	106	80 - 120	<0.000040	mg/L	NC	20
8640887	Total Silicon (Si)	2017/05/26					<0.050	mg/L	NC	20
8640887	Total Silver (Ag)	2017/05/26	109	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8640887	Total Strontium (Sr)	2017/05/26	102	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8640887	Total Thallium (Tl)	2017/05/26	102	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8640887	Total Tin (Sn)	2017/05/26	109	80 - 120	110	80 - 120	<0.00020	mg/L	NC	20
8640887	Total Titanium (Ti)	2017/05/26	106	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
8640887	Total Uranium (U)	2017/05/26	104	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8640887	Total Vanadium (V)	2017/05/26	106	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
8640887	Total Zinc (Zn)	2017/05/26	109	80 - 120	109	80 - 120	<0.00010	mg/L	NC	20
8640887	Total Zirconium (Zr)	2017/05/26					<0.00010	mg/L	NC	20
8641046	Total Ammonia (N)	2017/05/25	84	80 - 120	104	80 - 120	<0.0050	mg/L	4.1	20
8641048	Total Ammonia (N)	2017/05/25	96	80 - 120	108	80 - 120	<0.0050	mg/L	7.0	20
8641117	Dissolved Phosphorus (P)	2017/05/25	102	80 - 120	103	80 - 120	<0.0020	mg/L	17	20
8641118	Total Phosphorus (P)	2017/05/25	83	80 - 120	103	80 - 120	<0.0020	mg/L	NC	20
8644760	Total Ammonia (N)	2017/05/29			105	80 - 120	<0.0050	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8644810	Dissolved Organic Carbon (C)	2017/05/29			108	80 - 120	<0.50	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B739122
Report Date: 2017/05/30

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Name Redacted Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665.8566

CHAIN OF CUSTODY RECORD

COC #: 08438773

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)	
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:	
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah
Phone:		Phone:	(867) 668-6463	Site #:	
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature

Turnaround Time (TAT) Required

[x] Regular TAT 5 days (Most analyses)

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Rush TAT (Surcharges will be applied)

[ ] Same Day [ ] 2 Days
[ ] 1 Day [ ] 3 Days

Date Required:

Rush Confirmation #:

Regulatory Criteria

[ ] BC CSR Soil [ ] BC CSR Water
[ ] CCME (Specify) [ ] Other (Specify)
[ ] Drinking Water [ ] BC Water Quality

Special Instructions

[ ] Return Cooler
[ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		18-May-17	11:40	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3	KZ-6		18-May-17	9:25	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
4	KZ-9		17-May-17	11:40	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5	KZ-13		17-May-17	16:45	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
6	KZ-15		16-May-17	14:40	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
7	KZ-16		16-May-17	15:40	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
8	KZ-17		16-May-17	16:45	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
9	KZ-18		17-May-17	12:25	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
10	KZ-19		16-May-17	12:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
Refer	to	ACTR

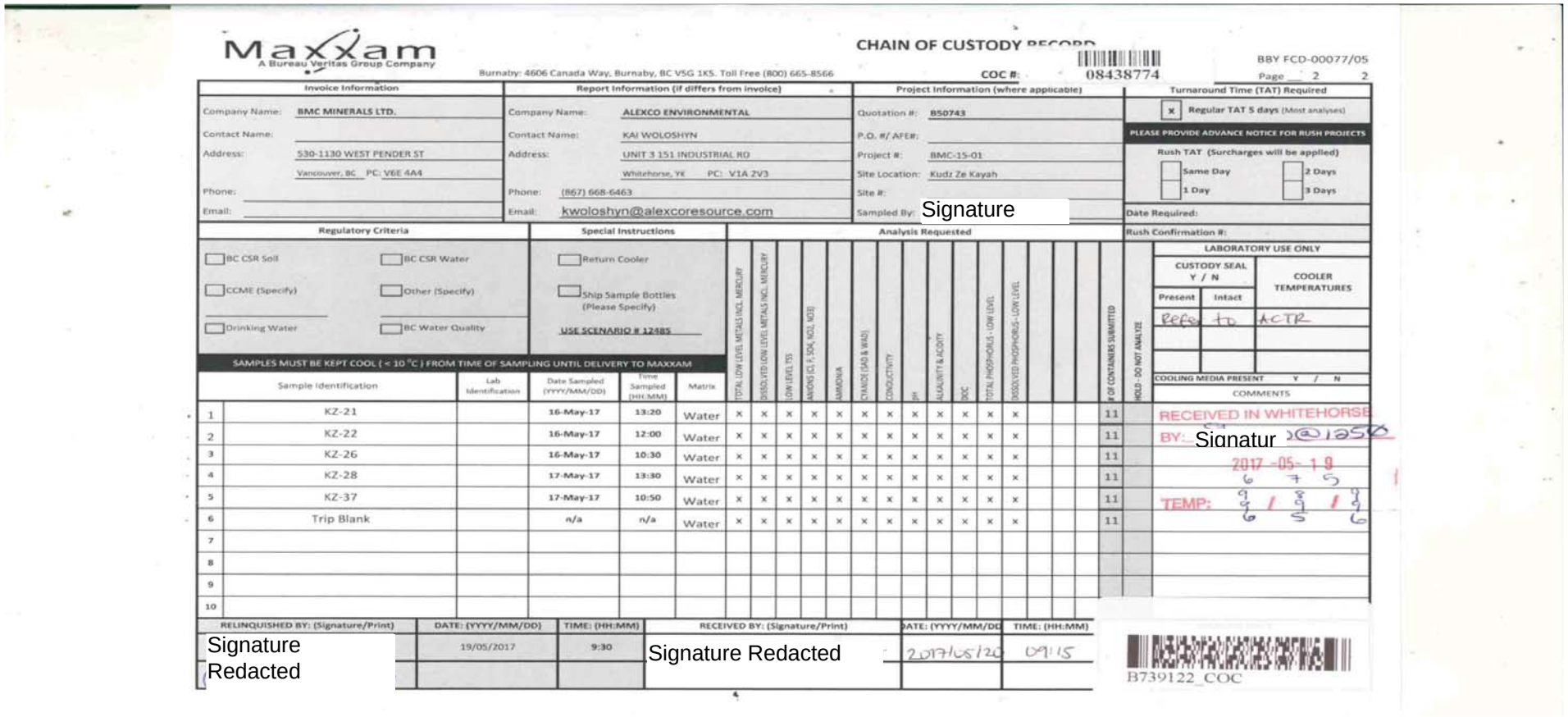
COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Signature Redacted 12:50
2017-05-19
TEMP: 6 7 5 / 9 8 9 / 9 9 9 / 6 5 6

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	19/05/2017	9:30	Signature Redacted	2017/05/20	09:15

B739122_COC



Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC #: 08438774

BBY FCD-00077/05
Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature	Date Required:
						Rush Confirmation #:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-21		16-May-17	13:20	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
2	KZ-22		16-May-17	12:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3	KZ-26		16-May-17	10:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
4	KZ-28		17-May-17	13:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5	KZ-37		17-May-17	10:50	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
6	Trip Blank		n/a	n/a	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
7																						
8																						
9																						
10																						

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
Refer	to	ACTR

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Signatur @1250
2017 -05- 19
6 7 5
TEMP: 9 8 9
9 9 9
6 5 6

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	19/05/2017	9:30	Signature Redacted	2017/05/20	09:15

B739122_COC

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08438980, 08438981

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/06/06
Report #: R2393030
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B741617
Received: 2017/05/29, 13:30

Sample Matrix: Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	14	N/A	2017/05/30	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	14	2017/05/31	2017/05/31	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	14	N/A	2017/05/31	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	14	N/A	2017/05/31	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	14	N/A	2017/05/31	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	14	N/A	2017/05/31	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	14	N/A	2017/05/31	BBY6SOP-00026	SM 22 2510 B m
Fluoride	14	N/A	2017/05/31	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	14	N/A	2017/06/01	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	14	N/A	2017/06/01	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	14	N/A	2017/05/31	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	14	2017/05/31	2017/05/31	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance (as Cations/Anions Ratio)	14	N/A	2017/06/01	BBY WI-00033	Auto Calc
Ion Balance	14	N/A	2017/06/01	BBY WI-00033	SM 22 1030E
Sum of cations, anions	14	N/A	2017/06/01	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	14	N/A	2017/06/01	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	14	N/A	2017/06/01	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	11	2017/05/31	2017/06/01	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	14	N/A	2017/06/01	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	1	N/A	2017/06/01	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	2	N/A	2017/06/04	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	14	N/A	2017/05/31	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	13	N/A	2017/05/31	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrate+Nitrite (N) (low level)	1	N/A	2017/06/02	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	14	N/A	2017/05/31	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N) Low Level Calc	13	N/A	2017/06/01	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N) Low Level Calc	1	N/A	2017/06/02	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	13	N/A	2017/06/01	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	14	N/A	2017/05/31	BBY6SOP-00026	SM 22 4500-H+ B m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08438980, 08438981

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/06/06
Report #: R2393030
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B741617
Received: 2017/05/29, 13:30

Sample Matrix: Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Sulphate by Automated Colourimetry	14	N/A	2017/05/31	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	14	2017/06/01	2017/06/01	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	14	N/A	2017/06/01	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	14	2017/05/31	2017/06/01	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08438980, 08438981

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/06/06
Report #: R2393030
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B741617
Received: 2017/05/29, 13:30

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RD7957	RD7958	RD7959	RD7960		RD7961		
Sampling Date		2017/05/26 13:45	2017/05/26 15:50	2017/05/27 13:15	2017/05/27 10:51		2017/05/27 10:15		
COC Number		08438980	08438980	08438980	08438980		08438980		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	1.3	1.1	2.1	1.9	8645904	1.7	N/A	8645904
Cation Sum	meq/L	1.2	1.2	2.0	1.9	8645904	1.7	N/A	8645904
Filter and HNO3 Preservation	N/A	FIELD	FIELD	FIELD	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.98	1.1	0.98	1.0	8645776	0.98	0.010	8645776
Ion Balance (% Difference)	%	1.1	4.0	1.2	0.24	8645777	0.87	N/A	8645777
Nitrate (N)	mg/L	0.0480	0.0205	0.0765	0.0665	8645654	0.0657	0.0020	8645654
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00065	0.00094	0.00072	0.00081	8647185	0.00073	0.00050	8647185
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00072	0.00084	0.00060	0.00084	8647188	0.00077	0.00050	8647188
Fluoride (F)	mg/L	0.028	0.035	0.050	0.051	8649207	0.043	0.010	8649207
Dissolved Organic Carbon (C)	mg/L	4.47	8.40	5.49	4.52	8647604	4.77	0.50	8647604
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	<0.50	8646094	<0.50	0.50	8646099
Alkalinity (Total as CaCO3)	mg/L	40.7	50.7	82.3	82.1	8646853	73.0	0.50	8646853
Acidity (pH 8.3)	mg/L	<0.50	<0.50	2.26	<0.50	8646094	<0.50	0.50	8646099
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	<0.50	8646853	<0.50	0.50	8646853
Bicarbonate (HCO3)	mg/L	49.7	61.8	100	100	8646853	89.1	0.50	8646853
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	<0.50	8646853	<0.50	0.50	8646853
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	<0.50	8646853	<0.50	0.50	8646853
Anions									
Dissolved Sulphate (SO4)	mg/L	21.3	4.86	18.6	13.4	8648239	11.6	0.50	8648239
Dissolved Chloride (Cl)	mg/L	<0.50	0.74	0.65	<0.50	8648230	0.56	0.50	8648230
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0064 (1)	0.0187 (1)	0.0128 (2)	0.0096 (2)	8649242	0.0058 (2)	0.0020	8649242
Total Ammonia (N)	mg/L	0.0062	0.011	0.012	0.0097	8647790	0.018	0.0050	8647790
Nitrate plus Nitrite (N)	mg/L	0.0480 (1)	0.0205 (1)	0.0765 (1)	0.0665 (1)	8648587	0.0657 (1)	0.0020	8648587
Nitrite (N)	mg/L	<0.0020 (1)	<0.0020 (1)	<0.0020 (1)	<0.0020 (1)	8648590	<0.0020 (1)	0.0020	8648590
Total Phosphorus (P)	mg/L	0.0069 (1)	0.0212 (1)	0.0168 (2)	0.0106 (2)	8649243	0.0055 (2)	0.0020	8649243
Physical Properties									
Conductivity	uS/cm	130	120	200	190	8646852	169	1.0	8646852

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.
(2) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RD7957	RD7958	RD7959	RD7960		RD7961		
Sampling Date		2017/05/26 13:45	2017/05/26 15:50	2017/05/27 13:15	2017/05/27 10:51		2017/05/27 10:15		
COC Number		08438980	08438980	08438980	08438980		08438980		
	UNITS	**KZ-2**	**KZ-6**	**KZ-9**	**KZ-15**	**QC Batch**	**KZ-16**	**RDL**	**QC Batch**
pH	pH	7.67	7.78	7.87	7.99	8646846	7.95		8646846
Physical Properties									
Total Suspended Solids	mg/L	<1.0	1.3	9.6	3.5	8646891	1.0	1.0	8646891
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RD7962	RD7963		RD7964		RD7965		
Sampling Date		2017/05/27 11:33	2017/05/27 13:37		2017/05/27 13:37		2017/05/26 11:14		
COC Number		08438980	08438980		08438980		08438981		
	UNITS	KZ-17	KZ-18	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	2.5	1.6	8645904	1.6	8645904	2.7	N/A	8645904
Cation Sum	meq/L	2.7	1.8	8645904	1.8	8645904	2.7	N/A	8645904
Filter and HNO3 Preservation	N/A	FIELD	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	1.1	1.1	8645776	1.1	8645776	0.98	0.010	8645776
Ion Balance (% Difference)	%	3.2	4.2	8645777	4.9	8645777	1.1	N/A	8645777
Nitrate (N)	mg/L	0.101	0.0492	8645654	0.0476	8645654	0.0200	0.0020	8645654
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00059	0.00091	8647185	0.00114	8647185	0.00083	0.00050	8647185
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00078	0.00094	8647188	0.00110	8647188	0.00085	0.00050	8647188
Fluoride (F)	mg/L	0.083	0.042	8649207	0.042	8649207	0.110	0.010	8649169
Dissolved Organic Carbon (C)	mg/L	2.05	8.19	8647604	8.98	8647604	8.34	0.50	8647604
Acidity (pH 4.5)	mg/L	<0.50	<0.50	8646094	<0.50	8646099	<0.50	0.50	8646099
Alkalinity (Total as CaCO3)	mg/L	108	79.1	8646853	79.1	8646853	114	0.50	8646837
Acidity (pH 8.3)	mg/L	3.81	2.90	8646094	2.75	8646099	0.92	0.50	8646099
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	8646853	<0.50	8646853	<0.50	0.50	8646837
Bicarbonate (HCO3)	mg/L	132	96.4	8646853	96.5	8646853	139	0.50	8646837
Carbonate (CO3)	mg/L	<0.50	<0.50	8646853	<0.50	8646853	<0.50	0.50	8646837
Hydroxide (OH)	mg/L	<0.50	<0.50	8646853	<0.50	8646853	<0.50	0.50	8646837
Anions									
Dissolved Sulphate (SO4)	mg/L	15.7	1.10	8648239	1.20	8648239	21.4	0.50	8648226
Dissolved Chloride (Cl)	mg/L	0.51	0.70	8648230	0.73	8648230	0.67	0.50	8648224
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0031 (1)	0.0266 (1)	8649242	0.0270 (1)	8649242	0.0216 (2)	0.0020	8649242
Total Ammonia (N)	mg/L	0.0085	0.0073	8647790	0.013	8647790	0.017	0.0050	8647790
Nitrate plus Nitrite (N)	mg/L	0.101 (2)	0.0492 (2)	8648587	0.0476 (2)	8648587	0.0221 (2)	0.0020	8648587
Nitrite (N)	mg/L	<0.0020 (2)	<0.0020 (2)	8648590	<0.0020 (2)	8648590	0.0021 (2)	0.0020	8648590
Total Phosphorus (P)	mg/L	0.0027 (1)	0.0272 (1)	8649243	0.0271 (1)	8649243	0.0267 (2)	0.0020	8649243
Physical Properties									
Conductivity	uS/cm	240	168	8646852	168	8646852	255	1.0	8646836

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample preserved to extend hold time.
(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RD7962	RD7963		RD7964		RD7965		
Sampling Date		2017/05/27 11:33	2017/05/27 13:37		2017/05/27 13:37		2017/05/26 11:14		
COC Number		08438980	08438980		08438980		08438981		
	UNITS	KZ-17	KZ-18	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
pH	pH	7.93	7.80	8646846	7.84	8646846	8.04		8646833
Physical Properties									
Total Suspended Solids	mg/L	<1.0	1.3	8646891	1.6	8646891	3.5	1.0	8646891
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RD7966		RD7967		RD7968		RD7969		
Sampling Date		2017/05/26 11:02		2017/05/26 09:46		2017/05/26 10:00		2017/05/27 12:50		
COC Number		08438981		08438981		08438981		08438981		
	UNITS	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	QC Batch	KZ-37	RDL	QC Batch
Calculated Parameters										
Anion Sum	meq/L	2.3	8645904	2.9	8645904	0.013	8645904	2.0	N/A	8645904
Cation Sum	meq/L	2.4	8645904	2.9	8645904	0.0031	8645904	2.0	N/A	8645904
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	1.0	8645776	1.0	8645776	0.23 (1)	8645776	1.0	0.010	8645776
Ion Balance (% Difference)	%	1.5	8645777	0.32	8645777	62 (1)	8645777	1.1	N/A	8645777
Nitrate (N)	mg/L	0.0350	8645654	0.0472	8645654	0.0064	8650215	0.0706	0.0020	8645654
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00080	8647185	0.00080	8647185	<0.00050	8647185	0.00075	0.00050	8647185
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00080	8647188	0.00077	8647188	0.00058	8647188	0.00085	0.00050	8647188
Fluoride (F)	mg/L	0.081	8649207	0.089	8649207	0.010	8649207	0.047	0.010	8649207
Dissolved Organic Carbon (C)	mg/L	5.18	8647604	6.34	8647604	<0.50	8647604	4.11	0.50	8647604
Acidity (pH 4.5)	mg/L	<0.50	8646099	<0.50	8646094	<0.50	8646094	<0.50	0.50	8646094
Alkalinity (Total as CaCO3)	mg/L	96.0	8646853	121	8646853	0.62	8646853	81.9	0.50	8646853
Acidity (pH 8.3)	mg/L	<0.50	8646099	<0.50	8646094	<0.50	8646094	2.52	0.50	8646094
Alkalinity (PP as CaCO3)	mg/L	<0.50	8646853	<0.50	8646853	<0.50	8646853	<0.50	0.50	8646853
Bicarbonate (HCO3)	mg/L	117	8646853	147	8646853	0.76	8646853	99.9	0.50	8646853
Carbonate (CO3)	mg/L	<0.50	8646853	<0.50	8646853	<0.50	8646853	<0.50	0.50	8646853
Hydroxide (OH)	mg/L	<0.50	8646853	<0.50	8646853	<0.50	8646853	<0.50	0.50	8646853
Anions										
Dissolved Sulphate (SO4)	mg/L	17.2	8648226	20.4	8648239	<0.50	8648239	15.6	0.50	8648239
Dissolved Chloride (Cl)	mg/L	0.62	8648224	0.60	8648230	<0.50	8648230	0.59	0.50	8648230
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0148 (2)	8649242	0.0180 (2)	8649242	0.0021 (2)	8649242	0.0141 (3)	0.0020	8649242
Total Ammonia (N)	mg/L	0.017	8647790	0.012	8647790	0.0099	8647790	0.012	0.0050	8647790
Nitrate plus Nitrite (N)	mg/L	0.0350 (2)	8648587	0.0472 (2)	8648587	0.0064 (2)	8650723	0.0706 (2)	0.0020	8648587
Nitrite (N)	mg/L	<0.0020 (2)	8648590	<0.0020 (2)	8648590	<0.0020 (2)	8648590	<0.0020 (2)	0.0020	8648590
Total Phosphorus (P)	mg/L	0.0165 (2)	8649243	0.0187 (2)	8649243	<0.0020 (2)	8649243	0.0160 (3)	0.0020	8649243

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

(2) Sample analysed past recommended hold time.
(3) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RD7966		RD7967		RD7968		RD7969		
Sampling Date		2017/05/26 11:02		2017/05/26 09:46		2017/05/26 10:00		2017/05/27 12:50		
COC Number		08438981		08438981		08438981		08438981		
	UNITS	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	QC Batch	KZ-37	RDL	QC Batch
Physical Properties										
Conductivity	uS/cm	227	8646852	273	8646852	1.2	8646852	196	1.0	8646852
pH	pH	8.04	8646846	8.16	8646846	5.63	8646846	7.99		8646846
Physical Properties										
Total Suspended Solids	mg/L	2.1	8646891	9.0	8646891	<1.0	8646891	7.9	1.0	8646891
RDL = Reportable Detection Limit										

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RD7970		
Sampling Date		2017/05/30 10:07		
COC Number		08438981		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Anion Sum	meq/L	0.0000	N/A	8645904
Cation Sum	meq/L	0.0055	N/A	8645904
Ion Balance	N/A	NC	0.010	8645776
Ion Balance (% Difference)	%	NC	N/A	8645777
Nitrate (N)	mg/L	<0.0020	0.0020	8645654
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8647185
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8647188
Fluoride (F)	mg/L	<0.010	0.010	8649207
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8647604
Acidity (pH 4.5)	mg/L	<0.50	0.50	8646099
Alkalinity (Total as CaCO3)	mg/L	<0.50	0.50	8646837
Acidity (pH 8.3)	mg/L	<0.50	0.50	8646099
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8646837
Bicarbonate (HCO3)	mg/L	<0.50	0.50	8646837
Carbonate (CO3)	mg/L	<0.50	0.50	8646837
Hydroxide (OH)	mg/L	<0.50	0.50	8646837
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8648239
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8648230
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8649242
Total Ammonia (N)	mg/L	0.0054	0.0050	8647790
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	8648587
Nitrite (N)	mg/L	<0.0020	0.0020	8648590
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8649243
Physical Properties				
Conductivity	uS/cm	1.1	1.0	8646836
pH	pH	5.29		8646833

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RD7970		
Sampling Date		2017/05/30 10:07		
COC Number		08438981		
	UNITS	TRIP BLANK	RDL	QC Batch
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8646891
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RD7957	RD7958	RD7959	RD7960	RD7961		
Sampling Date		2017/05/26 13:45	2017/05/26 15:50	2017/05/27 13:15	2017/05/27 10:51	2017/05/27 10:15		
COC Number		08438980	08438980	08438980	08438980	08438980		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-15	KZ-16	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	58.8	58.9	96.8	93.0	82.0	0.50	8645186
Elements								
Dissolved Mercury (Hg)	mg/L	0.0000053	0.0000037	<0.0000020	<0.0000020	0.0000020	0.0000020	8647149
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0261	0.0439	0.0157	0.0157	0.0138	0.00050	8646963
Dissolved Antimony (Sb)	mg/L	0.000046	0.000023	0.000062	0.000036	<0.000020	0.000020	8646963
Dissolved Arsenic (As)	mg/L	0.000103	0.000105	0.000310	0.000370	0.000223	0.000020	8646963
Dissolved Barium (Ba)	mg/L	0.0387	0.0195	0.0521	0.0394	0.0361	0.000020	8646963
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	<0.000010	<0.000010	0.000010	8646963
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8646963
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8646963
Dissolved Cadmium (Cd)	mg/L	0.000172	0.0000170	0.0000680	0.0000290	0.0000160	0.0000050	8646963
Dissolved Chromium (Cr)	mg/L	0.00011	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8646963
Dissolved Cobalt (Co)	mg/L	0.0000240	0.0000300	0.0000600	0.0000390	0.0000240	0.0000050	8646963
Dissolved Copper (Cu)	mg/L	0.00437	0.000856	0.00147	0.00129	0.00136	0.000050	8646963
Dissolved Iron (Fe)	mg/L	0.0212	0.0652	0.210	0.0705	0.0223	0.0010	8646963
Dissolved Lead (Pb)	mg/L	0.000114	0.0000110	0.000135	0.0000380	0.0000090	0.0000050	8646963
Dissolved Lithium (Li)	mg/L	0.00078	<0.00050	0.00148	0.00128	0.00091	0.00050	8646963
Dissolved Manganese (Mn)	mg/L	0.000790	0.00284	0.0276	0.0112	0.00249	0.000050	8646963
Dissolved Molybdenum (Mo)	mg/L	0.000434	0.000231	0.000441	0.000533	0.000296	0.000050	8646963
Dissolved Nickel (Ni)	mg/L	0.000751	0.000612	0.000710	0.000851	0.000676	0.000020	8646963
Dissolved Phosphorus (P)	mg/L	0.0069	0.0148	0.0116	0.0089	0.0072	0.0020	8646963
Dissolved Selenium (Se)	mg/L	0.000608	0.000387	0.000690	0.000496	0.000365	0.000040	8646963
Dissolved Silicon (Si)	mg/L	1.43	1.59	2.06	2.01	1.79	0.050	8646963
Dissolved Silver (Ag)	mg/L	0.0000110	0.0000050	0.0000050	<0.0000050	<0.0000050	0.0000050	8646963
Dissolved Strontium (Sr)	mg/L	0.0629	0.0567	0.103	0.0913	0.0846	0.000050	8646963
Dissolved Thallium (Tl)	mg/L	0.0000090	0.0000020	0.0000020	<0.0000020	<0.0000020	0.0000020	8646963
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8646963
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00054	<0.00050	<0.00050	<0.00050	0.00050	8646963
Dissolved Uranium (U)	mg/L	0.00112	0.000173	0.000637	0.000946	0.000530	0.0000020	8646963
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8646963

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RD7957	RD7958	RD7959	RD7960	RD7961		
Sampling Date		2017/05/26 13:45	2017/05/26 15:50	2017/05/27 13:15	2017/05/27 10:51	2017/05/27 10:15		
COC Number		08438980	08438980	08438980	08438980	08438980		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-15	KZ-16	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0241	0.00091	0.0152	0.00372	0.00067	0.00010	8646963
Dissolved Zirconium (Zr)	mg/L	0.00014	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8646963
Dissolved Calcium (Ca)	mg/L	19.6	19.3	31.9	28.5	25.9	0.050	8645570
Dissolved Magnesium (Mg)	mg/L	2.41	2.61	4.17	5.33	4.22	0.050	8645570
Dissolved Potassium (K)	mg/L	1.60	1.42	1.44	1.17	1.10	0.050	8645570
Dissolved Sodium (Na)	mg/L	0.344	0.278	0.613	0.561	0.513	0.050	8645570
Dissolved Sulphur (S)	mg/L	7.1	3.0	6.0	4.6	4.0	3.0	8645570

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RD7962	RD7963	RD7964		RD7965		
Sampling Date		2017/05/27 11:33	2017/05/27 13:37	2017/05/27 13:37		2017/05/26 11:14		
COC Number		08438980	08438980	08438980		08438981		
	UNITS	KZ-17	KZ-18	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	131	86.4	87.8	8645186	130	0.50	8645903
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000038	0.0000035	8647149	<0.0000020	0.0000020	8647149
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00415	0.0573	0.0559	8646963	0.0123	0.00050	8646963
Dissolved Antimony (Sb)	mg/L	0.000030	0.000030	0.000024	8646963	0.000099	0.000020	8646963
Dissolved Arsenic (As)	mg/L	0.000199	0.000364	0.000384	8646963	0.00168	0.000020	8646963
Dissolved Barium (Ba)	mg/L	0.0511	0.0232	0.0232	8646963	0.0381	0.000020	8646963
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8646963	<0.000010	0.000010	8646963
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8646963	<0.0000050	0.0000050	8646963
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8646963	<0.010	0.010	8646963
Dissolved Cadmium (Cd)	mg/L	0.0000160	0.0000320	0.0000300	8646963	0.0000100	0.0000050	8646963
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00013	0.00013	8646963	0.00012	0.00010	8646963
Dissolved Cobalt (Co)	mg/L	0.0000170	0.0000390	0.0000430	8646963	0.0000810	0.0000050	8646963
Dissolved Copper (Cu)	mg/L	0.00147	0.000730	0.000721	8646963	0.000817	0.000050	8646963
Dissolved Iron (Fe)	mg/L	0.0032	0.0273	0.0268	8646963	0.287	0.0010	8646963
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000070	<0.0000050	8646963	0.0000170	0.0000050	8646963
Dissolved Lithium (Li)	mg/L	0.00228	0.00090	0.00088	8646963	0.00238	0.00050	8646963
Dissolved Manganese (Mn)	mg/L	0.000418	0.00406	0.00428	8646963	0.0318	0.000050	8646963
Dissolved Molybdenum (Mo)	mg/L	0.000495	0.000659	0.000679	8646963	0.00142	0.000050	8646963
Dissolved Nickel (Ni)	mg/L	0.000571	0.00123	0.00127	8646963	0.00289	0.000020	8646963
Dissolved Phosphorus (P)	mg/L	0.0046	0.0262	0.0276	8646963	0.0160	0.0020	8646963
Dissolved Selenium (Se)	mg/L	0.000550	0.000501	0.000477	8646963	0.000356	0.000040	8646963
Dissolved Silicon (Si)	mg/L	2.50	2.07	2.13	8646963	2.76	0.050	8646963
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8646963	<0.0000050	0.0000050	8646963
Dissolved Strontium (Sr)	mg/L	0.129	0.0743	0.0747	8646963	0.0976	0.000050	8646963
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8646963	<0.0000020	0.0000020	8646963
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8646963	<0.00020	0.00020	8646963
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00065	0.00067	8646963	<0.00050	0.00050	8646963
Dissolved Uranium (U)	mg/L	0.00104	0.000751	0.000761	8646963	0.00139	0.0000020	8646963
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8646963	<0.00020	0.00020	8646963

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RD7962	RD7963	RD7964		RD7965		
Sampling Date		2017/05/27 11:33	2017/05/27 13:37	2017/05/27 13:37		2017/05/26 11:14		
COC Number		08438980	08438980	08438980		08438981		
	UNITS	KZ-17	KZ-18	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00097	0.00161	0.00169	8646963	0.00073	0.00010	8646963
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00012	0.00012	8646963	0.00012	0.00010	8646963
Dissolved Calcium (Ca)	mg/L	38.7	22.3	23.1	8645570	32.5	0.050	8645570
Dissolved Magnesium (Mg)	mg/L	8.26	7.44	7.33	8645570	11.8	0.050	8645570
Dissolved Potassium (K)	mg/L	1.05	0.781	0.778	8645570	1.45	0.050	8645570
Dissolved Sodium (Na)	mg/L	0.800	0.411	0.409	8645570	0.775	0.050	8645570
Dissolved Sulphur (S)	mg/L	6.1	<3.0	<3.0	8645570	6.8	3.0	8645570

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RD7966	RD7967	RD7968	RD7969	RD7970		
Sampling Date		2017/05/26 11:02	2017/05/26 09:46	2017/05/26 10:00	2017/05/27 12:50	2017/05/30 10:07		
COC Number		08438981	08438981	08438981	08438981	08438981		
	UNITS	KZ-22	KZ-26	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	115	140	<0.50	98.0	<0.50	0.50	8645903
Elements								
Dissolved Mercury (Hg)	mg/L	0.0000021	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8647149
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0155	0.0101	<0.00050	0.0228	<0.00050	0.00050	8646963
Dissolved Antimony (Sb)	mg/L	0.000060	0.000069	<0.000020	0.000053	<0.000020	0.000020	8646963
Dissolved Arsenic (As)	mg/L	0.00105	0.000872	<0.000020	0.000328	<0.000020	0.000020	8646963
Dissolved Barium (Ba)	mg/L	0.0399	0.0451	<0.000020	0.0476	<0.000020	0.000020	8646963
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8646963
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8646963
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8646963
Dissolved Cadmium (Cd)	mg/L	0.0000180	0.0000130	<0.0000050	0.0000610	<0.0000050	0.0000050	8646963
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8646963
Dissolved Cobalt (Co)	mg/L	0.0000560	0.0000340	<0.0000050	0.0000620	<0.0000050	0.0000050	8646963
Dissolved Copper (Cu)	mg/L	0.00112	0.00112	<0.000050	0.00136	<0.000050	0.000050	8646963
Dissolved Iron (Fe)	mg/L	0.170	0.134	<0.0010	0.194	<0.0010	0.0010	8646963
Dissolved Lead (Pb)	mg/L	0.0000390	0.0000150	<0.0000050	0.000109	<0.0000050	0.0000050	8646963
Dissolved Lithium (Li)	mg/L	0.00203	0.00296	<0.00050	0.00147	<0.00050	0.00050	8646963
Dissolved Manganese (Mn)	mg/L	0.0172	0.00464	<0.000050	0.0255	<0.000050	0.000050	8646963
Dissolved Molybdenum (Mo)	mg/L	0.000923	0.000954	<0.000050	0.000495	<0.000050	0.000050	8646963
Dissolved Nickel (Ni)	mg/L	0.00173	0.00160	<0.000020	0.000830	<0.000020	0.000020	8646963
Dissolved Phosphorus (P)	mg/L	0.0129	0.0104	0.0025	0.0115	<0.0020	0.0020	8646963
Dissolved Selenium (Se)	mg/L	0.000406	0.000477	<0.000040	0.000621	<0.000040	0.000040	8646963
Dissolved Silicon (Si)	mg/L	2.35	2.64	<0.050	2.23	<0.050	0.050	8646963
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8646963
Dissolved Strontium (Sr)	mg/L	0.101	0.118	0.000231	0.0981	<0.000050	0.000050	8646963
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000030	<0.0000020	0.0000020	8646963
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8646963
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8646963
Dissolved Uranium (U)	mg/L	0.00115	0.00138	<0.0000020	0.000671	0.0000020	0.0000020	8646963
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8646963

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RD7966	RD7967	RD7968	RD7969	RD7970		
Sampling Date		2017/05/26 11:02	2017/05/26 09:46	2017/05/26 10:00	2017/05/27 12:50	2017/05/30 10:07		
COC Number		08438981	08438981	08438981	08438981	08438981		
	UNITS	KZ-22	KZ-26	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00200	0.00103	0.00011	0.0134	<0.00010	0.00010	8646963
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8646963
Dissolved Calcium (Ca)	mg/L	31.4	37.4	<0.050	31.3	<0.050	0.050	8645570
Dissolved Magnesium (Mg)	mg/L	8.90	11.3	<0.050	4.79	<0.050	0.050	8645570
Dissolved Potassium (K)	mg/L	1.30	1.33	<0.050	1.31	<0.050	0.050	8645570
Dissolved Sodium (Na)	mg/L	0.697	0.916	<0.050	0.573	<0.050	0.050	8645570
Dissolved Sulphur (S)	mg/L	5.9	7.0	<3.0	5.8	<3.0	3.0	8645570

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RD7962	RD7968		RD7970		
Sampling Date		2017/05/27 11:33	2017/05/26 10:00		2017/05/30 10:07		
COC Number		08438980	08438981		08438981		
	UNITS	KZ-17	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	122	<0.50	8645334	<0.50	0.50	8645334
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8647178	<0.0000020	0.0000020	8647178
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00541	0.00303	8650287	<0.00050	0.00050	8648127
Total Antimony (Sb)	mg/L	0.000029	<0.000020	8650287	<0.000020	0.000020	8648127
Total Arsenic (As)	mg/L	0.000179	<0.000020	8650287	<0.000020	0.000020	8648127
Total Barium (Ba)	mg/L	0.0487	0.000086	8650287	<0.000020	0.000020	8648127
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	8650287	<0.000010	0.000010	8648127
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8650287	<0.0000050	0.0000050	8648127
Total Boron (B)	mg/L	<0.010	<0.010	8650287	<0.010	0.010	8648127
Total Cadmium (Cd)	mg/L	0.0000170	<0.0000050	8650287	<0.0000050	0.0000050	8648127
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	8650287	<0.00010	0.00010	8648127
Total Cobalt (Co)	mg/L	0.0000210	<0.0000050	8650287	<0.0000050	0.0000050	8648127
Total Copper (Cu)	mg/L	0.00165	<0.000050	8650287	<0.000050	0.000050	8648127
Total Iron (Fe)	mg/L	0.0066	0.0045	8650287	<0.0010	0.0010	8648127
Total Lead (Pb)	mg/L	0.0000430	0.0000050	8650287	<0.0000050	0.0000050	8648127
Total Lithium (Li)	mg/L	0.00240	<0.00050	8650287	<0.00050	0.00050	8648127
Total Manganese (Mn)	mg/L	0.000700	0.000216	8650287	<0.000050	0.000050	8648127
Total Molybdenum (Mo)	mg/L	0.000491	<0.000050	8650287	<0.000050	0.000050	8648127
Total Nickel (Ni)	mg/L	0.000614	<0.000020	8650287	<0.000020	0.000020	8648127
Total Phosphorus (P)	mg/L	0.0060	0.0029	8650287	<0.0020	0.0020	8648127
Total Selenium (Se)	mg/L	0.000629	<0.000040	8650287	<0.000040	0.000040	8648127
Total Silicon (Si)	mg/L	2.71	<0.050	8650287	<0.050	0.050	8648127
Total Silver (Ag)	mg/L	0.0000050	<0.0000050	8650287	<0.0000050	0.0000050	8648127
Total Strontium (Sr)	mg/L	0.127	0.000134	8650287	<0.000050	0.000050	8648127
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8650287	<0.0000020	0.0000020	8648127
Total Tin (Sn)	mg/L	<0.00020	<0.00020	8650287	<0.00020	0.00020	8648127
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	8650287	<0.00050	0.00050	8648127
Total Uranium (U)	mg/L	0.000979	<0.0000020	8650287	<0.0000020	0.0000020	8648127
Total Vanadium (V)	mg/L	<0.00020	<0.00020	8650287	<0.00020	0.00020	8648127
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RD7962	RD7968		RD7970		
Sampling Date		2017/05/27 11:33	2017/05/26 10:00		2017/05/30 10:07		
COC Number		08438980	08438981		08438981		
	UNITS	KZ-17	KZ-28	QC Batch	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00105	0.00025	8650287	<0.00010	0.00010	8648127
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	8650287	<0.00010	0.00010	8648127
Total Calcium (Ca)	mg/L	37.6	<0.050	8645857	<0.050	0.050	8645857
Total Magnesium (Mg)	mg/L	7.89	<0.050	8645857	<0.050	0.050	8645857
Total Potassium (K)	mg/L	1.10	<0.050	8645857	<0.050	0.050	8645857
Total Sodium (Na)	mg/L	0.827	<0.050	8645857	<0.050	0.050	8645857
Total Sulphur (S)	mg/L	6.1	<3.0	8645857	<3.0	3.0	8645857
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RD7957	RD7958	RD7959	RD7960	RD7961		
Sampling Date		2017/05/26 13:45	2017/05/26 15:50	2017/05/27 13:15	2017/05/27 10:51	2017/05/27 10:15		
COC Number		08438980	08438980	08438980	08438980	08438980		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-15	KZ-16	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	58.4	58.6	95.6	93.9	80.7	0.50	8645334
Elements								
Total Mercury (Hg)	mg/L	0.0000055	0.0000045	0.0000021	<0.0000020	0.0000024	0.0000020	8647178
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0373	0.0525	0.110	0.0366	0.0150	0.0030	8647292
Total Antimony (Sb)	mg/L	0.000032	<0.000020	0.000070	0.000041	0.000023	0.000020	8647292
Total Arsenic (As)	mg/L	0.000127	0.000108	0.000522	0.000525	0.000244	0.000020	8647292
Total Barium (Ba)	mg/L	0.0386	0.0202	0.0539	0.0407	0.0352	0.000050	8647292
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000014	<0.000010	<0.000010	0.000010	8647292
Total Bismuth (Bi)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8647292
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8647292
Total Cadmium (Cd)	mg/L	0.000177	0.0000230	0.000105	0.0000400	0.0000180	0.0000050	8647292
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00027	0.00011	<0.00010	0.00010	8647292
Total Cobalt (Co)	mg/L	0.000034	0.000046	0.000170	0.000071	0.000028	0.000010	8647292
Total Copper (Cu)	mg/L	0.00434	0.00089	0.00192	0.00146	0.00138	0.00010	8647292
Total Iron (Fe)	mg/L	0.0332	0.110	0.524	0.174	0.0326	0.0050	8647292
Total Lead (Pb)	mg/L	0.000184	0.000038	0.000623	0.000137	0.000022	0.000020	8647292
Total Lithium (Li)	mg/L	0.00077	<0.00050	0.00152	0.00125	0.00088	0.00050	8647292
Total Manganese (Mn)	mg/L	0.00112	0.0118	0.0384	0.0260	0.00359	0.00010	8647292
Total Molybdenum (Mo)	mg/L	0.000425	0.000254	0.000441	0.000554	0.000305	0.000050	8647292
Total Nickel (Ni)	mg/L	0.00074	0.00063	0.00099	0.00090	0.00066	0.00010	8647292
Total Phosphorus (P)	mg/L	0.0098	0.0219	0.0229	0.0214	0.0102	0.0050	8647292
Total Selenium (Se)	mg/L	0.000657	0.000386	0.000691	0.000464	0.000359	0.000040	8647292
Total Silicon (Si)	mg/L	1.50	1.70	2.25	2.09	1.83	0.050	8647292
Total Silver (Ag)	mg/L	0.000014	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8647292
Total Strontium (Sr)	mg/L	0.0626	0.0564	0.101	0.0933	0.0845	0.000050	8647292
Total Thallium (Tl)	mg/L	0.0000100	0.0000020	0.0000030	0.0000020	<0.0000020	0.0000020	8647292
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8647292
Total Titanium (Ti)	mg/L	<0.0020	<0.0020	0.0053	<0.0020	<0.0020	0.0020	8647292
Total Uranium (U)	mg/L	0.00115	0.000173	0.000651	0.000931	0.000520	0.0000050	8647292
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00047	<0.00020	<0.00020	0.00020	8647292
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RD7957	RD7958	RD7959	RD7960	RD7961		
Sampling Date		2017/05/26 13:45	2017/05/26 15:50	2017/05/27 13:15	2017/05/27 10:51	2017/05/27 10:15		
COC Number		08438980	08438980	08438980	08438980	08438980		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-15	KZ-16	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0233	0.0012	0.0231	0.0057	<0.0010	0.0010	8647292
Total Zirconium (Zr)	mg/L	0.00012	<0.00010	0.00011	<0.00010	<0.00010	0.00010	8647292
Total Calcium (Ca)	mg/L	19.4	19.3	31.6	28.9	25.5	0.25	8645857
Total Magnesium (Mg)	mg/L	2.43	2.54	4.02	5.25	4.14	0.25	8645857
Total Potassium (K)	mg/L	1.58	1.36	1.39	1.14	1.07	0.25	8645857
Total Sodium (Na)	mg/L	0.35	0.26	0.57	0.54	0.51	0.25	8645857
Total Sulphur (S)	mg/L	7.4	3.2	6.3	4.9	4.2	3.0	8645857

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RD7963	RD7964	RD7965	RD7966	RD7967		
Sampling Date		2017/05/27 13:37	2017/05/27 13:37	2017/05/26 11:14	2017/05/26 11:02	2017/05/26 09:46		
COC Number		08438980	08438980	08438981	08438981	08438981		
	UNITS	KZ-18	KZ-19	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	86.1	85.4	132	116	138	0.50	8645334
Elements								
Total Mercury (Hg)	mg/L	0.0000036	0.0000038	<0.0000020	<0.0000020	<0.0000020	0.0000020	8647178
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0646	0.0656	0.0328	0.0313	0.0414	0.0030	8647292
Total Antimony (Sb)	mg/L	0.000026	0.000029	0.000108	0.000071	0.000089	0.000020	8647292
Total Arsenic (As)	mg/L	0.000362	0.000370	0.00256	0.00143	0.00131	0.000020	8647292
Total Barium (Ba)	mg/L	0.0231	0.0236	0.0419	0.0416	0.0480	0.000050	8647292
Total Beryllium (Be)	mg/L	<0.000010	0.000011	<0.000010	<0.000010	<0.000010	0.000010	8647292
Total Bismuth (Bi)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8647292
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8647292
Total Cadmium (Cd)	mg/L	0.0000350	0.0000340	0.0000210	0.0000290	0.0000210	0.0000050	8647292
Total Chromium (Cr)	mg/L	0.00017	0.00016	0.00018	0.00012	0.00013	0.00010	8647292
Total Cobalt (Co)	mg/L	0.000053	0.000057	0.000133	0.000082	0.000096	0.000010	8647292
Total Copper (Cu)	mg/L	0.00080	0.00076	0.00100	0.00126	0.00133	0.00010	8647292
Total Iron (Fe)	mg/L	0.0400	0.0393	0.551	0.310	0.311	0.0050	8647292
Total Lead (Pb)	mg/L	0.000021	0.000020	0.000061	0.000072	0.000136	0.000020	8647292
Total Lithium (Li)	mg/L	0.00084	0.00089	0.00240	0.00195	0.00277	0.00050	8647292
Total Manganese (Mn)	mg/L	0.00524	0.00569	0.0586	0.0329	0.0210	0.00010	8647292
Total Molybdenum (Mo)	mg/L	0.000662	0.000662	0.00148	0.000928	0.000976	0.000050	8647292
Total Nickel (Ni)	mg/L	0.00140	0.00132	0.00313	0.00186	0.00187	0.00010	8647292
Total Phosphorus (P)	mg/L	0.0315	0.0329	0.0287	0.0193	0.0241	0.0050	8647292
Total Selenium (Se)	mg/L	0.000474	0.000474	0.000385	0.000428	0.000462	0.000040	8647292
Total Silicon (Si)	mg/L	2.18	2.14	2.87	2.46	2.75	0.050	8647292
Total Silver (Ag)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8647292
Total Strontium (Sr)	mg/L	0.0738	0.0741	0.102	0.101	0.118	0.000050	8647292
Total Thallium (Tl)	mg/L	<0.0000020	0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8647292
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8647292
Total Titanium (Ti)	mg/L	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8647292
Total Uranium (U)	mg/L	0.000781	0.000747	0.00144	0.00122	0.00141	0.0000050	8647292
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00025	<0.00020	0.00022	0.00020	8647292

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RD7963	RD7964	RD7965	RD7966	RD7967		
Sampling Date		2017/05/27 13:37	2017/05/27 13:37	2017/05/26 11:14	2017/05/26 11:02	2017/05/26 09:46		
COC Number		08438980	08438980	08438981	08438981	08438981		
	UNITS	KZ-18	KZ-19	KZ-21	KZ-22	KZ-26	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0017	0.0022	0.0019	0.0031	0.0023	0.0010	8647292
Total Zirconium (Zr)	mg/L	0.00011	<0.00010	0.00013	0.00011	0.00011	0.00010	8647292
Total Calcium (Ca)	mg/L	22.3	22.3	32.8	31.6	37.2	0.25	8645857
Total Magnesium (Mg)	mg/L	7.38	7.22	12.1	9.08	11.0	0.25	8645857
Total Potassium (K)	mg/L	0.77	0.77	1.50	1.31	1.31	0.25	8645857
Total Sodium (Na)	mg/L	0.41	0.40	0.79	0.70	0.90	0.25	8645857
Total Sulphur (S)	mg/L	<3.0	<3.0	7.2	6.1	7.3	3.0	8645857

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RD7969		
Sampling Date		2017/05/27 12:50		
COC Number		08438981		
	UNITS	KZ-37	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	95.6	0.50	8645334
Elements				
Total Mercury (Hg)	mg/L	0.0000025	0.0000020	8647178
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.0914	0.0030	8647292
Total Antimony (Sb)	mg/L	0.000063	0.000020	8647292
Total Arsenic (As)	mg/L	0.000533	0.000020	8647292
Total Barium (Ba)	mg/L	0.0481	0.000050	8647292
Total Beryllium (Be)	mg/L	<0.000010	0.000010	8647292
Total Bismuth (Bi)	mg/L	<0.000010	0.000010	8647292
Total Boron (B)	mg/L	<0.010	0.010	8647292
Total Cadmium (Cd)	mg/L	0.0000900	0.0000050	8647292
Total Chromium (Cr)	mg/L	0.00017	0.00010	8647292
Total Cobalt (Co)	mg/L	0.000132	0.000010	8647292
Total Copper (Cu)	mg/L	0.00185	0.00010	8647292
Total Iron (Fe)	mg/L	0.450	0.0050	8647292
Total Lead (Pb)	mg/L	0.000486	0.000020	8647292
Total Lithium (Li)	mg/L	0.00140	0.00050	8647292
Total Manganese (Mn)	mg/L	0.0331	0.00010	8647292
Total Molybdenum (Mo)	mg/L	0.000470	0.000050	8647292
Total Nickel (Ni)	mg/L	0.00103	0.00010	8647292
Total Phosphorus (P)	mg/L	0.0226	0.0050	8647292
Total Selenium (Se)	mg/L	0.000666	0.000040	8647292
Total Silicon (Si)	mg/L	2.29	0.050	8647292
Total Silver (Ag)	mg/L	<0.000010	0.000010	8647292
Total Strontium (Sr)	mg/L	0.0976	0.000050	8647292
Total Thallium (Tl)	mg/L	0.0000040	0.0000020	8647292
Total Tin (Sn)	mg/L	<0.00020	0.00020	8647292
Total Titanium (Ti)	mg/L	0.0047	0.0020	8647292
Total Uranium (U)	mg/L	0.000676	0.0000050	8647292
Total Vanadium (V)	mg/L	0.00035	0.00020	8647292
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RD7969		
Sampling Date		2017/05/27 12:50		
COC Number		08438981		
	UNITS	KZ-37	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0192	0.0010	8647292
Total Zirconium (Zr)	mg/L	0.00011	0.00010	8647292
Total Calcium (Ca)	mg/L	30.7	0.25	8645857
Total Magnesium (Mg)	mg/L	4.62	0.25	8645857
Total Potassium (K)	mg/L	1.30	0.25	8645857
Total Sodium (Na)	mg/L	0.55	0.25	8645857
Total Sulphur (S)	mg/L	5.6	3.0	8645857
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RD7957
Sample ID: KZ-2
Matrix: Water

Collected: 2017/05/26
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8646094	N/A	2017/05/30	Name Redacted
Alkalinity - Water	AT/ALK	8646853	2017/05/31	2017/05/31	
Chloride by Automated Colourimetry	KONE/COL	8648230	N/A	2017/05/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8647185	N/A	2017/05/31	
Cyanide WAD (weak acid dissociable)	TECH/COL	8647188	N/A	2017/05/31	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8647604	N/A	2017/05/31	
Conductance - water	AT/ALK	8646852	N/A	2017/05/31	
Fluoride	ISE/ISE	8649207	N/A	2017/05/31	
Hardness Total (calculated as CaCO3)	CALC	8645334	N/A	2017/06/01	
Hardness (calculated as CaCO3)	CALC	8645186	N/A	2017/06/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8647149	N/A	2017/05/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8647178	2017/05/31	2017/05/31	
Ion Balance (as Cations/Anions Ratio)	CALC	8645776	N/A	2017/06/01	
Ion Balance	CALC	8645777	N/A	2017/06/01	
Sum of cations, anions	CALC	8645904	N/A	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8645570	N/A	2017/06/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8646963	N/A	2017/06/01	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8647292	2017/05/31	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8645857	N/A	2017/06/01	
Ammonia-N (Preserved)	KONE/COL	8647790	N/A	2017/05/31	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8648587	N/A	2017/05/31	
Nitrite (N) (low level)	TRAA/COL	8648590	N/A	2017/05/31	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8645654	N/A	2017/06/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/30	
pH Water	AT/ALK	8646846	N/A	2017/05/31	
Sulphate by Automated Colourimetry	KONE/COL	8648239	N/A	2017/05/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8649242	2017/06/01	2017/06/01	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8649243	N/A	2017/06/01	
Total Suspended Solids-Low Level	BAL/BAL	8646891	2017/05/31	2017/06/01	

Maxxam ID: RD7957 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2017/05/26
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8647185	N/A	2017/05/31	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8647188	N/A	2017/05/31	

Maxxam ID: RD7958
Sample ID: KZ-6
Matrix: Water

Collected: 2017/05/26
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8646094	N/A	2017/05/30	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RD7958
Sample ID: KZ-6
Matrix: Water

Collected: 2017/05/26
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8646853	2017/05/31	2017/05/31	Name Redacted
Chloride by Automated Colourimetry	KONE/COL	8648230	N/A	2017/05/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8647185	N/A	2017/05/31	
Cyanide WAD (weak acid dissociable)	TECH/COL	8647188	N/A	2017/05/31	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8647604	N/A	2017/05/31	
Conductance - water	AT/ALK	8646852	N/A	2017/05/31	
Fluoride	ISE/ISE	8649207	N/A	2017/05/31	
Hardness Total (calculated as CaCO3)	CALC	8645334	N/A	2017/06/01	
Hardness (calculated as CaCO3)	CALC	8645186	N/A	2017/06/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8647149	N/A	2017/05/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8647178	2017/05/31	2017/05/31	
Ion Balance (as Cations/Anions Ratio)	CALC	8645776	N/A	2017/06/01	
Ion Balance	CALC	8645777	N/A	2017/06/01	
Sum of cations, anions	CALC	8645904	N/A	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8645570	N/A	2017/06/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8646963	N/A	2017/06/01	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8647292	2017/05/31	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8645857	N/A	2017/06/01	
Ammonia-N (Preserved)	KONE/COL	8647790	N/A	2017/05/31	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8648587	N/A	2017/05/31	
Nitrite (N) (low level)	TRAA/COL	8648590	N/A	2017/05/31	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8645654	N/A	2017/06/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/30	
pH Water	AT/ALK	8646846	N/A	2017/05/31	
Sulphate by Automated Colourimetry	KONE/COL	8648239	N/A	2017/05/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8649242	2017/06/01	2017/06/01	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8649243	N/A	2017/06/01	
Total Suspended Solids-Low Level	BAL/BAL	8646891	2017/05/31	2017/06/01	

Maxxam ID: RD7959
Sample ID: KZ-9
Matrix: Water

Collected: 2017/05/27
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8646094	N/A	2017/05/30	Name Redacted
Alkalinity - Water	AT/ALK	8646853	2017/05/31	2017/05/31	
Chloride by Automated Colourimetry	KONE/COL	8648230	N/A	2017/05/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8647185	N/A	2017/05/31	
Cyanide WAD (weak acid dissociable)	TECH/COL	8647188	N/A	2017/05/31	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8647604	N/A	2017/05/31	
Conductance - water	AT/ALK	8646852	N/A	2017/05/31	
Fluoride	ISE/ISE	8649207	N/A	2017/05/31	
Hardness Total (calculated as CaCO3)	CALC	8645334	N/A	2017/06/01	
Hardness (calculated as CaCO3)	CALC	8645186	N/A	2017/06/01	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RD7959
Sample ID: KZ-9
Matrix: Water

Collected: 2017/05/27
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8647149	N/A	2017/05/31	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8647178	2017/05/31	2017/05/31	
Ion Balance (as Cations/Anions Ratio)	CALC	8645776	N/A	2017/06/01	
Ion Balance	CALC	8645777	N/A	2017/06/01	
Sum of cations, anions	CALC	8645904	N/A	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8645570	N/A	2017/06/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8646963	N/A	2017/06/01	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8647292	2017/05/31	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8645857	N/A	2017/06/01	
Ammonia-N (Preserved)	KONE/COL	8647790	N/A	2017/05/31	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8648587	N/A	2017/05/31	
Nitrite (N) (low level)	TRAA/COL	8648590	N/A	2017/05/31	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8645654	N/A	2017/06/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/30	
pH Water	AT/ALK	8646846	N/A	2017/05/31	
Sulphate by Automated Colourimetry	KONE/COL	8648239	N/A	2017/05/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8649242	2017/06/01	2017/06/01	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8649243	N/A	2017/06/01	
Total Suspended Solids-Low Level	BAL/BAL	8646891	2017/05/31	2017/06/01	

Maxxam ID: RD7960
Sample ID: KZ-15
Matrix: Water

Collected: 2017/05/27
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8646094	N/A	2017/05/30	Name Redacted
Alkalinity - Water	AT/ALK	8646853	2017/05/31	2017/05/31	
Chloride by Automated Colourimetry	KONE/COL	8648230	N/A	2017/05/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8647185	N/A	2017/05/31	
Cyanide WAD (weak acid dissociable)	TECH/COL	8647188	N/A	2017/05/31	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8647604	N/A	2017/05/31	
Conductance - water	AT/ALK	8646852	N/A	2017/05/31	
Fluoride	ISE/ISE	8649207	N/A	2017/05/31	
Hardness Total (calculated as CaCO3)	CALC	8645334	N/A	2017/06/01	
Hardness (calculated as CaCO3)	CALC	8645186	N/A	2017/06/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8647149	N/A	2017/05/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8647178	2017/05/31	2017/05/31	
Ion Balance (as Cations/Anions Ratio)	CALC	8645776	N/A	2017/06/01	
Ion Balance	CALC	8645777	N/A	2017/06/01	
Sum of cations, anions	CALC	8645904	N/A	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8645570	N/A	2017/06/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8646963	N/A	2017/06/01	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8647292	2017/05/31	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8645857	N/A	2017/06/01	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RD7960
Sample ID: KZ-15
Matrix: Water

Collected: 2017/05/27
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8647790	N/A	2017/05/31	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8648587	N/A	2017/05/31	
Nitrite (N) (low level)	TRAA/COL	8648590	N/A	2017/05/31	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8645654	N/A	2017/06/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/30	
pH Water	AT/ALK	8646846	N/A	2017/05/31	
Sulphate by Automated Colourimetry	KONE/COL	8648239	N/A	2017/05/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8649242	2017/06/01	2017/06/01	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8649243	N/A	2017/06/01	
Total Suspended Solids-Low Level	BAL/BAL	8646891	2017/05/31	2017/06/01	

Maxxam ID: RD7960 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2017/05/27
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8646853	2017/05/31	2017/05/31	Name Redacted
Conductance - water	AT/ALK	8646852	N/A	2017/05/31	
pH Water	AT/ALK	8646846	N/A	2017/05/31	

Maxxam ID: RD7961
Sample ID: KZ-16
Matrix: Water

Collected: 2017/05/27
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8646099	N/A	2017/05/30	Name Redacted
Alkalinity - Water	AT/ALK	8646853	2017/05/31	2017/05/31	
Chloride by Automated Colourimetry	KONE/COL	8648230	N/A	2017/05/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8647185	N/A	2017/05/31	
Cyanide WAD (weak acid dissociable)	TECH/COL	8647188	N/A	2017/05/31	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8647604	N/A	2017/05/31	
Conductance - water	AT/ALK	8646852	N/A	2017/05/31	
Fluoride	ISE/ISE	8649207	N/A	2017/05/31	
Hardness Total (calculated as CaCO3)	CALC	8645334	N/A	2017/06/01	
Hardness (calculated as CaCO3)	CALC	8645186	N/A	2017/06/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8647149	N/A	2017/05/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8647178	2017/05/31	2017/05/31	
Ion Balance (as Cations/Anions Ratio)	CALC	8645776	N/A	2017/06/01	
Ion Balance	CALC	8645777	N/A	2017/06/01	
Sum of cations, anions	CALC	8645904	N/A	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8645570	N/A	2017/06/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8646963	N/A	2017/06/01	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8647292	2017/05/31	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8645857	N/A	2017/06/01	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RD7961
Sample ID: KZ-16
Matrix: Water

Collected: 2017/05/27
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8647790	N/A	2017/05/31	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8648587	N/A	2017/05/31	
Nitrite (N) (low level)	TRAA/COL	8648590	N/A	2017/05/31	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8645654	N/A	2017/06/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/30	
pH Water	AT/ALK	8646846	N/A	2017/05/31	
Sulphate by Automated Colourimetry	KONE/COL	8648239	N/A	2017/05/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8649242	2017/06/01	2017/06/01	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8649243	N/A	2017/06/01	
Total Suspended Solids-Low Level	BAL/BAL	8646891	2017/05/31	2017/06/01	

Maxxam ID: RD7962
Sample ID: KZ-17
Matrix: Water

Collected: 2017/05/27
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8646094	N/A	2017/05/30	Name Redacted
Alkalinity - Water	AT/ALK	8646853	2017/05/31	2017/05/31	
Chloride by Automated Colourimetry	KONE/COL	8648230	N/A	2017/05/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8647185	N/A	2017/05/31	
Cyanide WAD (weak acid dissociable)	TECH/COL	8647188	N/A	2017/05/31	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8647604	N/A	2017/05/31	
Conductance - water	AT/ALK	8646852	N/A	2017/05/31	
Fluoride	ISE/ISE	8649207	N/A	2017/05/31	
Hardness Total (calculated as CaCO3)	CALC	8645334	N/A	2017/06/01	
Hardness (calculated as CaCO3)	CALC	8645186	N/A	2017/06/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8647149	N/A	2017/05/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8647178	2017/05/31	2017/05/31	
Ion Balance (as Cations/Anions Ratio)	CALC	8645776	N/A	2017/06/01	
Ion Balance	CALC	8645777	N/A	2017/06/01	
Sum of cations, anions	CALC	8645904	N/A	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8645570	N/A	2017/06/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8646963	N/A	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8645857	N/A	2017/06/01	
Elements by ICPMS Low Level (total)	ICP/CRCM	8650287	N/A	2017/06/04	
Ammonia-N (Preserved)	KONE/COL	8647790	N/A	2017/05/31	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8648587	N/A	2017/05/31	
Nitrite (N) (low level)	TRAA/COL	8648590	N/A	2017/05/31	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8645654	N/A	2017/06/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/30	
pH Water	AT/ALK	8646846	N/A	2017/05/31	
Sulphate by Automated Colourimetry	KONE/COL	8648239	N/A	2017/05/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8649242	2017/06/01	2017/06/01	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8649243	N/A	2017/06/01	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RD7962
Sample ID: KZ-17
Matrix: Water

Collected: 2017/05/27
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Suspended Solids-Low Level	BAL/BAL	8646891	2017/05/31	2017/06/01	Name Redacted

Maxxam ID: RD7963
Sample ID: KZ-18
Matrix: Water

Collected: 2017/05/27
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8646094	N/A	2017/05/30	Name Redacted
Alkalinity - Water	AT/ALK	8646853	2017/05/31	2017/05/31	
Chloride by Automated Colourimetry	KONE/COL	8648230	N/A	2017/05/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8647185	N/A	2017/05/31	
Cyanide WAD (weak acid dissociable)	TECH/COL	8647188	N/A	2017/05/31	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8647604	N/A	2017/05/31	
Conductance - water	AT/ALK	8646852	N/A	2017/05/31	
Fluoride	ISE/ISE	8649207	N/A	2017/05/31	
Hardness Total (calculated as CaCO3)	CALC	8645334	N/A	2017/06/01	
Hardness (calculated as CaCO3)	CALC	8645186	N/A	2017/06/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8647149	N/A	2017/05/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8647178	2017/05/31	2017/05/31	
Ion Balance (as Cations/Anions Ratio)	CALC	8645776	N/A	2017/06/01	
Ion Balance	CALC	8645777	N/A	2017/06/01	
Sum of cations, anions	CALC	8645904	N/A	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8645570	N/A	2017/06/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8646963	N/A	2017/06/01	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8647292	2017/05/31	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8645857	N/A	2017/06/01	
Ammonia-N (Preserved)	KONE/COL	8647790	N/A	2017/05/31	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8648587	N/A	2017/05/31	
Nitrite (N) (low level)	TRAA/COL	8648590	N/A	2017/05/31	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8645654	N/A	2017/06/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/30	
pH Water	AT/ALK	8646846	N/A	2017/05/31	
Sulphate by Automated Colourimetry	KONE/COL	8648239	N/A	2017/05/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8649242	2017/06/01	2017/06/01	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8649243	N/A	2017/06/01	
Total Suspended Solids-Low Level	BAL/BAL	8646891	2017/05/31	2017/06/01	

Maxxam ID: RD7964
Sample ID: KZ-19
Matrix: Water

Collected: 2017/05/27
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8646099	N/A	2017/05/30	Name Redacted
Alkalinity - Water	AT/ALK	8646853	2017/05/31	2017/05/31	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RD7964
Sample ID: KZ-19
Matrix: Water

Collected: 2017/05/27
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8648230	N/A	2017/05/31	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8647185	N/A	2017/05/31	
Cyanide WAD (weak acid dissociable)	TECH/COL	8647188	N/A	2017/05/31	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8647604	N/A	2017/05/31	
Conductance - water	AT/ALK	8646852	N/A	2017/05/31	
Fluoride	ISE/ISE	8649207	N/A	2017/05/31	
Hardness Total (calculated as CaCO3)	CALC	8645334	N/A	2017/06/01	
Hardness (calculated as CaCO3)	CALC	8645186	N/A	2017/06/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8647149	N/A	2017/05/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8647178	2017/05/31	2017/05/31	
Ion Balance (as Cations/Anions Ratio)	CALC	8645776	N/A	2017/06/01	
Ion Balance	CALC	8645777	N/A	2017/06/01	
Sum of cations, anions	CALC	8645904	N/A	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8645570	N/A	2017/06/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8646963	N/A	2017/06/01	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8647292	2017/05/31	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8645857	N/A	2017/06/01	
Ammonia-N (Preserved)	KONE/COL	8647790	N/A	2017/05/31	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8648587	N/A	2017/05/31	
Nitrite (N) (low level)	TRAA/COL	8648590	N/A	2017/05/31	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8645654	N/A	2017/06/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/30	
pH Water	AT/ALK	8646846	N/A	2017/05/31	
Sulphate by Automated Colourimetry	KONE/COL	8648239	N/A	2017/05/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8649242	2017/06/01	2017/06/01	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8649243	N/A	2017/06/01	
Total Suspended Solids-Low Level	BAL/BAL	8646891	2017/05/31	2017/06/01	

Maxxam ID: RD7965
Sample ID: KZ-21
Matrix: Water

Collected: 2017/05/26
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8646099	N/A	2017/05/30	Name Redacted
Alkalinity - Water	AT/ALK	8646837	2017/05/31	2017/05/31	
Chloride by Automated Colourimetry	KONE/COL	8648224	N/A	2017/05/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8647185	N/A	2017/05/31	
Cyanide WAD (weak acid dissociable)	TECH/COL	8647188	N/A	2017/05/31	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8647604	N/A	2017/05/31	
Conductance - water	AT/ALK	8646836	N/A	2017/05/31	
Fluoride	ISE/ISE	8649169	N/A	2017/05/31	
Hardness Total (calculated as CaCO3)	CALC	8645334	N/A	2017/06/01	
Hardness (calculated as CaCO3)	CALC	8645903	N/A	2017/06/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8647149	N/A	2017/05/31	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RD7965
Sample ID: KZ-21
Matrix: Water

Collected: 2017/05/26
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8647178	2017/05/31	2017/05/31	Name Redacted
Ion Balance (as Cations/Anions Ratio)	CALC	8645776	N/A	2017/06/01	
Ion Balance	CALC	8645777	N/A	2017/06/01	
Sum of cations, anions	CALC	8645904	N/A	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8645570	N/A	2017/06/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8646963	N/A	2017/06/01	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8647292	2017/05/31	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8645857	N/A	2017/06/01	
Ammonia-N (Preserved)	KONE/COL	8647790	N/A	2017/05/31	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8648587	N/A	2017/05/31	
Nitrite (N) (low level)	TRAA/COL	8648590	N/A	2017/05/31	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8645654	N/A	2017/06/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/30	
pH Water	AT/ALK	8646833	N/A	2017/05/31	
Sulphate by Automated Colourimetry	KONE/COL	8648226	N/A	2017/05/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8649242	2017/06/01	2017/06/01	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8649243	N/A	2017/06/01	
Total Suspended Solids-Low Level	BAL/BAL	8646891	2017/05/31	2017/06/01	

Maxxam ID: RD7965 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2017/05/26
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8646099	N/A	2017/05/30	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8648587	N/A	2017/05/31	
Nitrite (N) (low level)	TRAA/COL	8648590	N/A	2017/05/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8649242	2017/06/01	2017/06/01	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8649243	N/A	2017/06/01	

Maxxam ID: RD7966
Sample ID: KZ-22
Matrix: Water

Collected: 2017/05/26
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8646099	N/A	2017/05/30	Name Redacted
Alkalinity - Water	AT/ALK	8646853	2017/05/31	2017/05/31	
Chloride by Automated Colourimetry	KONE/COL	8648224	N/A	2017/05/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8647185	N/A	2017/05/31	
Cyanide WAD (weak acid dissociable)	TECH/COL	8647188	N/A	2017/05/31	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8647604	N/A	2017/05/31	
Conductance - water	AT/ALK	8646852	N/A	2017/05/31	
Fluoride	ISE/ISE	8649207	N/A	2017/05/31	
Hardness Total (calculated as CaCO3)	CALC	8645334	N/A	2017/06/01	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RD7966
Sample ID: KZ-22
Matrix: Water

Collected: 2017/05/26
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8645903	N/A	2017/06/01	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8647149	N/A	2017/05/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8647178	2017/05/31	2017/05/31	
Ion Balance (as Cations/Anions Ratio)	CALC	8645776	N/A	2017/06/01	
Ion Balance	CALC	8645777	N/A	2017/06/01	
Sum of cations, anions	CALC	8645904	N/A	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8645570	N/A	2017/06/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8646963	N/A	2017/06/01	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8647292	2017/05/31	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8645857	N/A	2017/06/01	
Ammonia-N (Preserved)	KONE/COL	8647790	N/A	2017/05/31	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8648587	N/A	2017/05/31	
Nitrite (N) (low level)	TRAA/COL	8648590	N/A	2017/05/31	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8645654	N/A	2017/06/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/30	
pH Water	AT/ALK	8646846	N/A	2017/05/31	
Sulphate by Automated Colourimetry	KONE/COL	8648226	N/A	2017/05/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8649242	2017/06/01	2017/06/01	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8649243	N/A	2017/06/01	
Total Suspended Solids-Low Level	BAL/BAL	8646891	2017/05/31	2017/06/01	

Maxxam ID: RD7967
Sample ID: KZ-26
Matrix: Water

Collected: 2017/05/26
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8646094	N/A	2017/05/30	Name Redacted
Alkalinity - Water	AT/ALK	8646853	2017/05/31	2017/05/31	
Chloride by Automated Colourimetry	KONE/COL	8648230	N/A	2017/05/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8647185	N/A	2017/05/31	
Cyanide WAD (weak acid dissociable)	TECH/COL	8647188	N/A	2017/05/31	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8647604	N/A	2017/05/31	
Conductance - water	AT/ALK	8646852	N/A	2017/05/31	
Fluoride	ISE/ISE	8649207	N/A	2017/05/31	
Hardness Total (calculated as CaCO3)	CALC	8645334	N/A	2017/06/01	
Hardness (calculated as CaCO3)	CALC	8645903	N/A	2017/06/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8647149	N/A	2017/05/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8647178	2017/05/31	2017/05/31	
Ion Balance (as Cations/Anions Ratio)	CALC	8645776	N/A	2017/06/01	
Ion Balance	CALC	8645777	N/A	2017/06/01	
Sum of cations, anions	CALC	8645904	N/A	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8645570	N/A	2017/06/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8646963	N/A	2017/06/01	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8647292	2017/05/31	2017/06/01	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RD7967
Sample ID: KZ-26
Matrix: Water

Collected: 2017/05/26
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8645857	N/A	2017/06/01	Name Redacted
Ammonia-N (Preserved)	KONE/COL	8647790	N/A	2017/05/31	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8648587	N/A	2017/05/31	
Nitrite (N) (low level)	TRAA/COL	8648590	N/A	2017/05/31	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8645654	N/A	2017/06/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/30	
pH Water	AT/ALK	8646846	N/A	2017/05/31	
Sulphate by Automated Colourimetry	KONE/COL	8648239	N/A	2017/05/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8649242	2017/06/01	2017/06/01	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8649243	N/A	2017/06/01	
Total Suspended Solids-Low Level	BAL/BAL	8646891	2017/05/31	2017/06/01	

Maxxam ID: RD7967 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2017/05/26
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8647604	N/A	2017/05/31	Name Redacted

Maxxam ID: RD7968
Sample ID: KZ-28
Matrix: Water

Collected: 2017/05/26
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8646094	N/A	2017/05/30	Name Redacted
Alkalinity - Water	AT/ALK	8646853	2017/05/31	2017/05/31	
Chloride by Automated Colourimetry	KONE/COL	8648230	N/A	2017/05/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8647185	N/A	2017/05/31	
Cyanide WAD (weak acid dissociable)	TECH/COL	8647188	N/A	2017/05/31	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8647604	N/A	2017/05/31	
Conductance - water	AT/ALK	8646852	N/A	2017/05/31	
Fluoride	ISE/ISE	8649207	N/A	2017/05/31	
Hardness Total (calculated as CaCO3)	CALC	8645334	N/A	2017/06/01	
Hardness (calculated as CaCO3)	CALC	8645903	N/A	2017/06/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8647149	N/A	2017/05/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8647178	2017/05/31	2017/05/31	
Ion Balance (as Cations/Anions Ratio)	CALC	8645776	N/A	2017/06/01	
Ion Balance	CALC	8645777	N/A	2017/06/01	
Sum of cations, anions	CALC	8645904	N/A	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8645570	N/A	2017/06/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8646963	N/A	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8645857	N/A	2017/06/01	
Elements by ICPMS Low Level (total)	ICP/CRCM	8650287	N/A	2017/06/04	
Ammonia-N (Preserved)	KONE/COL	8647790	N/A	2017/05/31	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RD7968
Sample ID: KZ-28
Matrix: Water

Collected: 2017/05/26
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8650723	N/A	2017/06/02	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8648590	N/A	2017/05/31	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8650215	N/A	2017/06/02	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/30	
pH Water	AT/ALK	8646846	N/A	2017/05/31	
Sulphate by Automated Colourimetry	KONE/COL	8648239	N/A	2017/05/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8649242	2017/06/01	2017/06/01	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8649243	N/A	2017/06/01	
Total Suspended Solids-Low Level	BAL/BAL	8646891	2017/05/31	2017/06/01	

Maxxam ID: RD7969
Sample ID: KZ-37
Matrix: Water

Collected: 2017/05/27
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8646094	N/A	2017/05/30	Name Redacted
Alkalinity - Water	AT/ALK	8646853	2017/05/31	2017/05/31	
Chloride by Automated Colourimetry	KONE/COL	8648230	N/A	2017/05/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8647185	N/A	2017/05/31	
Cyanide WAD (weak acid dissociable)	TECH/COL	8647188	N/A	2017/05/31	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8647604	N/A	2017/05/31	
Conductance - water	AT/ALK	8646852	N/A	2017/05/31	
Fluoride	ISE/ISE	8649207	N/A	2017/05/31	
Hardness Total (calculated as CaCO3)	CALC	8645334	N/A	2017/06/01	
Hardness (calculated as CaCO3)	CALC	8645903	N/A	2017/06/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8647149	N/A	2017/05/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8647178	2017/05/31	2017/05/31	
Ion Balance (as Cations/Anions Ratio)	CALC	8645776	N/A	2017/06/01	
Ion Balance	CALC	8645777	N/A	2017/06/01	
Sum of cations, anions	CALC	8645904	N/A	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8645570	N/A	2017/06/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8646963	N/A	2017/06/01	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8647292	2017/05/31	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8645857	N/A	2017/06/01	
Ammonia-N (Preserved)	KONE/COL	8647790	N/A	2017/05/31	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8648587	N/A	2017/05/31	
Nitrite (N) (low level)	TRAA/COL	8648590	N/A	2017/05/31	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8645654	N/A	2017/06/01	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/05/30	
pH Water	AT/ALK	8646846	N/A	2017/05/31	
Sulphate by Automated Colourimetry	KONE/COL	8648239	N/A	2017/05/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8649242	2017/06/01	2017/06/01	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8649243	N/A	2017/06/01	
Total Suspended Solids-Low Level	BAL/BAL	8646891	2017/05/31	2017/06/01	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RD7970
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/05/30
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8646099	N/A	2017/05/30	Name Redacted
Alkalinity - Water	AT/ALK	8646837	2017/05/31	2017/05/31	
Chloride by Automated Colourimetry	KONE/COL	8648230	N/A	2017/05/31	
Cyanide SAD (strong acid dissociable)	TECH/COL	8647185	N/A	2017/05/31	
Cyanide WAD (weak acid dissociable)	TECH/COL	8647188	N/A	2017/05/31	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8647604	N/A	2017/05/31	
Conductance - water	AT/ALK	8646836	N/A	2017/05/31	
Fluoride	ISE/ISE	8649207	N/A	2017/05/31	
Hardness Total (calculated as CaCO3)	CALC	8645334	N/A	2017/06/01	
Hardness (calculated as CaCO3)	CALC	8645903	N/A	2017/06/01	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8647149	N/A	2017/05/31	
Mercury (Total-LowLevel) by CVAF	CV/AF	8647178	2017/05/31	2017/05/31	
Ion Balance (as Cations/Anions Ratio)	CALC	8645776	N/A	2017/06/01	
Ion Balance	CALC	8645777	N/A	2017/06/01	
Sum of cations, anions	CALC	8645904	N/A	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8645570	N/A	2017/06/01	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8646963	N/A	2017/06/01	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8645857	N/A	2017/06/01	
Elements by ICPMS Low Level (total)	ICP/CRCM	8648127	N/A	2017/06/01	
Ammonia-N (Preserved)	KONE/COL	8647790	N/A	2017/05/31	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8648587	N/A	2017/05/31	
Nitrite (N) (low level)	TRAA/COL	8648590	N/A	2017/05/31	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8645654	N/A	2017/06/01	
pH Water	AT/ALK	8646833	N/A	2017/05/31	
Sulphate by Automated Colourimetry	KONE/COL	8648239	N/A	2017/05/31	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8649242	2017/06/01	2017/06/01	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8649243	N/A	2017/06/01	
Total Suspended Solids-Low Level	BAL/BAL	8646891	2017/05/31	2017/06/01	

Maxxam ID: RD7970 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/05/30
Shipped:
Received: 2017/05/29

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8647149	N/A	2017/05/31	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8647178	2017/05/31	2017/05/31	
Elements by ICPMS Low Level (total)	ICP/CRCM	8648127	N/A	2017/06/01	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	9.7°C
Package 2	10.0°C
Package 3	9.7°C
Package 4	10.0°C

Samples collected May 26th arrived at analytical lab past hold for Nitrate, Nitrite, Dissolved Phosphorus and Total Phosphorus. Samples collected on May 27th arrived at analytical lab on date of hold time expiry for Nitrate and Nitrite, samples were analyzed past hold time.

Sample RD7957 [KZ-2] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RD7958 [KZ-6] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RD7959 [KZ-9] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RD7960 [KZ-15] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RD7961 [KZ-16] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RD7963 [KZ-18] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RD7964 [KZ-19] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RD7965 [KZ-21] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RD7966 [KZ-22] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RD7967 [KZ-26] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RD7969 [KZ-37] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RD7970 [TRIP BLANK] : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8646094	Acidity (pH 4.5)	2017/05/30					<0.50	mg/L		
8646094	Acidity (pH 8.3)	2017/05/30			103	80 - 120	<0.50	mg/L		
8646099	Acidity (pH 4.5)	2017/05/30					<0.50	mg/L	NC	20
8646099	Acidity (pH 8.3)	2017/05/30			101	80 - 120	<0.50	mg/L	3.2	20
8646833	pH	2017/05/31			101	97 - 103			1.1	N/A
8646836	Conductivity	2017/05/31			99	80 - 120	<1.0	uS/cm	NC	20
8646837	Alkalinity (PP as CaCO3)	2017/05/31					<0.50	mg/L	NC	20
8646837	Alkalinity (Total as CaCO3)	2017/05/31	98	80 - 120	100	80 - 120	<0.50	mg/L	NC	20
8646837	Bicarbonate (HCO3)	2017/05/31					<0.50	mg/L	NC	20
8646837	Carbonate (CO3)	2017/05/31					<0.50	mg/L	NC	20
8646837	Hydroxide (OH)	2017/05/31					<0.50	mg/L	NC	20
8646846	pH	2017/05/31			101	97 - 103			0.37	N/A
8646852	Conductivity	2017/05/31			100	80 - 120	<1.0	uS/cm	0.27	20
8646853	Alkalinity (PP as CaCO3)	2017/05/31					<0.50	mg/L	NC	20
8646853	Alkalinity (Total as CaCO3)	2017/05/31	NC	80 - 120	96	80 - 120	<0.50	mg/L	1.2	20
8646853	Bicarbonate (HCO3)	2017/05/31					<0.50	mg/L	1.2	20
8646853	Carbonate (CO3)	2017/05/31					<0.50	mg/L	NC	20
8646853	Hydroxide (OH)	2017/05/31					<0.50	mg/L	NC	20
8646891	Total Suspended Solids	2017/06/01			106	80 - 120	<1.0	mg/L		
8646963	Dissolved Aluminum (Al)	2017/06/01	105	80 - 120	107	80 - 120	<0.00050	mg/L	3.9	20
8646963	Dissolved Antimony (Sb)	2017/06/01	98	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8646963	Dissolved Arsenic (As)	2017/06/01	98	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8646963	Dissolved Barium (Ba)	2017/06/01	97	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8646963	Dissolved Beryllium (Be)	2017/06/01	100	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8646963	Dissolved Bismuth (Bi)	2017/06/01	96	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8646963	Dissolved Boron (B)	2017/06/01	97	80 - 120	99	80 - 120	<0.010	mg/L	NC	20
8646963	Dissolved Cadmium (Cd)	2017/06/01	96	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8646963	Dissolved Chromium (Cr)	2017/06/01	100	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8646963	Dissolved Cobalt (Co)	2017/06/01	96	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8646963	Dissolved Copper (Cu)	2017/06/01	101	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8646963	Dissolved Iron (Fe)	2017/06/01	105	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8646963	Dissolved Lead (Pb)	2017/06/01	97	80 - 120	101	80 - 120	<0.0000050	mg/L	11	20
8646963	Dissolved Lithium (Li)	2017/06/01	98	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8646963	Dissolved Manganese (Mn)	2017/06/01	101	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8646963	Dissolved Molybdenum (Mo)	2017/06/01	103	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8646963	Dissolved Nickel (Ni)	2017/06/01	97	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8646963	Dissolved Phosphorus (P)	2017/06/01					<0.0020	mg/L		
8646963	Dissolved Selenium (Se)	2017/06/01	99	80 - 120	103	80 - 120	<0.000040	mg/L	NC	20
8646963	Dissolved Silicon (Si)	2017/06/01					<0.050	mg/L	NC	20
8646963	Dissolved Silver (Ag)	2017/06/01	102	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8646963	Dissolved Strontium (Sr)	2017/06/01	95	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8646963	Dissolved Thallium (Tl)	2017/06/01	96	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8646963	Dissolved Tin (Sn)	2017/06/01	102	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8646963	Dissolved Titanium (Ti)	2017/06/01	94	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
8646963	Dissolved Uranium (U)	2017/06/01	94	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8646963	Dissolved Vanadium (V)	2017/06/01	97	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8646963	Dissolved Zinc (Zn)	2017/06/01	95	80 - 120	100	80 - 120	<0.00010	mg/L	9.0	20
8646963	Dissolved Zirconium (Zr)	2017/06/01					<0.00010	mg/L	NC	20
8647149	Dissolved Mercury (Hg)	2017/05/31	101	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8647178	Total Mercury (Hg)	2017/05/31	98	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8647185	Strong Acid Dissoc. Cyanide (CN)	2017/05/31	105	80 - 120	102	80 - 120	<0.00050	mg/L	8.0	20
8647188	Weak Acid Dissoc. Cyanide (CN)	2017/05/31	107	80 - 120	103	80 - 120	<0.00050	mg/L	1.4	20
8647292	Total Aluminum (Al)	2017/01/06	101	80 - 120	106	80 - 120	<0.0030	mg/L		
8647292	Total Antimony (Sb)	2017/01/06	99	80 - 120	101	80 - 120	<0.000020	mg/L		
8647292	Total Arsenic (As)	2017/01/06	100	80 - 120	102	80 - 120	<0.000020	mg/L		
8647292	Total Barium (Ba)	2017/01/06	99	80 - 120	100	80 - 120	<0.000050	mg/L		
8647292	Total Beryllium (Be)	2017/01/06	101	80 - 120	104	80 - 120	<0.000010	mg/L		
8647292	Total Bismuth (Bi)	2017/01/06	98	80 - 120	98	80 - 120	<0.000010	mg/L		
8647292	Total Boron (B)	2017/01/06	103	80 - 120	102	80 - 120	<0.010	mg/L		
8647292	Total Cadmium (Cd)	2017/01/06	98	80 - 120	99	80 - 120	<0.0000050	mg/L		
8647292	Total Chromium (Cr)	2017/01/06	99	80 - 120	103	80 - 120	<0.00010	mg/L		
8647292	Total Cobalt (Co)	2017/01/06	99	80 - 120	99	80 - 120	<0.000010	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8647292	Total Copper (Cu)	2017/01/06	99	80 - 120	101	80 - 120	<0.00010	mg/L		
8647292	Total Iron (Fe)	2017/01/06	96	80 - 120	101	80 - 120	<0.0050	mg/L		
8647292	Total Lead (Pb)	2017/01/06	98	80 - 120	99	80 - 120	<0.000020	mg/L		
8647292	Total Lithium (Li)	2017/01/06	101	80 - 120	102	80 - 120	<0.00050	mg/L		
8647292	Total Manganese (Mn)	2017/01/06	96	80 - 120	99	80 - 120	<0.00010	mg/L		
8647292	Total Molybdenum (Mo)	2017/01/06	103	80 - 120	103	80 - 120	<0.000050	mg/L		
8647292	Total Nickel (Ni)	2017/01/06	101	80 - 120	102	80 - 120	<0.00010	mg/L		
8647292	Total Phosphorus (P)	2017/01/06					<0.0050	mg/L		
8647292	Total Selenium (Se)	2017/01/06	99	80 - 120	100	80 - 120	<0.000040	mg/L		
8647292	Total Silicon (Si)	2017/01/06					<0.050	mg/L		
8647292	Total Silver (Ag)	2017/01/06	102	80 - 120	105	80 - 120	<0.000010	mg/L		
8647292	Total Strontium (Sr)	2017/01/06	96	80 - 120	98	80 - 120	<0.000050	mg/L		
8647292	Total Thallium (Tl)	2017/01/06	100	80 - 120	99	80 - 120	<0.0000020	mg/L		
8647292	Total Tin (Sn)	2017/01/06	106	80 - 120	110	80 - 120	<0.00020	mg/L		
8647292	Total Titanium (Ti)	2017/01/06	90	80 - 120	95	80 - 120	<0.0020	mg/L		
8647292	Total Uranium (U)	2017/01/06	97	80 - 120	97	80 - 120	<0.0000050	mg/L		
8647292	Total Vanadium (V)	2017/01/06	99	80 - 120	101	80 - 120	<0.00020	mg/L		
8647292	Total Zinc (Zn)	2017/01/06	97	80 - 120	106	80 - 120	<0.0010	mg/L		
8647292	Total Zirconium (Zr)	2017/01/06					<0.00010	mg/L		
8647604	Dissolved Organic Carbon (C)	2017/05/31	108	80 - 120	112	80 - 120	<0.50	mg/L	1.7	20
8648127	Total Aluminum (Al)	2017/06/01	104	80 - 120	108	80 - 120	<0.00050	mg/L	NC	20
8648127	Total Antimony (Sb)	2017/06/01	96	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8648127	Total Arsenic (As)	2017/06/01	100	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8648127	Total Barium (Ba)	2017/06/01	99	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8648127	Total Beryllium (Be)	2017/06/01	98	80 - 120	95	80 - 120	<0.000010	mg/L	NC	20
8648127	Total Bismuth (Bi)	2017/06/01	97	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8648127	Total Boron (B)	2017/06/01	94	80 - 120	96	80 - 120	<0.010	mg/L	NC	20
8648127	Total Cadmium (Cd)	2017/06/01	100	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8648127	Total Chromium (Cr)	2017/06/01	97	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8648127	Total Cobalt (Co)	2017/06/01	97	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8648127	Total Copper (Cu)	2017/06/01	100	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8648127	Total Iron (Fe)	2017/06/01	100	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20
8648127	Total Lead (Pb)	2017/06/01	98	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8648127	Total Lithium (Li)	2017/06/01	101	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8648127	Total Manganese (Mn)	2017/06/01	101	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8648127	Total Molybdenum (Mo)	2017/06/01	93	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8648127	Total Nickel (Ni)	2017/06/01	101	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8648127	Total Phosphorus (P)	2017/06/01					<0.0020	mg/L	NC	20
8648127	Total Selenium (Se)	2017/06/01	99	80 - 120	104	80 - 120	<0.000040	mg/L	NC	20
8648127	Total Silicon (Si)	2017/06/01					<0.050	mg/L	NC	20
8648127	Total Silver (Ag)	2017/06/01	101	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8648127	Total Strontium (Sr)	2017/06/01	96	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8648127	Total Thallium (Tl)	2017/06/01	97	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8648127	Total Tin (Sn)	2017/06/01	96	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8648127	Total Titanium (Ti)	2017/06/01	100	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8648127	Total Uranium (U)	2017/06/01	97	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8648127	Total Vanadium (V)	2017/06/01	100	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8648127	Total Zinc (Zn)	2017/06/01	106	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20
8648127	Total Zirconium (Zr)	2017/06/01					<0.00010	mg/L	NC	20
8648224	Dissolved Chloride (Cl)	2017/05/31			96	80 - 120	<0.50	mg/L		
8648226	Dissolved Sulphate (SO4)	2017/05/31	NC	80 - 120	93	80 - 120	<0.50	mg/L	0.92	20
8648230	Dissolved Chloride (Cl)	2017/05/31			96	80 - 120	<0.50	mg/L		
8648239	Dissolved Sulphate (SO4)	2017/05/31	103	80 - 120	95	80 - 120	<0.50	mg/L	2.0	20
8648587	Nitrate plus Nitrite (N)	2017/05/31	102	80 - 120	96	80 - 120	<0.0020	mg/L	20	25
8648590	Nitrite (N)	2017/05/31	97	80 - 120	96	80 - 120	<0.0020	mg/L	4.9	25
8649169	Fluoride (F)	2017/05/31	106	80 - 120	100	80 - 120	0.012, RDL=0.010	mg/L	1.3	20
8649207	Fluoride (F)	2017/05/31	110	80 - 120	102	80 - 120	<0.010	mg/L	0	20
8649242	Dissolved Phosphorus (P)	2017/06/01	110	80 - 120	111	80 - 120	<0.0020	mg/L	10	20
8649243	Total Phosphorus (P)	2017/06/01	98	80 - 120	105	80 - 120	<0.0020	mg/L	3.4	20
8650287	Total Aluminum (Al)	2017/06/04	102	80 - 120	104	80 - 120	<0.00050	mg/L	5.6	20
8650287	Total Antimony (Sb)	2017/06/04	101	80 - 120	99	80 - 120	<0.000020	mg/L	2.2	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8650287	Total Arsenic (As)	2017/06/04	96	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8650287	Total Barium (Ba)	2017/06/04	97	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8650287	Total Beryllium (Be)	2017/06/04	97	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8650287	Total Bismuth (Bi)	2017/06/04	96	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8650287	Total Boron (B)	2017/06/04	96	80 - 120	99	80 - 120	<0.010	mg/L	NC	20
8650287	Total Cadmium (Cd)	2017/06/04	101	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8650287	Total Chromium (Cr)	2017/06/04	100	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8650287	Total Cobalt (Co)	2017/06/04	99	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8650287	Total Copper (Cu)	2017/06/04	99	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
8650287	Total Iron (Fe)	2017/06/04	99	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
8650287	Total Lead (Pb)	2017/06/04	98	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8650287	Total Lithium (Li)	2017/06/04	100	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
8650287	Total Manganese (Mn)	2017/06/04	95	80 - 120	95	80 - 120	<0.000050	mg/L	NC	20
8650287	Total Molybdenum (Mo)	2017/06/04	99	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8650287	Total Nickel (Ni)	2017/06/04	103	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8650287	Total Phosphorus (P)	2017/06/04					<0.0020	mg/L		
8650287	Total Selenium (Se)	2017/06/04	103	80 - 120	104	80 - 120	<0.000040	mg/L	NC	20
8650287	Total Silicon (Si)	2017/06/04					<0.050	mg/L	NC	20
8650287	Total Silver (Ag)	2017/06/04	104	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8650287	Total Strontium (Sr)	2017/06/04	94	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8650287	Total Thallium (Tl)	2017/06/04	98	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8650287	Total Tin (Sn)	2017/06/04	104	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8650287	Total Titanium (Ti)	2017/06/04	97	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8650287	Total Uranium (U)	2017/06/04	96	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8650287	Total Vanadium (V)	2017/06/04	100	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8650287	Total Zinc (Zn)	2017/06/04	102	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8650287	Total Zirconium (Zr)	2017/06/04					<0.00010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8650723	Nitrate plus Nitrite (N)	2017/06/02			109	80 - 120	<0.0020	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B741617
Report Date: 2017/06/06

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

-

Name Redacted Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY

COC #: 08438980

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:	Kelli Bergh	Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:	778-233-7058	Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:	kellib@bmcminerals.com	Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature	Date Required:
						Rush Confirmation #:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-2		2017/05/26	13:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		
3	KZ-6		2017/05/26	15:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		
4	KZ-9		2017/05/27	13:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		
5	KZ-13		n/a		Water	x	x	x	x	x	x	x	x	x	x	x	x	11		no sample
6	KZ-15		2017/05/27	10:51	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		
7	KZ-16		2017/05/27	10:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		
8	KZ-17		2017/05/27	11:33	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		
9	KZ-18		2017/05/27	13:37	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		
10	KZ-19		2017/05/27	13:37	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		

LABORATORY USE ONLY

CUSTODY SEAL (Y) / N Present	Intact	COOLER TEMPERATURES
✓	✓	3, 4, 4
✓	✓	5, 4, 5
✓ ✓	✓ ✓	3, 1, 5 / 4, 5, 4

COOLING MEDIA PRESENT Y / N

RECEIVED IN WHITEHORSE
BY: Signature @1330
2017-05-29
10 9 10
TEMP: 10 / 10 / 10
10 10 9
10 10 10

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	2017/05/29	13:30	Signature Redacted	2017/05/30	10:07

B741617_COC

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY

COC #: 08438981

BBY FCD-00077/05

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

Rush Confirmation #:

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-21		2017/05/26	11:14	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
2	KZ-22		2017/05/26	11:02	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3	KZ-26		2017/05/26	9:46	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
4	KZ-28		2017/05/26	10:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	KZ-37		2017/05/27	12:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
7																			
8																			
9																			
10																			

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
✓	✓	3, 4, 4
✓	✓	5, 4, 5
✓	✓	3, 1, 5 / 4, 5, 4

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Signature Redacted @ 1330
2017-05-29

TEMP: 10 / 10 / 10
10 10 9
10 10 10

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	2017/05/29	13:30	Signature Redacted	2017/05/30	10:07

B741617_COC

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08439165, 08439166

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/06/14
Report #: R2397413
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B744321
Received: 2017/06/05, 09:30

Sample Matrix: Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	14	N/A	2017/06/07	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	14	2017/06/07	2017/06/07	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	14	N/A	2017/06/07	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	14	N/A	2017/06/07	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	14	N/A	2017/06/07	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	13	N/A	2017/06/07	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - field filtered/preserved (1)	1	N/A	2017/06/09	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	14	N/A	2017/06/07	BBY6SOP-00026	SM 22 2510 B m
Fluoride	14	N/A	2017/06/07	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	7	N/A	2017/06/08	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	7	N/A	2017/06/09	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	14	N/A	2017/06/08	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	14	N/A	2017/06/08	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	14	2017/06/07	2017/06/08	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance (as Cations/Anions Ratio)	14	N/A	2017/06/08	BBY WI-00033	Auto Calc
Ion Balance	14	N/A	2017/06/08	BBY WI-00033	SM 22 1030E
Sum of cations, anions	14	N/A	2017/06/08	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	14	N/A	2017/06/08	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	2	N/A	2017/06/07	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	12	N/A	2017/06/08	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	7	2017/06/07	2017/06/08	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	7	N/A	2017/06/08	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	7	N/A	2017/06/09	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	7	N/A	2017/06/08	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	12	N/A	2017/06/07	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	1	N/A	2017/06/09	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	1	N/A	2017/06/12	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	14	N/A	2017/06/07	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	14	N/A	2017/06/07	BBY6SOP-00010	SM 22 4500-NO3- I m

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08439165, 08439166

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/06/14
Report #: R2397413
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B744321
Received: 2017/06/05, 09:30

Sample Matrix: Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrogen - Nitrate (as N) Low Level Calc	14	N/A	2017/06/08	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	13	N/A	2017/06/08	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	14	N/A	2017/06/07	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	14	N/A	2017/06/07	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	13	2017/06/07	2017/06/07	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2017/06/10	2017/06/10	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	13	N/A	2017/06/07	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	1	N/A	2017/06/10	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	14	2017/06/07	2017/06/08	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08439165, 08439166

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/06/14
Report #: R2397413
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B744321
Received: 2017/06/05, 09:30

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted
a

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RF4488		RF4489		RF4490		RF4491		
Sampling Date		2017/06/01 14:55		2017/06/01 13:55		2017/06/01 11:42		2017/05/31 14:48		
COC Number		08439165		08439165		08439165		08439165		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	QC Batch	KZ-15	RDL	QC Batch
Calculated Parameters										
Anion Sum	meq/L	0.78	8654265	1.1	8654265	1.7	8654265	1.6	N/A	8654265
Cation Sum	meq/L	0.75	8654265	1.2	8654265	1.6	8654265	1.6	N/A	8654265
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.96	8654263	1.1	8654263	0.95	8654263	0.99	0.010	8654263
Ion Balance (% Difference)	%	2.2	8654264	3.8	8654264	2.7	8654264	0.49	N/A	8654264
Nitrate (N)	mg/L	0.0481	8653862	0.0107	8653862	0.0417	8653862	0.0274	0.0020	8653862
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00054	8654988	0.00076	8654988	0.00073	8654988	0.00073	0.00050	8654988
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8654992	0.00059	8654992	0.00086	8654992	0.00087	0.00050	8654992
Fluoride (F)	mg/L	0.023	8656274	0.037	8656274	0.042	8656274	0.047	0.010	8656274
Dissolved Organic Carbon (C)	mg/L	1.72	8655178	5.28	8655178	3.11	8655178	3.33	0.50	8658741
Acidity (pH 4.5)	mg/L	<0.50	8655003	<0.50	8655003	<0.50	8655003	<0.50	0.50	8655003
Alkalinity (Total as CaCO3)	mg/L	22.8	8655098	49.4	8655098	66.9	8655098	69.1	0.50	8655098
Acidity (pH 8.3)	mg/L	<0.50	8655003	<0.50	8655003	0.79	8655003	<0.50	0.50	8655003
Alkalinity (PP as CaCO3)	mg/L	<0.50	8655098	<0.50	8655098	<0.50	8655098	<0.50	0.50	8655098
Bicarbonate (HCO3)	mg/L	27.8	8655098	60.2	8655098	81.6	8655098	84.3	0.50	8655098
Carbonate (CO3)	mg/L	<0.50	8655098	<0.50	8655098	<0.50	8655098	<0.50	0.50	8655098
Hydroxide (OH)	mg/L	<0.50	8655098	<0.50	8655098	<0.50	8655098	<0.50	0.50	8655098
Anions										
Dissolved Sulphate (SO4)	mg/L	14.7	8656028	3.56	8656028	18.0	8656028	12.6	0.50	8656028
Dissolved Chloride (Cl)	mg/L	0.50	8655999	0.60	8655999	0.52	8655999	<0.50	0.50	8655999
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0056 (1)	8655442	0.0099 (1)	8655442	0.0188 (1)	8655442	0.0087 (1)	0.0020	8655442
Total Ammonia (N)	mg/L	0.017	8654745	0.024	8654744	0.019	8654745	0.028	0.0050	8658162
Nitrate plus Nitrite (N)	mg/L	0.0481 (1)	8656240	0.0107 (1)	8656240	0.0417 (1)	8656240	0.0274 (1)	0.0020	8656240
Nitrite (N)	mg/L	<0.0020 (1)	8656241	<0.0020 (1)	8656241	<0.0020 (1)	8656241	<0.0020 (1)	0.0020	8656241
Total Phosphorus (P)	mg/L	0.0070 (1)	8655446	0.0099 (1)	8655446	0.0199 (1)	8655446	0.0072 (1)	0.0020	8655446
Physical Properties										
Conductivity	uS/cm	81.1	8655097	113	8655097	168	8655097	162	1.0	8655097
pH	pH	7.40	8655081	7.76	8655081	7.79	8655081	7.81		8655081

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RF4488		RF4489		RF4490		RF4491		
Sampling Date		2017/06/01 14:55		2017/06/01 13:55		2017/06/01 11:42		2017/05/31 14:48		
COC Number		08439165		08439165		08439165		08439165		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	QC Batch	KZ-15	RDL	QC Batch
Physical Properties										
Total Suspended Solids	mg/L	1.9	8654790	<1.0	8654790	26.7	8654790	2.7	1.0	8654790
RDL = Reportable Detection Limit										

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RF4492		RF4493	RF4494		RF4495		
Sampling Date		2017/05/31 15:43		2017/05/31 15:20	2017/06/01 12:00		2017/06/01 12:00		
COC Number		08439165		08439165	08439165		08439165		
	UNITS	KZ-16	QC Batch	KZ-17	KZ-18	QC Batch	KZ-19	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	1.4	8654265	2.5	3.1	8654265	3.2	N/A	8654265
Cation Sum	meq/L	1.3	8654265	2.4	3.1	8654265	3.1	N/A	8654265
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.95	8654263	0.94	0.98	8654263	0.97	0.010	8654263
Ion Balance (% Difference)	%	2.7	8654264	3.0	0.92	8654264	1.7	N/A	8654264
Nitrate (N)	mg/L	0.0229	8653862	0.0932	0.0973	8653862	0.0969	0.0020	8653862
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00068	8654988	0.00060	0.00072	8654988	0.00069	0.00050	8654988
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00072	8654992	0.00063	0.00072	8654992	0.00069	0.00050	8654992
Fluoride (F)	mg/L	0.039	8656274	0.085	0.055	8656302	0.057	0.010	8656274
Dissolved Organic Carbon (C)	mg/L	3.49	8655178	2.45	2.99	8655178	4.10	0.50	8655178
Acidity (pH 4.5)	mg/L	<0.50	8655003	<0.50	<0.50	8655003	<0.50	0.50	8655003
Alkalinity (Total as CaCO3)	mg/L	57.4	8655098	108	141	8655098	144	0.50	8655098
Acidity (pH 8.3)	mg/L	<0.50	8655003	3.10	3.38	8655003	3.71	0.50	8655003
Alkalinity (PP as CaCO3)	mg/L	<0.50	8655098	<0.50	<0.50	8655098	<0.50	0.50	8655098
Bicarbonate (HCO3)	mg/L	70.0	8655098	132	172	8655098	176	0.50	8655098
Carbonate (CO3)	mg/L	<0.50	8655098	<0.50	<0.50	8655098	<0.50	0.50	8655098
Hydroxide (OH)	mg/L	<0.50	8655098	<0.50	<0.50	8655098	<0.50	0.50	8655098
Anions									
Dissolved Sulphate (SO4)	mg/L	9.69	8656036	16.7	15.4	8656036	15.7	0.50	8656028
Dissolved Chloride (Cl)	mg/L	0.54	8656032	<0.50	<0.50	8656032	<0.50	0.50	8655999
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0063 (1)	8655442	<0.0020 (1)	0.0345 (1)	8655442	0.0345 (1)	0.0020	8655442
Total Ammonia (N)	mg/L	0.016	8654745	0.012	0.021	8654745	0.0088	0.0050	8654744
Nitrate plus Nitrite (N)	mg/L	0.0229 (1)	8656240	0.0932 (1)	0.0973 (1)	8656240	0.0969 (1)	0.0020	8656240
Nitrite (N)	mg/L	<0.0020 (1)	8656241	<0.0020 (1)	<0.0020 (1)	8656241	<0.0020 (1)	0.0020	8656241
Total Phosphorus (P)	mg/L	0.0049 (1)	8655446	0.0021 (1)	0.0355 (1)	8655446	0.0344 (1)	0.0020	8655446
Physical Properties									
Conductivity	uS/cm	131	8655097	240	294	8655097	294	1.0	8655097
pH	pH	7.78	8655081	7.81	7.89	8655081	7.85		8655081

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RF4492		RF4493	RF4494		RF4495		
Sampling Date		2017/05/31 15:43		2017/05/31 15:20	2017/06/01 12:00		2017/06/01 12:00		
COC Number		08439165		08439165	08439165		08439165		
	UNITS	KZ-16	QC Batch	KZ-17	KZ-18	QC Batch	KZ-19	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8654790	<1.0	<1.0	8654790	<1.0	1.0	8654790
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RF4506		RF4507		RF4508		RF4509		
Sampling Date		2017/05/31 13:39		2017/05/31 13:05		2017/05/31 11:19		2017/05/31 11:42		
COC Number		08439166		08439166		08439166		08439166		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Calculated Parameters										
Anion Sum	meq/L	2.9	8654265	2.4	8654265	2.7	8654265	0.0000	N/A	8654265
Cation Sum	meq/L	2.8	8654265	2.4	8654265	2.6	8654265	0.0029	N/A	8654265
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.98	8654263	0.98	8654263	0.98	8654263	NC	0.010	8654263
Ion Balance (% Difference)	%	1.2	8654264	1.3	8654264	0.81	8654264	NC	N/A	8654264
Nitrate (N)	mg/L	<0.0020	8653862	0.0093	8653862	0.0177	8653862	<0.0020	0.0020	8653862
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00080	8654988	0.00075	8654988	0.00070	8654988	<0.00050	0.00050	8654988
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00083	8654992	0.00066	8654992	0.00055	8654992	<0.00050	0.00050	8654992
Fluoride (F)	mg/L	0.110	8656274	0.081	8656274	0.082	8656274	<0.010	0.010	8656274
Dissolved Organic Carbon (C)	mg/L	6.55	8655178	4.48	8655178	4.64	8655178	<0.50	0.50	8655178
Acidity (pH 4.5)	mg/L	<0.50	8655003	<0.50	8655003	<0.50	8655003	<0.50	0.50	8655003
Alkalinity (Total as CaCO3)	mg/L	122	8655115	102	8655115	112	8655098	<0.50	0.50	8655098
Acidity (pH 8.3)	mg/L	0.93	8655003	1.23	8655003	<0.50	8655003	<0.50	0.50	8655003
Alkalinity (PP as CaCO3)	mg/L	<0.50	8655115	<0.50	8655115	<0.50	8655098	<0.50	0.50	8655098
Bicarbonate (HCO3)	mg/L	148	8655115	124	8655115	136	8655098	<0.50	0.50	8655098
Carbonate (CO3)	mg/L	<0.50	8655115	<0.50	8655115	<0.50	8655098	<0.50	0.50	8655098
Hydroxide (OH)	mg/L	<0.50	8655115	<0.50	8655115	<0.50	8655098	<0.50	0.50	8655098
Anions										
Dissolved Sulphate (SO4)	mg/L	22.2	8656028	18.8	8656028	21.1	8656028	<0.50	0.50	8656028
Dissolved Chloride (Cl)	mg/L	0.63	8655999	<0.50	8655999	0.51	8655999	<0.50	0.50	8655999
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0169 (1)	8655442	0.0192 (2)	8659547	0.0095 (1)	8655442	<0.0020 (1)	0.0020	8655442
Total Ammonia (N)	mg/L	0.024	8654744	0.030	8654744	0.034	8654744	0.010	0.0050	8660356
Nitrate plus Nitrite (N)	mg/L	0.0027 (1)	8656240	0.0117 (1)	8656240	0.0177 (1)	8656240	<0.0020 (1)	0.0020	8656240
Nitrite (N)	mg/L	0.0024 (1)	8656241	0.0024 (1)	8656241	<0.0020 (1)	8656241	<0.0020 (1)	0.0020	8656241
Total Phosphorus (P)	mg/L	0.0165 (1)	8655446	0.0137 (1)	8661107	0.0142 (1)	8655446	<0.0020 (1)	0.0020	8655446

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.
(2) Sample arrived to laboratory past recommended hold time.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RF4506		RF4507		RF4508		RF4509		
Sampling Date		2017/05/31 13:39		2017/05/31 13:05		2017/05/31 11:19		2017/05/31 11:42		
COC Number		08439166		08439166		08439166		08439166		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Physical Properties										
Conductivity	uS/cm	271	8655113	230	8655113	251	8655097	1.5	1.0	8655097
pH	pH	8.01	8655112	7.99	8655112	8.06	8655081	5.72		8655081
Physical Properties										
Total Suspended Solids	mg/L	1.9	8654790	1.9	8654790	4.4	8654790	<1.0	1.0	8654790
RDL = Reportable Detection Limit										

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RF4510		RF4511		
Sampling Date		2017/06/01 11:22		2017/06/05		
COC Number		08439166		08439166		
	UNITS	KZ-37	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters						
Anion Sum	meq/L	1.8	8654265	0.0000	N/A	8654265
Cation Sum	meq/L	1.7	8654265	0.0066	N/A	8654265
Filter and HNO3 Preservation	N/A	FIELD	ONSITE			ONSITE
Ion Balance	N/A	1.0	8654263	NC	0.010	8654263
Ion Balance (% Difference)	%	0.21	8654264	NC	N/A	8654264
Nitrate (N)	mg/L	0.0452	8653862	<0.0020	0.0020	8653862
Misc. Inorganics						
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00070	8654988	<0.00050	0.00050	8654988
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8654992	<0.00050	0.00050	8654992
Fluoride (F)	mg/L	0.044	8656274	<0.010	0.010	8656302
Dissolved Organic Carbon (C)	mg/L	3.64	8655178	0.66	0.50	8655178
Acidity (pH 4.5)	mg/L	<0.50	8655003	<0.50	0.50	8655003
Alkalinity (Total as CaCO3)	mg/L	68.8	8655098	<0.50	0.50	8655069
Acidity (pH 8.3)	mg/L	1.06	8655003	<0.50	0.50	8655003
Alkalinity (PP as CaCO3)	mg/L	<0.50	8655098	<0.50	0.50	8655069
Bicarbonate (HCO3)	mg/L	83.9	8655098	<0.50	0.50	8655069
Carbonate (CO3)	mg/L	<0.50	8655098	<0.50	0.50	8655069
Hydroxide (OH)	mg/L	<0.50	8655098	<0.50	0.50	8655069
Anions						
Dissolved Sulphate (SO4)	mg/L	17.4	8656028	<0.50	0.50	8656036
Dissolved Chloride (Cl)	mg/L	0.52	8655999	<0.50	0.50	8656032
Nutrients						
Dissolved Phosphorus (P)	mg/L	0.0229 (1)	8655442	<0.0020	0.0020	8655442
Total Ammonia (N)	mg/L	0.019	8654744	<0.0050	0.0050	8654744
Nitrate plus Nitrite (N)	mg/L	0.0452 (1)	8656240	<0.0020	0.0020	8656240
Nitrite (N)	mg/L	<0.0020 (1)	8656241	<0.0020	0.0020	8656241
Total Phosphorus (P)	mg/L	0.0241 (1)	8655446	<0.0020	0.0020	8655446
Physical Properties						
Conductivity	uS/cm	173	8655097	<1.0	1.0	8655068
pH	pH	7.72	8655081	5.18		8655066

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RF4510		RF4511		
Sampling Date		2017/06/01 11:22		2017/06/05		
COC Number		08439166		08439166		
	UNITS	KZ-37	QC Batch	TRIP BLANK	RDL	QC Batch
Physical Properties						
Total Suspended Solids	mg/L	25.7	8654931	<1.0	1.0	8654931
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RF4488	RF4489	RF4490	RF4491	RF4492		
Sampling Date		2017/06/01 14:55	2017/06/01 13:55	2017/06/01 11:42	2017/05/31 14:48	2017/05/31 15:43		
COC Number		08439165	08439165	08439165	08439165	08439165		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-15	KZ-16	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	35.3	56.3	79.3	79.0	62.6	0.50	8653377
Elements								
Dissolved Mercury (Hg)	mg/L	0.0000048	0.0000024	<0.0000020	<0.0000020	0.0000024	0.0000020	8656217
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0275	0.0248	0.00939	0.0101	0.0118	0.00050	8654750
Dissolved Antimony (Sb)	mg/L	0.000029	<0.000020	0.000073	0.000033	0.000021	0.000020	8654750
Dissolved Arsenic (As)	mg/L	0.000105	0.000087	0.000260	0.000357	0.000215	0.000020	8654750
Dissolved Barium (Ba)	mg/L	0.0250	0.0188	0.0431	0.0384	0.0309	0.000020	8654750
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8654750
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8654750
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8654750
Dissolved Cadmium (Cd)	mg/L	0.000202	0.0000120	0.0000480	0.0000230	0.0000150	0.0000050	8654750
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8654750
Dissolved Cobalt (Co)	mg/L	0.0000250	0.0000200	0.0000380	0.0000220	0.0000220	0.0000050	8654750
Dissolved Copper (Cu)	mg/L	0.00298	0.000694	0.00139	0.00118	0.00120	0.000050	8654750
Dissolved Iron (Fe)	mg/L	0.0171	0.0386	0.145	0.0607	0.0190	0.0010	8654750
Dissolved Lead (Pb)	mg/L	0.000138	<0.0000050	0.000105	0.0000360	0.0000080	0.0000050	8654750
Dissolved Lithium (Li)	mg/L	<0.00050	<0.00050	0.00091	0.00098	0.00072	0.00050	8654750
Dissolved Manganese (Mn)	mg/L	0.00167	0.000949	0.0156	0.00693	0.00216	0.000050	8654750
Dissolved Molybdenum (Mo)	mg/L	0.000368	0.000237	0.000406	0.000510	0.000259	0.000050	8654750
Dissolved Nickel (Ni)	mg/L	0.000634	0.000514	0.000580	0.000695	0.000598	0.000020	8654750
Dissolved Phosphorus (P)	mg/L	0.0045	0.0087	0.0064	0.0063	0.0055	0.0020	8654750
Dissolved Selenium (Se)	mg/L	0.000282	0.000238	0.000572	0.000442	0.000220	0.000040	8654750
Dissolved Silicon (Si)	mg/L	1.07	1.60	1.82	1.80	1.48	0.050	8654750
Dissolved Silver (Ag)	mg/L	0.0000090	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8654750
Dissolved Strontium (Sr)	mg/L	0.0364	0.0553	0.0870	0.0815	0.0665	0.000050	8654750
Dissolved Thallium (Tl)	mg/L	0.0000080	<0.0000020	0.0000030	<0.0000020	<0.0000020	0.0000020	8654750
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8654750
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8654750
Dissolved Uranium (U)	mg/L	0.000639	0.000126	0.000429	0.000672	0.000263	0.0000020	8654750
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8654750

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RF4488	RF4489	RF4490	RF4491	RF4492		
Sampling Date		2017/06/01 14:55	2017/06/01 13:55	2017/06/01 11:42	2017/05/31 14:48	2017/05/31 15:43		
COC Number		08439165	08439165	08439165	08439165	08439165		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-15	KZ-16	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0355	0.00056	0.0123	0.00273	0.00065	0.00010	8654750
Dissolved Zirconium (Zr)	mg/L	0.00012	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8654750
Dissolved Calcium (Ca)	mg/L	12.2	18.8	26.2	25.0	20.4	0.050	8653378
Dissolved Magnesium (Mg)	mg/L	1.15	2.28	3.36	4.01	2.81	0.050	8653378
Dissolved Potassium (K)	mg/L	0.995	0.860	1.15	1.08	0.991	0.050	8653378
Dissolved Sodium (Na)	mg/L	0.237	0.269	0.461	0.455	0.395	0.050	8653378
Dissolved Sulphur (S)	mg/L	4.6	<3.0	5.9	4.2	3.0	3.0	8653378
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RF4493	RF4494	RF4495		RF4506		
Sampling Date		2017/05/31 15:20	2017/06/01 12:00	2017/06/01 12:00		2017/05/31 13:39		
COC Number		08439165	08439165	08439165		08439166		
	UNITS	KZ-17	KZ-18	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	116	152	153	8653377	138	0.50	8653377
Elements								
Dissolved Mercury (Hg)	mg/L	0.0000021	<0.0000020	<0.0000020	8656217	<0.0000020	0.0000020	8656050
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00454	0.0167	0.0164	8654750	0.00867	0.00050	8654750
Dissolved Antimony (Sb)	mg/L	0.000029	0.000037	0.000030	8654750	0.000086	0.000020	8654750
Dissolved Arsenic (As)	mg/L	0.000168	0.000600	0.000589	8654750	0.00170	0.000020	8654750
Dissolved Barium (Ba)	mg/L	0.0475	0.0419	0.0417	8654750	0.0412	0.000020	8654750
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8654750	<0.000010	0.000010	8654750
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8654750	<0.0000050	0.0000050	8654750
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8654750	<0.010	0.010	8654750
Dissolved Cadmium (Cd)	mg/L	0.0000150	0.0000330	0.0000340	8654750	0.0000080	0.0000050	8654750
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00013	0.00012	8654750	0.00011	0.00010	8654750
Dissolved Cobalt (Co)	mg/L	0.0000140	0.0000310	0.0000290	8654750	0.0000620	0.0000050	8654750
Dissolved Copper (Cu)	mg/L	0.00137	0.000386	0.000388	8654750	0.000734	0.000050	8654750
Dissolved Iron (Fe)	mg/L	0.0033	0.0197	0.0195	8654750	0.273	0.0010	8654750
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	8654750	0.0000100	0.0000050	8654750
Dissolved Lithium (Li)	mg/L	0.00201	0.00141	0.00142	8654750	0.00253	0.00050	8654750
Dissolved Manganese (Mn)	mg/L	0.000248	0.00831	0.00824	8654750	0.0241	0.000050	8654750
Dissolved Molybdenum (Mo)	mg/L	0.000473	0.00120	0.00118	8654750	0.00139	0.000050	8654750
Dissolved Nickel (Ni)	mg/L	0.000581	0.000784	0.000825	8654750	0.00264	0.000020	8654750
Dissolved Phosphorus (P)	mg/L	0.0042	0.0341	0.0348	8654750	0.0121	0.0020	8654750
Dissolved Selenium (Se)	mg/L	0.000509	0.000883	0.000795	8654750	0.000322	0.000040	8654750
Dissolved Silicon (Si)	mg/L	2.40	2.77	2.75	8654750	2.75	0.050	8654750
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8654750	<0.0000050	0.0000050	8654750
Dissolved Strontium (Sr)	mg/L	0.117	0.134	0.135	8654750	0.110	0.000050	8654750
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8654750	<0.0000020	0.0000020	8654750
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8654750	<0.00020	0.00020	8654750
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8654750	<0.00050	0.00050	8654750
Dissolved Uranium (U)	mg/L	0.000876	0.00187	0.00186	8654750	0.00145	0.0000020	8654750
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8654750	<0.00020	0.00020	8654750

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RF4493	RF4494	RF4495		RF4506		
Sampling Date		2017/05/31 15:20	2017/06/01 12:00	2017/06/01 12:00		2017/05/31 13:39		
COC Number		08439165	08439165	08439165		08439166		
	UNITS	KZ-17	KZ-18	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00070	0.00152	0.00140	8654750	0.00053	0.00010	8654750
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8654750	0.00011	0.00010	8654750
Dissolved Calcium (Ca)	mg/L	34.8	39.7	39.9	8653378	35.5	0.050	8653378
Dissolved Magnesium (Mg)	mg/L	7.02	12.9	12.9	8653378	12.0	0.050	8653378
Dissolved Potassium (K)	mg/L	1.04	0.798	0.796	8653378	1.43	0.050	8653378
Dissolved Sodium (Na)	mg/L	0.713	0.664	0.657	8653378	0.844	0.050	8653378
Dissolved Sulphur (S)	mg/L	5.4	5.0	4.9	8653378	7.2	3.0	8653378
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RF4507	RF4508		RF4509	RF4510		
Sampling Date		2017/05/31 13:05	2017/05/31 11:19		2017/05/31 11:42	2017/06/01 11:22		
COC Number		08439166	08439166		08439166	08439166		
	UNITS	KZ-22	KZ-26	QC Batch	KZ-28	KZ-37	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	115	129	8653377	<0.50	84.5	0.50	8653377
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8656050	<0.0000020	<0.0000020	0.0000020	8656217
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00905	0.0101	8654750	<0.00050	0.0104	0.00050	8654750
Dissolved Antimony (Sb)	mg/L	0.000056	0.000064	8654750	<0.000020	0.000070	0.000020	8654750
Dissolved Arsenic (As)	mg/L	0.000981	0.000714	8654750	<0.000020	0.000280	0.000020	8654750
Dissolved Barium (Ba)	mg/L	0.0416	0.0454	8654750	0.000027	0.0435	0.000020	8654750
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	8654750	<0.000010	<0.000010	0.000010	8654750
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8654750	<0.0000050	<0.0000050	0.0000050	8654750
Dissolved Boron (B)	mg/L	<0.010	<0.010	8654750	<0.010	<0.010	0.010	8654750
Dissolved Cadmium (Cd)	mg/L	0.0000140	0.0000110	8654750	<0.0000050	0.0000460	0.0000050	8654750
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	8654750	<0.00010	<0.00010	0.00010	8654750
Dissolved Cobalt (Co)	mg/L	0.0000420	0.0000300	8654750	<0.0000050	0.0000420	0.0000050	8654750
Dissolved Copper (Cu)	mg/L	0.000933	0.000995	8654750	<0.000050	0.00133	0.000050	8654750
Dissolved Iron (Fe)	mg/L	0.154	0.101	8654750	<0.0010	0.160	0.0010	8654750
Dissolved Lead (Pb)	mg/L	0.0000180	0.0000160	8654750	<0.0000050	0.000104	0.0000050	8654750
Dissolved Lithium (Li)	mg/L	0.00203	0.00255	8654750	<0.00050	0.00096	0.00050	8654750
Dissolved Manganese (Mn)	mg/L	0.0139	0.00401	8654750	<0.000050	0.0164	0.000050	8654750
Dissolved Molybdenum (Mo)	mg/L	0.000896	0.000866	8654750	<0.000050	0.000423	0.000050	8654750
Dissolved Nickel (Ni)	mg/L	0.00153	0.00126	8654750	<0.000020	0.000581	0.000020	8654750
Dissolved Phosphorus (P)	mg/L	0.0087	0.0080	8654750	0.0026	0.0085	0.0020	8654750
Dissolved Selenium (Se)	mg/L	0.000383	0.000396	8654750	<0.000040	0.000493	0.000040	8654750
Dissolved Silicon (Si)	mg/L	2.26	2.44	8654750	<0.050	1.89	0.050	8654750
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	8654750	<0.0000050	0.0000060	0.0000050	8654750
Dissolved Strontium (Sr)	mg/L	0.105	0.116	8654750	<0.000050	0.0890	0.000050	8654750
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8654750	<0.0000020	0.0000020	0.0000020	8654750
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	8654750	<0.00020	<0.00020	0.00020	8654750
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	8654750	<0.00050	<0.00050	0.00050	8654750
Dissolved Uranium (U)	mg/L	0.00113	0.00124	8654750	<0.0000020	0.000502	0.0000020	8654750
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	8654750	<0.00020	<0.00020	0.00020	8654750

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RF4507	RF4508		RF4509	RF4510		
Sampling Date		2017/05/31 13:05	2017/05/31 11:19		2017/05/31 11:42	2017/06/01 11:22		
COC Number		08439166	08439166		08439166	08439166		
	UNITS	KZ-22	KZ-26	QC Batch	KZ-28	KZ-37	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00130	0.00101	8654750	<0.00010	0.0120	0.00010	8654750
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	8654750	<0.00010	<0.00010	0.00010	8654750
Dissolved Calcium (Ca)	mg/L	32.0	35.5	8653378	<0.050	27.4	0.050	8653378
Dissolved Magnesium (Mg)	mg/L	8.50	9.74	8653378	<0.050	3.91	0.050	8653378
Dissolved Potassium (K)	mg/L	1.25	1.22	8653378	<0.050	1.16	0.050	8653378
Dissolved Sodium (Na)	mg/L	0.716	0.846	8653378	<0.050	0.488	0.050	8653378
Dissolved Sulphur (S)	mg/L	6.1	6.7	8653378	<3.0	5.6	3.0	8653378

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RF4511		
Sampling Date		2017/06/05		
COC Number		08439166		
	UNITS	TRIP BLANK	RDL	QC Batch
Misc. Inorganics				
Dissolved Hardness (CaCO3)	mg/L	<0.50	0.50	8653377
Elements				
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000020	8656217
Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	mg/L	<0.00050	0.00050	8654750
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000020	8654750
Dissolved Arsenic (As)	mg/L	<0.000020	0.000020	8654750
Dissolved Barium (Ba)	mg/L	<0.000020	0.000020	8654750
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000010	8654750
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8654750
Dissolved Boron (B)	mg/L	<0.010	0.010	8654750
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.0000050	8654750
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00010	8654750
Dissolved Cobalt (Co)	mg/L	<0.0000050	0.0000050	8654750
Dissolved Copper (Cu)	mg/L	<0.000050	0.000050	8654750
Dissolved Iron (Fe)	mg/L	<0.0010	0.0010	8654750
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000050	8654750
Dissolved Lithium (Li)	mg/L	<0.00050	0.00050	8654750
Dissolved Manganese (Mn)	mg/L	<0.000050	0.000050	8654750
Dissolved Molybdenum (Mo)	mg/L	<0.000050	0.000050	8654750
Dissolved Nickel (Ni)	mg/L	<0.000020	0.000020	8654750
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8654750
Dissolved Selenium (Se)	mg/L	<0.000040	0.000040	8654750
Dissolved Silicon (Si)	mg/L	<0.050	0.050	8654750
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	8654750
Dissolved Strontium (Sr)	mg/L	<0.000050	0.000050	8654750
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000020	8654750
Dissolved Tin (Sn)	mg/L	<0.00020	0.00020	8654750
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00050	8654750
Dissolved Uranium (U)	mg/L	<0.0000020	0.0000020	8654750
Dissolved Vanadium (V)	mg/L	<0.00020	0.00020	8654750
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RF4511		
Sampling Date		2017/06/05		
COC Number		08439166		
	UNITS	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	<0.00010	0.00010	8654750
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00010	8654750
Dissolved Calcium (Ca)	mg/L	<0.050	0.050	8653378
Dissolved Magnesium (Mg)	mg/L	<0.050	0.050	8653378
Dissolved Potassium (K)	mg/L	<0.050	0.050	8653378
Dissolved Sodium (Na)	mg/L	<0.050	0.050	8653378
Dissolved Sulphur (S)	mg/L	<3.0	3.0	8653378
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RF4488	RF4489	RF4492	RF4493	RF4495		
Sampling Date		2017/06/01 14:55	2017/06/01 13:55	2017/05/31 15:43	2017/05/31 15:20	2017/06/01 12:00		
COC Number		08439165	08439165	08439165	08439165	08439165		
	UNITS	KZ-2	KZ-6	KZ-16	KZ-17	KZ-19	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	36.7	56.5	64.8	123	158	0.50	8654205
Elements								
Total Mercury (Hg)	mg/L	0.0000037	0.0000025	<0.0000020	<0.0000020	<0.0000020	0.0000020	8655238
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0894	0.0297	0.0131	0.00425	0.0200	0.00050	8654846
Total Antimony (Sb)	mg/L	0.000028	<0.000020	<0.000020	0.000030	0.000026	0.000020	8654846
Total Arsenic (As)	mg/L	0.000149	0.000102	0.000231	0.000169	0.000651	0.000020	8654846
Total Barium (Ba)	mg/L	0.0271	0.0189	0.0325	0.0506	0.0429	0.000020	8654846
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8654846
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8654846
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8654846
Total Cadmium (Cd)	mg/L	0.000221	0.0000160	0.0000190	0.0000160	0.0000340	0.0000050	8654846
Total Chromium (Cr)	mg/L	0.00018	<0.00010	<0.00010	<0.00010	0.00013	0.00010	8654846
Total Cobalt (Co)	mg/L	0.0000510	0.0000280	0.0000210	0.0000150	0.0000320	0.0000050	8654846
Total Copper (Cu)	mg/L	0.00312	0.000690	0.00119	0.00136	0.000384	0.000050	8654846
Total Iron (Fe)	mg/L	0.0653	0.0613	0.0247	0.0034	0.0313	0.0010	8654846
Total Lead (Pb)	mg/L	0.000416	0.0000160	0.0000120	<0.0000050	<0.0000050	0.0000050	8654846
Total Lithium (Li)	mg/L	<0.00050	<0.00050	0.00074	0.00210	0.00147	0.00050	8654846
Total Manganese (Mn)	mg/L	0.00328	0.00531	0.00315	0.000311	0.00928	0.000050	8654846
Total Molybdenum (Mo)	mg/L	0.000387	0.000256	0.000265	0.000505	0.00128	0.000050	8654846
Total Nickel (Ni)	mg/L	0.000686	0.000567	0.000579	0.000551	0.000771	0.000020	8654846
Total Phosphorus (P)	mg/L	0.0071	0.0111	0.0056	0.0043	0.0367	0.0020	8654846
Total Selenium (Se)	mg/L	0.000321	0.000303	0.000273	0.000596	0.000944	0.000040	8654846
Total Silicon (Si)	mg/L	1.21	1.66	1.59	2.54	2.94	0.050	8654846
Total Silver (Ag)	mg/L	0.0000130	<0.0000050	0.0000050	<0.0000050	<0.0000050	0.0000050	8654846
Total Strontium (Sr)	mg/L	0.0370	0.0557	0.0686	0.124	0.140	0.000050	8654846
Total Thallium (Tl)	mg/L	0.0000110	0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8654846
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8654846
Total Titanium (Ti)	mg/L	0.00210	0.00053	<0.00050	<0.00050	<0.00050	0.00050	8654846
Total Uranium (U)	mg/L	0.000683	0.000130	0.000280	0.000980	0.00191	0.0000020	8654846
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8654846

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RF4488	RF4489	RF4492	RF4493	RF4495		
Sampling Date		2017/06/01 14:55	2017/06/01 13:55	2017/05/31 15:43	2017/05/31 15:20	2017/06/01 12:00		
COC Number		08439165	08439165	08439165	08439165	08439165		
	UNITS	KZ-2	KZ-6	KZ-16	KZ-17	KZ-19	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0391	0.00082	0.00109	0.00086	0.00138	0.00010	8654846
Total Zirconium (Zr)	mg/L	0.00019	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8654846
Total Calcium (Ca)	mg/L	12.7	18.7	20.9	37.0	41.5	0.050	8653586
Total Magnesium (Mg)	mg/L	1.24	2.36	3.05	7.46	13.2	0.050	8653586
Total Potassium (K)	mg/L	1.03	0.859	1.02	1.06	0.799	0.050	8653586
Total Sodium (Na)	mg/L	0.244	0.273	0.432	0.768	0.683	0.050	8653586
Total Sulphur (S)	mg/L	5.0	<3.0	3.2	5.7	5.3	3.0	8653586

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RF4509	RF4511		
Sampling Date		2017/05/31 11:42	2017/06/05		
COC Number		08439166	08439166		
	UNITS	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters					
Total Hardness (CaCO3)	mg/L	<0.50	<0.50	0.50	8654205
Elements					
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8655238
Total Metals by ICPMS					
Total Aluminum (Al)	mg/L	<0.00050	<0.00050	0.00050	8654846
Total Antimony (Sb)	mg/L	<0.000020	<0.000020	0.000020	8654846
Total Arsenic (As)	mg/L	<0.000020	<0.000020	0.000020	8654846
Total Barium (Ba)	mg/L	<0.000020	<0.000020	0.000020	8654846
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	8654846
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	0.0000050	8654846
Total Boron (B)	mg/L	<0.010	<0.010	0.010	8654846
Total Cadmium (Cd)	mg/L	<0.0000050	<0.0000050	0.0000050	8654846
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00010	8654846
Total Cobalt (Co)	mg/L	<0.0000050	<0.0000050	0.0000050	8654846
Total Copper (Cu)	mg/L	0.000060	<0.000050	0.000050	8654846
Total Iron (Fe)	mg/L	<0.0010	<0.0010	0.0010	8654846
Total Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000050	8654846
Total Lithium (Li)	mg/L	<0.00050	<0.00050	0.00050	8654846
Total Manganese (Mn)	mg/L	<0.000050	<0.000050	0.000050	8654846
Total Molybdenum (Mo)	mg/L	<0.000050	<0.000050	0.000050	8654846
Total Nickel (Ni)	mg/L	<0.000020	<0.000020	0.000020	8654846
Total Phosphorus (P)	mg/L	0.0029	<0.0020	0.0020	8654846
Total Selenium (Se)	mg/L	<0.000040	<0.000040	0.000040	8654846
Total Silicon (Si)	mg/L	<0.050	<0.050	0.050	8654846
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	0.0000050	8654846
Total Strontium (Sr)	mg/L	<0.000050	<0.000050	0.000050	8654846
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	8654846
Total Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8654846
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00050	8654846
Total Uranium (U)	mg/L	<0.0000020	<0.0000020	0.0000020	8654846
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00020	8654846
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RF4509	RF4511		
Sampling Date		2017/05/31 11:42	2017/06/05		
COC Number		08439166	08439166		
	UNITS	KZ-28	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	<0.00010	<0.00010	0.00010	8654846
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8654846
Total Calcium (Ca)	mg/L	<0.050	<0.050	0.050	8653586
Total Magnesium (Mg)	mg/L	<0.050	<0.050	0.050	8653586
Total Potassium (K)	mg/L	<0.050	<0.050	0.050	8653586
Total Sodium (Na)	mg/L	<0.050	<0.050	0.050	8653586
Total Sulphur (S)	mg/L	<3.0	<3.0	3.0	8653586
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RF4490	RF4491	RF4494	RF4506	RF4507		
Sampling Date		2017/06/01 11:42	2017/05/31 14:48	2017/06/01 12:00	2017/05/31 13:39	2017/05/31 13:05		
COC Number		08439165	08439165	08439165	08439166	08439166		
	UNITS	KZ-9	KZ-15	KZ-18	KZ-21	KZ-22	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	83.1	81.3	151	140	118	0.50	8654205
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8655238
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.206	0.0321	0.0207	0.0185	0.0228	0.0030	8654818
Total Antimony (Sb)	mg/L	0.000072	0.000034	0.000031	0.000089	0.000059	0.000020	8654818
Total Arsenic (As)	mg/L	0.000704	0.000479	0.000597	0.00237	0.00139	0.000020	8654818
Total Barium (Ba)	mg/L	0.0463	0.0385	0.0404	0.0415	0.0422	0.000050	8654818
Total Beryllium (Be)	mg/L	0.000013	<0.000010	<0.000010	0.000011	<0.000010	0.000010	8654818
Total Bismuth (Bi)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8654818
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8654818
Total Cadmium (Cd)	mg/L	0.000133	0.0000400	0.0000330	0.0000130	0.0000230	0.0000050	8654818
Total Chromium (Cr)	mg/L	0.00048	0.00011	0.00013	0.00015	0.00012	0.00010	8654818
Total Cobalt (Co)	mg/L	0.000300	0.000090	0.000034	0.000085	0.000076	0.000010	8654818
Total Copper (Cu)	mg/L	0.00244	0.00142	0.00042	0.00090	0.00113	0.00010	8654818
Total Iron (Fe)	mg/L	0.849	0.156	0.0319	0.421	0.273	0.0050	8654818
Total Lead (Pb)	mg/L	0.00112	0.000133	<0.000020	0.000034	0.000060	0.000020	8654818
Total Lithium (Li)	mg/L	0.00135	0.00113	0.00162	0.00285	0.00238	0.00050	8654818
Total Manganese (Mn)	mg/L	0.0356	0.0198	0.00875	0.0365	0.0278	0.00010	8654818
Total Molybdenum (Mo)	mg/L	0.000390	0.000507	0.00114	0.00145	0.000930	0.000050	8654818
Total Nickel (Ni)	mg/L	0.00128	0.00090	0.00077	0.00268	0.00163	0.00010	8654818
Total Phosphorus (P)	mg/L	0.0460	0.0120	0.0365	0.0201	0.0148	0.0050	8654818
Total Selenium (Se)	mg/L	0.000555	0.000400	0.000870	0.000404	0.000383	0.000040	8654818
Total Silicon (Si)	mg/L	2.17	1.90	2.78	2.78	2.41	0.050	8654818
Total Silver (Ag)	mg/L	0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8654818
Total Strontium (Sr)	mg/L	0.0846	0.0823	0.129	0.112	0.109	0.000050	8654818
Total Thallium (Tl)	mg/L	0.0000060	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8654818
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8654818
Total Titanium (Ti)	mg/L	0.0143	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8654818
Total Uranium (U)	mg/L	0.000457	0.000655	0.00183	0.00150	0.00115	0.0000050	8654818
Total Vanadium (V)	mg/L	0.00081	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8654818

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RF4490	RF4491	RF4494	RF4506	RF4507		
Sampling Date		2017/06/01 11:42	2017/05/31 14:48	2017/06/01 12:00	2017/05/31 13:39	2017/05/31 13:05		
COC Number		08439165	08439165	08439165	08439166	08439166		
	UNITS	KZ-9	KZ-15	KZ-18	KZ-21	KZ-22	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0278	0.0050	0.0016	0.0012	0.0024	0.0010	8654818
Total Zirconium (Zr)	mg/L	0.00011	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8654818
Total Calcium (Ca)	mg/L	27.4	25.5	39.4	35.2	32.5	0.25	8653586
Total Magnesium (Mg)	mg/L	3.58	4.25	12.8	12.6	8.88	0.25	8653586
Total Potassium (K)	mg/L	1.17	1.11	0.77	1.45	1.28	0.25	8653586
Total Sodium (Na)	mg/L	0.49	0.52	0.68	0.91	0.78	0.25	8653586
Total Sulphur (S)	mg/L	5.7	4.3	4.9	7.8	6.8	3.0	8653586

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RF4508	RF4510		
Sampling Date		2017/05/31 11:19	2017/06/01 11:22		
COC Number		08439166	08439166		
	UNITS	KZ-26	KZ-37	RDL	QC Batch
Calculated Parameters					
Total Hardness (CaCO3)	mg/L	121	85.9	0.50	8654205
Elements					
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8655238
Total Metals by ICPMS					
Total Aluminum (Al)	mg/L	0.0318	0.234	0.0030	8654818
Total Antimony (Sb)	mg/L	0.000067	0.000068	0.000020	8654818
Total Arsenic (As)	mg/L	0.00102	0.000719	0.000020	8654818
Total Barium (Ba)	mg/L	0.0423	0.0468	0.000050	8654818
Total Beryllium (Be)	mg/L	<0.000010	0.000013	0.000010	8654818
Total Bismuth (Bi)	mg/L	<0.000010	<0.000010	0.000010	8654818
Total Boron (B)	mg/L	<0.010	<0.010	0.010	8654818
Total Cadmium (Cd)	mg/L	0.0000190	0.000131	0.0000050	8654818
Total Chromium (Cr)	mg/L	0.00013	0.00062	0.00010	8654818
Total Cobalt (Co)	mg/L	0.000077	0.000314	0.000010	8654818
Total Copper (Cu)	mg/L	0.00119	0.00253	0.00010	8654818
Total Iron (Fe)	mg/L	0.218	0.880	0.0050	8654818
Total Lead (Pb)	mg/L	0.000092	0.00110	0.000020	8654818
Total Lithium (Li)	mg/L	0.00283	0.00140	0.00050	8654818
Total Manganese (Mn)	mg/L	0.0179	0.0375	0.00010	8654818
Total Molybdenum (Mo)	mg/L	0.000848	0.000432	0.000050	8654818
Total Nickel (Ni)	mg/L	0.00137	0.00131	0.00010	8654818
Total Phosphorus (P)	mg/L	0.0156	0.0429	0.0050	8654818
Total Selenium (Se)	mg/L	0.000385	0.000568	0.000040	8654818
Total Silicon (Si)	mg/L	2.32	2.23	0.050	8654818
Total Silver (Ag)	mg/L	<0.000010	0.000011	0.000010	8654818
Total Strontium (Sr)	mg/L	0.114	0.0870	0.000050	8654818
Total Thallium (Tl)	mg/L	0.0000020	0.0000070	0.0000020	8654818
Total Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8654818
Total Titanium (Ti)	mg/L	<0.0020	0.0160	0.0020	8654818
Total Uranium (U)	mg/L	0.00117	0.000520	0.0000050	8654818
Total Vanadium (V)	mg/L	<0.00020	0.00095	0.00020	8654818
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RF4508	RF4510		
Sampling Date		2017/05/31 11:19	2017/06/01 11:22		
COC Number		08439166	08439166		
	UNITS	KZ-26	KZ-37	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0018	0.0268	0.0010	8654818
Total Zirconium (Zr)	mg/L	<0.00010	0.00013	0.00010	8654818
Total Calcium (Ca)	mg/L	33.1	27.9	0.25	8653586
Total Magnesium (Mg)	mg/L	9.37	3.96	0.25	8653586
Total Potassium (K)	mg/L	1.15	1.15	0.25	8653586
Total Sodium (Na)	mg/L	0.84	0.50	0.25	8653586
Total Sulphur (S)	mg/L	6.9	5.8	3.0	8653586
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RF4488
Sample ID: KZ-2
Matrix: Water

Collected: 2017/06/01
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8655003	N/A	2017/06/07	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8655098	2017/06/07	2017/06/07	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8655999	N/A	2017/06/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8654988	N/A	2017/06/07	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8654992	N/A	2017/06/07	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8655178	N/A	2017/06/07	Isabel Choi
Conductance - water	AT/ALK	8655097	N/A	2017/06/07	Maria Maclean
Fluoride	ISE/ISE	8656274	N/A	2017/06/07	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8654205	N/A	2017/06/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8653377	N/A	2017/06/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8656217	N/A	2017/06/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8655238	2017/06/07	2017/06/08	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8654263	N/A	2017/06/08	Automated Statchk
Ion Balance	CALC	8654264	N/A	2017/06/08	Automated Statchk
Sum of cations, anions	CALC	8654265	N/A	2017/06/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8653378	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8654750	N/A	2017/06/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8653586	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8654846	N/A	2017/06/08	Andrew An
Ammonia-N (Preserved)	KONE/COL	8654745	N/A	2017/06/07	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8656240	N/A	2017/06/07	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8656241	N/A	2017/06/07	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8653862	N/A	2017/06/08	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/06	Avani Patel
pH Water	AT/ALK	8655081	N/A	2017/06/07	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8656028	N/A	2017/06/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8655442	2017/06/07	2017/06/07	Beatriz Ortega
Total Phosphorus - Low Level Unpreserved	KONE/COL	8655446	N/A	2017/06/07	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8654790	2017/06/07	2017/06/08	Beatriz Ortega

Maxxam ID: RF4488 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2017/06/01
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8654988	N/A	2017/06/07	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8654992	N/A	2017/06/07	Tatyana Serzhanova

Maxxam ID: RF4489
Sample ID: KZ-6
Matrix: Water

Collected: 2017/06/01
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8655003	N/A	2017/06/07	Wilson Au Yueng

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RF4489
Sample ID: KZ-6
Matrix: Water

Collected: 2017/06/01
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8655098	2017/06/07	2017/06/07	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8655999	N/A	2017/06/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8654988	N/A	2017/06/07	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8654992	N/A	2017/06/07	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8655178	N/A	2017/06/07	Isabel Choi
Conductance - water	AT/ALK	8655097	N/A	2017/06/07	Maria Maclean
Fluoride	ISE/ISE	8656274	N/A	2017/06/07	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8654205	N/A	2017/06/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8653377	N/A	2017/06/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8656217	N/A	2017/06/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8655238	2017/06/07	2017/06/08	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8654263	N/A	2017/06/08	Automated Statchk
Ion Balance	CALC	8654264	N/A	2017/06/08	Automated Statchk
Sum of cations, anions	CALC	8654265	N/A	2017/06/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8653378	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8654750	N/A	2017/06/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8653586	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8654846	N/A	2017/06/08	Andrew An
Ammonia-N (Preserved)	KONE/COL	8654744	N/A	2017/06/07	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8656240	N/A	2017/06/07	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8656241	N/A	2017/06/07	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8653862	N/A	2017/06/08	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/06	Avani Patel
pH Water	AT/ALK	8655081	N/A	2017/06/07	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8656028	N/A	2017/06/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8655442	2017/06/07	2017/06/07	Beatriz Ortega
Total Phosphorus - Low Level Unpreserved	KONE/COL	8655446	N/A	2017/06/07	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8654790	2017/06/07	2017/06/08	Beatriz Ortega

Maxxam ID: RF4490
Sample ID: KZ-9
Matrix: Water

Collected: 2017/06/01
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8655003	N/A	2017/06/07	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8655098	2017/06/07	2017/06/07	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8655999	N/A	2017/06/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8654988	N/A	2017/06/07	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8654992	N/A	2017/06/07	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8655178	N/A	2017/06/07	Isabel Choi
Conductance - water	AT/ALK	8655097	N/A	2017/06/07	Maria Maclean
Fluoride	ISE/ISE	8656274	N/A	2017/06/07	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8654205	N/A	2017/06/09	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8653377	N/A	2017/06/08	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RF4490
Sample ID: KZ-9
Matrix: Water

Collected: 2017/06/01
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8656217	N/A	2017/06/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8655238	2017/06/07	2017/06/08	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8654263	N/A	2017/06/08	Automated Statchk
Ion Balance	CALC	8654264	N/A	2017/06/08	Automated Statchk
Sum of cations, anions	CALC	8654265	N/A	2017/06/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8653378	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8654750	N/A	2017/06/08	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8654818	2017/06/07	2017/06/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8653586	N/A	2017/06/09	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8654745	N/A	2017/06/07	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8656240	N/A	2017/06/07	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8656241	N/A	2017/06/07	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8653862	N/A	2017/06/08	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/06	Avani Patel
pH Water	AT/ALK	8655081	N/A	2017/06/07	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8656028	N/A	2017/06/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8655442	2017/06/07	2017/06/07	Beatriz Ortega
Total Phosphorus - Low Level Unpreserved	KONE/COL	8655446	N/A	2017/06/07	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8654790	2017/06/07	2017/06/08	Beatriz Ortega

Maxxam ID: RF4491
Sample ID: KZ-15
Matrix: Water

Collected: 2017/05/31
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8655003	N/A	2017/06/07	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8655098	2017/06/07	2017/06/07	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8655999	N/A	2017/06/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8654988	N/A	2017/06/07	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8654992	N/A	2017/06/07	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8658741	N/A	2017/06/09	Isabel Choi
Conductance - water	AT/ALK	8655097	N/A	2017/06/07	Maria Maclean
Fluoride	ISE/ISE	8656274	N/A	2017/06/07	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8654205	N/A	2017/06/09	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8653377	N/A	2017/06/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8656217	N/A	2017/06/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8655238	2017/06/07	2017/06/08	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8654263	N/A	2017/06/08	Automated Statchk
Ion Balance	CALC	8654264	N/A	2017/06/08	Automated Statchk
Sum of cations, anions	CALC	8654265	N/A	2017/06/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8653378	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8654750	N/A	2017/06/08	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8654818	2017/06/07	2017/06/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8653586	N/A	2017/06/09	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RF4491
Sample ID: KZ-15
Matrix: Water

Collected: 2017/05/31
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8658162	N/A	2017/06/09	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8656240	N/A	2017/06/07	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8656241	N/A	2017/06/07	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8653862	N/A	2017/06/08	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/06	Avani Patel
pH Water	AT/ALK	8655081	N/A	2017/06/07	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8656028	N/A	2017/06/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8655442	2017/06/07	2017/06/07	Beatriz Ortega
Total Phosphorus - Low Level Unpreserved	KONE/COL	8655446	N/A	2017/06/07	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8654790	2017/06/07	2017/06/08	Beatriz Ortega

Maxxam ID: RF4491 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2017/05/31
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8658741	N/A	2017/06/09	Isabel Choi
Elements by ICPMS Digested LL (total)	ICP/CRCM	8654818	2017/06/07	2017/06/08	Andrew An

Maxxam ID: RF4492
Sample ID: KZ-16
Matrix: Water

Collected: 2017/05/31
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8655003	N/A	2017/06/07	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8655098	2017/06/07	2017/06/07	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8656032	N/A	2017/06/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8654988	N/A	2017/06/07	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8654992	N/A	2017/06/07	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8655178	N/A	2017/06/07	Isabel Choi
Conductance - water	AT/ALK	8655097	N/A	2017/06/07	Maria Maclean
Fluoride	ISE/ISE	8656274	N/A	2017/06/07	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8654205	N/A	2017/06/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8653377	N/A	2017/06/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8656217	N/A	2017/06/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8655238	2017/06/07	2017/06/08	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8654263	N/A	2017/06/08	Automated Statchk
Ion Balance	CALC	8654264	N/A	2017/06/08	Automated Statchk
Sum of cations, anions	CALC	8654265	N/A	2017/06/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8653378	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8654750	N/A	2017/06/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8653586	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8654846	N/A	2017/06/08	Andrew An
Ammonia-N (Preserved)	KONE/COL	8654745	N/A	2017/06/07	Clare Kwok

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RF4492
Sample ID: KZ-16
Matrix: Water

Collected: 2017/05/31
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8656240	N/A	2017/06/07	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8656241	N/A	2017/06/07	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8653862	N/A	2017/06/08	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/06	Avani Patel
pH Water	AT/ALK	8655081	N/A	2017/06/07	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8656036	N/A	2017/06/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8655442	2017/06/07	2017/06/07	Beatriz Ortega
Total Phosphorus - Low Level Unpreserved	KONE/COL	8655446	N/A	2017/06/07	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8654790	2017/06/07	2017/06/08	Beatriz Ortega

Maxxam ID: RF4492 Dup
Sample ID: KZ-16
Matrix: Water

Collected: 2017/05/31
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8654745	N/A	2017/06/07	Clare Kwok

Maxxam ID: RF4493
Sample ID: KZ-17
Matrix: Water

Collected: 2017/05/31
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8655003	N/A	2017/06/07	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8655098	2017/06/07	2017/06/07	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8656032	N/A	2017/06/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8654988	N/A	2017/06/07	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8654992	N/A	2017/06/07	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8655178	N/A	2017/06/07	Isabel Choi
Conductance - water	AT/ALK	8655097	N/A	2017/06/07	Maria Maclean
Fluoride	ISE/ISE	8656302	N/A	2017/06/07	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8654205	N/A	2017/06/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8653377	N/A	2017/06/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8656217	N/A	2017/06/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8655238	2017/06/07	2017/06/08	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8654263	N/A	2017/06/08	Automated Statchk
Ion Balance	CALC	8654264	N/A	2017/06/08	Automated Statchk
Sum of cations, anions	CALC	8654265	N/A	2017/06/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8653378	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8654750	N/A	2017/06/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8653586	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8654846	N/A	2017/06/08	Andrew An
Ammonia-N (Preserved)	KONE/COL	8654745	N/A	2017/06/07	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8656240	N/A	2017/06/07	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8656241	N/A	2017/06/07	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RF4493
Sample ID: KZ-17
Matrix: Water

Collected: 2017/05/31
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8653862	N/A	2017/06/08	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/06	Avani Patel
pH Water	AT/ALK	8655081	N/A	2017/06/07	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8656036	N/A	2017/06/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8655442	2017/06/07	2017/06/07	Beatriz Ortega
Total Phosphorus - Low Level Unpreserved	KONE/COL	8655446	N/A	2017/06/07	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8654790	2017/06/07	2017/06/08	Beatriz Ortega

Maxxam ID: RF4493 Dup
Sample ID: KZ-17
Matrix: Water

Collected: 2017/05/31
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8656032	N/A	2017/06/07	Balwinder Bassi
Sulphate by Automated Colourimetry	KONE/COL	8656036	N/A	2017/06/07	Balwinder Bassi

Maxxam ID: RF4494
Sample ID: KZ-18
Matrix: Water

Collected: 2017/06/01
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8655003	N/A	2017/06/07	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8655098	2017/06/07	2017/06/07	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8656032	N/A	2017/06/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8654988	N/A	2017/06/07	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8654992	N/A	2017/06/07	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8655178	N/A	2017/06/07	Isabel Choi
Conductance - water	AT/ALK	8655097	N/A	2017/06/07	Maria Maclean
Fluoride	ISE/ISE	8656302	N/A	2017/06/07	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8654205	N/A	2017/06/09	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8653377	N/A	2017/06/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8656217	N/A	2017/06/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8655238	2017/06/07	2017/06/08	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8654263	N/A	2017/06/08	Automated Statchk
Ion Balance	CALC	8654264	N/A	2017/06/08	Automated Statchk
Sum of cations, anions	CALC	8654265	N/A	2017/06/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8653378	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8654750	N/A	2017/06/08	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8654818	2017/06/07	2017/06/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8653586	N/A	2017/06/09	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8654745	N/A	2017/06/07	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8656240	N/A	2017/06/07	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8656241	N/A	2017/06/07	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8653862	N/A	2017/06/08	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RF4494
Sample ID: KZ-18
Matrix: Water

Collected: 2017/06/01
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/06	Avani Patel
pH Water	AT/ALK	8655081	N/A	2017/06/07	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8656036	N/A	2017/06/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8655442	2017/06/07	2017/06/07	Beatriz Ortega
Total Phosphorus - Low Level Unpreserved	KONE/COL	8655446	N/A	2017/06/07	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8654790	2017/06/07	2017/06/08	Beatriz Ortega

Maxxam ID: RF4495
Sample ID: KZ-19
Matrix: Water

Collected: 2017/06/01
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8655003	N/A	2017/06/07	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8655098	2017/06/07	2017/06/07	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8655999	N/A	2017/06/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8654988	N/A	2017/06/07	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8654992	N/A	2017/06/07	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8655178	N/A	2017/06/07	Isabel Choi
Conductance - water	AT/ALK	8655097	N/A	2017/06/07	Maria Maclean
Fluoride	ISE/ISE	8656274	N/A	2017/06/07	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8654205	N/A	2017/06/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8653377	N/A	2017/06/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8656217	N/A	2017/06/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8655238	2017/06/07	2017/06/08	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8654263	N/A	2017/06/08	Automated Statchk
Ion Balance	CALC	8654264	N/A	2017/06/08	Automated Statchk
Sum of cations, anions	CALC	8654265	N/A	2017/06/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8653378	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8654750	N/A	2017/06/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8653586	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8654846	N/A	2017/06/08	Andrew An
Ammonia-N (Preserved)	KONE/COL	8654744	N/A	2017/06/07	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8656240	N/A	2017/06/07	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8656241	N/A	2017/06/07	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8653862	N/A	2017/06/08	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/06	Avani Patel
pH Water	AT/ALK	8655081	N/A	2017/06/07	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8656028	N/A	2017/06/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8655442	2017/06/07	2017/06/07	Beatriz Ortega
Total Phosphorus - Low Level Unpreserved	KONE/COL	8655446	N/A	2017/06/07	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8654790	2017/06/07	2017/06/08	Beatriz Ortega

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RF4495 Dup
Sample ID: KZ-19
Matrix: Water

Collected: 2017/06/01
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8655178	N/A	2017/06/07	Isabel Choi

Maxxam ID: RF4506
Sample ID: KZ-21
Matrix: Water

Collected: 2017/05/31
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8655003	N/A	2017/06/07	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8655115	2017/06/07	2017/06/07	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8655999	N/A	2017/06/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8654988	N/A	2017/06/07	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8654992	N/A	2017/06/07	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8655178	N/A	2017/06/07	Isabel Choi
Conductance - water	AT/ALK	8655113	N/A	2017/06/07	Maria Maclean
Fluoride	ISE/ISE	8656274	N/A	2017/06/07	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8654205	N/A	2017/06/09	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8653377	N/A	2017/06/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8656050	N/A	2017/06/08	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8655238	2017/06/07	2017/06/08	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8654263	N/A	2017/06/08	Automated Statchk
Ion Balance	CALC	8654264	N/A	2017/06/08	Automated Statchk
Sum of cations, anions	CALC	8654265	N/A	2017/06/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8653378	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8654750	N/A	2017/06/08	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8654818	2017/06/07	2017/06/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8653586	N/A	2017/06/09	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8654744	N/A	2017/06/07	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8656240	N/A	2017/06/07	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8656241	N/A	2017/06/07	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8653862	N/A	2017/06/08	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/06	Avani Patel
pH Water	AT/ALK	8655112	N/A	2017/06/07	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8656028	N/A	2017/06/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8655442	2017/06/07	2017/06/07	Beatriz Ortega
Total Phosphorus - Low Level Unpreserved	KONE/COL	8655446	N/A	2017/06/07	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8654790	2017/06/07	2017/06/08	Beatriz Ortega

Maxxam ID: RF4506 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2017/05/31
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8655003	N/A	2017/06/07	Wilson Au Yueng
Nitrate+Nitrite (N) (low level)	TRAA/COL	8656240	N/A	2017/06/07	Isaac Wang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RF4506 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2017/05/31
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8656241	N/A	2017/06/07	Isaac Wang
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8655442	2017/06/07	2017/06/07	Beatriz Ortega
Total Phosphorus - Low Level Unpreserved	KONE/COL	8655446	N/A	2017/06/07	Beatriz Ortega

Maxxam ID: RF4507
Sample ID: KZ-22
Matrix: Water

Collected: 2017/05/31
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8655003	N/A	2017/06/07	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8655115	2017/06/07	2017/06/07	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8655999	N/A	2017/06/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8654988	N/A	2017/06/07	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8654992	N/A	2017/06/07	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8655178	N/A	2017/06/07	Isabel Choi
Conductance - water	AT/ALK	8655113	N/A	2017/06/07	Maria Maclean
Fluoride	ISE/ISE	8656274	N/A	2017/06/07	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8654205	N/A	2017/06/09	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8653377	N/A	2017/06/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8656050	N/A	2017/06/08	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8655238	2017/06/07	2017/06/08	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8654263	N/A	2017/06/08	Automated Statchk
Ion Balance	CALC	8654264	N/A	2017/06/08	Automated Statchk
Sum of cations, anions	CALC	8654265	N/A	2017/06/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8653378	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8654750	N/A	2017/06/08	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8654818	2017/06/07	2017/06/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8653586	N/A	2017/06/09	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8654744	N/A	2017/06/07	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8656240	N/A	2017/06/07	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8656241	N/A	2017/06/07	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8653862	N/A	2017/06/08	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/06	Avani Patel
pH Water	AT/ALK	8655112	N/A	2017/06/07	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8656028	N/A	2017/06/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8659547	2017/06/10	2017/06/10	Beatriz Ortega
Total Phosphorus - Low Level Unpreserved	KONE/COL	8661107	N/A	2017/06/10	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8654790	2017/06/07	2017/06/08	Beatriz Ortega

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RF4507 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2017/05/31
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8659547	2017/06/10	2017/06/10	Beatriz Ortega

Maxxam ID: RF4508
Sample ID: KZ-26
Matrix: Water

Collected: 2017/05/31
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8655003	N/A	2017/06/07	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8655098	2017/06/07	2017/06/07	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8655999	N/A	2017/06/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8654988	N/A	2017/06/07	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8654992	N/A	2017/06/07	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8655178	N/A	2017/06/07	Isabel Choi
Conductance - water	AT/ALK	8655097	N/A	2017/06/07	Maria Maclean
Fluoride	ISE/ISE	8656274	N/A	2017/06/07	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8654205	N/A	2017/06/09	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8653377	N/A	2017/06/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8656050	N/A	2017/06/08	Rob Mcclelland
Mercury (Total-LowLevel) by CVAF	CV/AF	8655238	2017/06/07	2017/06/08	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8654263	N/A	2017/06/08	Automated Statchk
Ion Balance	CALC	8654264	N/A	2017/06/08	Automated Statchk
Sum of cations, anions	CALC	8654265	N/A	2017/06/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8653378	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8654750	N/A	2017/06/08	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8654818	2017/06/07	2017/06/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8653586	N/A	2017/06/09	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8654744	N/A	2017/06/07	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8656240	N/A	2017/06/07	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8656241	N/A	2017/06/07	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8653862	N/A	2017/06/08	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/06	Avani Patel
pH Water	AT/ALK	8655081	N/A	2017/06/07	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8656028	N/A	2017/06/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8655442	2017/06/07	2017/06/07	Beatriz Ortega
Total Phosphorus - Low Level Unpreserved	KONE/COL	8655446	N/A	2017/06/07	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8654790	2017/06/07	2017/06/08	Beatriz Ortega

Maxxam ID: RF4509
Sample ID: KZ-28
Matrix: Water

Collected: 2017/05/31
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8655003	N/A	2017/06/07	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8655098	2017/06/07	2017/06/07	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RF4509
Sample ID: KZ-28
Matrix: Water

Collected: 2017/05/31
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8655999	N/A	2017/06/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8654988	N/A	2017/06/07	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8654992	N/A	2017/06/07	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8655178	N/A	2017/06/07	Isabel Choi
Conductance - water	AT/ALK	8655097	N/A	2017/06/07	Maria Maclean
Fluoride	ISE/ISE	8656274	N/A	2017/06/07	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8654205	N/A	2017/06/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8653377	N/A	2017/06/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8656217	N/A	2017/06/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8655238	2017/06/07	2017/06/08	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8654263	N/A	2017/06/08	Automated Statchk
Ion Balance	CALC	8654264	N/A	2017/06/08	Automated Statchk
Sum of cations, anions	CALC	8654265	N/A	2017/06/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8653378	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8654750	N/A	2017/06/07	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8653586	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8654846	N/A	2017/06/08	Andrew An
Ammonia-N (Preserved)	KONE/COL	8660356	N/A	2017/06/12	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8656240	N/A	2017/06/07	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8656241	N/A	2017/06/07	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8653862	N/A	2017/06/08	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/06	Avani Patel
pH Water	AT/ALK	8655081	N/A	2017/06/07	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8656028	N/A	2017/06/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8655442	2017/06/07	2017/06/07	Beatriz Ortega
Total Phosphorus - Low Level Unpreserved	KONE/COL	8655446	N/A	2017/06/07	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8654790	2017/06/07	2017/06/08	Beatriz Ortega

Maxxam ID: RF4509 Dup
Sample ID: KZ-28
Matrix: Water

Collected: 2017/05/31
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8655238	2017/06/07	2017/06/08	Edwin Lamigo
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8654750	N/A	2017/06/07	Andrew An
Ammonia-N (Preserved)	KONE/COL	8660356	N/A	2017/06/12	Clare Kwok

Maxxam ID: RF4510
Sample ID: KZ-37
Matrix: Water

Collected: 2017/06/01
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8655003	N/A	2017/06/07	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8655098	2017/06/07	2017/06/07	Maria Maclean

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RF4510
Sample ID: KZ-37
Matrix: Water

Collected: 2017/06/01
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8655999	N/A	2017/06/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8654988	N/A	2017/06/07	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8654992	N/A	2017/06/07	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8655178	N/A	2017/06/07	Isabel Choi
Conductance - water	AT/ALK	8655097	N/A	2017/06/07	Maria Maclean
Fluoride	ISE/ISE	8656274	N/A	2017/06/07	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8654205	N/A	2017/06/09	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8653377	N/A	2017/06/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8656217	N/A	2017/06/08	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8655238	2017/06/07	2017/06/08	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8654263	N/A	2017/06/08	Automated Statchk
Ion Balance	CALC	8654264	N/A	2017/06/08	Automated Statchk
Sum of cations, anions	CALC	8654265	N/A	2017/06/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8653378	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8654750	N/A	2017/06/08	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8654818	2017/06/07	2017/06/08	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8653586	N/A	2017/06/09	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8654744	N/A	2017/06/07	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8656240	N/A	2017/06/07	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8656241	N/A	2017/06/07	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8653862	N/A	2017/06/08	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/06	Avani Patel
pH Water	AT/ALK	8655081	N/A	2017/06/07	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8656028	N/A	2017/06/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8655442	2017/06/07	2017/06/07	Beatriz Ortega
Total Phosphorus - Low Level Unpreserved	KONE/COL	8655446	N/A	2017/06/07	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8654931	2017/06/07	2017/06/08	Beatriz Ortega

Maxxam ID: RF4511
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/06/05
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8655003	N/A	2017/06/07	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8655069	2017/06/07	2017/06/07	Maria Maclean
Chloride by Automated Colourimetry	KONE/COL	8656032	N/A	2017/06/07	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8654988	N/A	2017/06/07	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8654992	N/A	2017/06/07	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8655178	N/A	2017/06/07	Isabel Choi
Conductance - water	AT/ALK	8655068	N/A	2017/06/07	Maria Maclean
Fluoride	ISE/ISE	8656302	N/A	2017/06/07	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8654205	N/A	2017/06/08	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8653377	N/A	2017/06/08	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8656217	N/A	2017/06/08	Edwin Lamigo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RF4511
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/06/05
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8655238	2017/06/07	2017/06/08	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8654263	N/A	2017/06/08	Automated Statchk
Ion Balance	CALC	8654264	N/A	2017/06/08	Automated Statchk
Sum of cations, anions	CALC	8654265	N/A	2017/06/08	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8653378	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8654750	N/A	2017/06/07	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8653586	N/A	2017/06/08	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8654846	N/A	2017/06/08	Andrew An
Ammonia-N (Preserved)	KONE/COL	8654744	N/A	2017/06/07	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8656240	N/A	2017/06/07	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8656241	N/A	2017/06/07	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8653862	N/A	2017/06/08	Automated Statchk
pH Water	AT/ALK	8655066	N/A	2017/06/07	Maria Maclean
Sulphate by Automated Colourimetry	KONE/COL	8656036	N/A	2017/06/07	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8655442	2017/06/07	2017/06/07	Beatriz Ortega
Total Phosphorus - Low Level Unpreserved	KONE/COL	8655446	N/A	2017/06/07	Beatriz Ortega
Total Suspended Solids-Low Level	BAL/BAL	8654931	2017/06/07	2017/06/08	Beatriz Ortega

Maxxam ID: RF4511 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/06/05
Shipped:
Received: 2017/06/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8656217	N/A	2017/06/08	Edwin Lamigo

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.0°C
Package 2	3.3°C
Package 3	6.0°C
Package 4	4.0°C

Samples were received at the analytical lab past hold time for Nitrate, Nitrite, Dissolved Phosphorus and Total Phosphorus.

Sample RF4490 [KZ-9] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RF4491 [KZ-15] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RF4494 [KZ-18] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RF4506 [KZ-21] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RF4507 [KZ-22] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RF4508 [KZ-26] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RF4509 [KZ-28] : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Sample RF4510 [KZ-37] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RF4511 [TRIP BLANK] : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8654744	Total Ammonia (N)	2017/06/07	102	80 - 120	103	80 - 120	<0.0050	mg/L	NC	20
8654745	Total Ammonia (N)	2017/06/07	102	80 - 120	100	80 - 120	<0.0050	mg/L	0.88	20
8654750	Dissolved Aluminum (Al)	2017/06/07	104	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8654750	Dissolved Antimony (Sb)	2017/06/07	100	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8654750	Dissolved Arsenic (As)	2017/06/07	100	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8654750	Dissolved Barium (Ba)	2017/06/07	104	80 - 120	107	80 - 120	<0.000020	mg/L	12	20
8654750	Dissolved Beryllium (Be)	2017/06/07	91	80 - 120	93	80 - 120	<0.000010	mg/L	NC	20
8654750	Dissolved Bismuth (Bi)	2017/06/07	92	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8654750	Dissolved Boron (B)	2017/06/07	92	80 - 120	97	80 - 120	<0.010	mg/L	NC	20
8654750	Dissolved Cadmium (Cd)	2017/06/07	103	80 - 120	109	80 - 120	<0.0000050	mg/L	NC	20
8654750	Dissolved Chromium (Cr)	2017/06/07	103	80 - 120	110	80 - 120	<0.00010	mg/L	NC	20
8654750	Dissolved Cobalt (Co)	2017/06/07	102	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8654750	Dissolved Copper (Cu)	2017/06/07	102	80 - 120	109	80 - 120	<0.000050	mg/L	NC	20
8654750	Dissolved Iron (Fe)	2017/06/07	103	80 - 120	109	80 - 120	<0.0010	mg/L	NC	20
8654750	Dissolved Lead (Pb)	2017/06/07	101	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8654750	Dissolved Lithium (Li)	2017/06/07	94	80 - 120	95	80 - 120	<0.00050	mg/L	NC	20
8654750	Dissolved Manganese (Mn)	2017/06/07	95	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8654750	Dissolved Molybdenum (Mo)	2017/06/07	101	80 - 120	106	80 - 120	<0.000050	mg/L	NC	20
8654750	Dissolved Nickel (Ni)	2017/06/07	104	80 - 120	110	80 - 120	<0.000020	mg/L	NC	20
8654750	Dissolved Phosphorus (P)	2017/06/07					<0.0020	mg/L	1.3	20
8654750	Dissolved Selenium (Se)	2017/06/07	102	80 - 120	102	80 - 120	<0.000040	mg/L	NC	20
8654750	Dissolved Silicon (Si)	2017/06/07					<0.050	mg/L	NC	20
8654750	Dissolved Silver (Ag)	2017/06/07	106	80 - 120	114	80 - 120	<0.0000050	mg/L	NC	20
8654750	Dissolved Strontium (Sr)	2017/06/07	97	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8654750	Dissolved Thallium (Tl)	2017/06/07	100	80 - 120	105	80 - 120	<0.0000020	mg/L	NC	20
8654750	Dissolved Tin (Sn)	2017/06/07	105	80 - 120	110	80 - 120	<0.00020	mg/L	NC	20
8654750	Dissolved Titanium (Ti)	2017/06/07	103	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
8654750	Dissolved Uranium (U)	2017/06/07	97	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8654750	Dissolved Vanadium (V)	2017/06/07	101	80 - 120	109	80 - 120	<0.00020	mg/L	NC	20
8654750	Dissolved Zinc (Zn)	2017/06/07	106	80 - 120	113	80 - 120	<0.00010	mg/L	NC	20
8654750	Dissolved Zirconium (Zr)	2017/06/07					<0.00010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8654790	Total Suspended Solids	2017/06/08			103	80 - 120	<1.0	mg/L		
8654818	Total Aluminum (Al)	2017/06/08	103	80 - 120	98	80 - 120	<0.0030	mg/L	0.36	20
8654818	Total Antimony (Sb)	2017/06/08	105	80 - 120	100	80 - 120	<0.000020	mg/L	3.0	20
8654818	Total Arsenic (As)	2017/06/08	100	80 - 120	98	80 - 120	<0.000020	mg/L	1.7	20
8654818	Total Barium (Ba)	2017/06/08	NC	80 - 120	99	80 - 120	<0.000050	mg/L	1.5	20
8654818	Total Beryllium (Be)	2017/06/08	103	80 - 120	95	80 - 120	<0.000010	mg/L	NC	20
8654818	Total Bismuth (Bi)	2017/06/08	100	80 - 120	99	80 - 120	<0.000010	mg/L	NC	20
8654818	Total Boron (B)	2017/06/08	94	80 - 120	85	80 - 120	<0.010	mg/L	NC	20
8654818	Total Cadmium (Cd)	2017/06/08	102	80 - 120	100	80 - 120	<0.0000050	mg/L	2.5	20
8654818	Total Chromium (Cr)	2017/06/08	106	80 - 120	103	80 - 120	<0.00010	mg/L	11	20
8654818	Total Cobalt (Co)	2017/06/08	103	80 - 120	102	80 - 120	<0.000010	mg/L	8.1	20
8654818	Total Copper (Cu)	2017/06/08	104	80 - 120	106	80 - 120	<0.00010	mg/L	1.6	20
8654818	Total Iron (Fe)	2017/06/08	NC	80 - 120	99	80 - 120	<0.0050	mg/L	0.55	20
8654818	Total Lead (Pb)	2017/06/08	100	80 - 120	97	80 - 120	<0.000020	mg/L	0.75	20
8654818	Total Lithium (Li)	2017/06/08	111	80 - 120	104	80 - 120	<0.00050	mg/L	7.7	20
8654818	Total Manganese (Mn)	2017/06/08	NC	80 - 120	96	80 - 120	<0.00010	mg/L	0.64	20
8654818	Total Molybdenum (Mo)	2017/06/08	103	80 - 120	101	80 - 120	<0.000050	mg/L	0.59	20
8654818	Total Nickel (Ni)	2017/06/08	105	80 - 120	104	80 - 120	<0.00010	mg/L	1.1	20
8654818	Total Phosphorus (P)	2017/06/08					<0.0050	mg/L	2.7	20
8654818	Total Selenium (Se)	2017/06/08	102	80 - 120	99	80 - 120	<0.000040	mg/L	5.1	20
8654818	Total Silicon (Si)	2017/06/08					<0.050	mg/L	2.5	20
8654818	Total Silver (Ag)	2017/06/08	108	80 - 120	105	80 - 120	<0.000010	mg/L	NC	20
8654818	Total Strontium (Sr)	2017/06/08	NC	80 - 120	95	80 - 120	<0.000050	mg/L	1.8	20
8654818	Total Thallium (Tl)	2017/06/08	103	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8654818	Total Tin (Sn)	2017/06/08	101	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8654818	Total Titanium (Ti)	2017/06/08	101	80 - 120	104	80 - 120	<0.0020	mg/L	NC	20
8654818	Total Uranium (U)	2017/06/08	99	80 - 120	95	80 - 120	<0.0000050	mg/L	2.3	20
8654818	Total Vanadium (V)	2017/06/08	108	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
8654818	Total Zinc (Zn)	2017/06/08	113	80 - 120	104	80 - 120	<0.0010	mg/L	5.0	20
8654818	Total Zirconium (Zr)	2017/06/08					<0.00010	mg/L	NC	20
8654846	Total Aluminum (Al)	2017/06/08	100	80 - 120	104	80 - 120	<0.00050	mg/L	19	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8654846	Total Antimony (Sb)	2017/06/08	101	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8654846	Total Arsenic (As)	2017/06/08	99	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8654846	Total Barium (Ba)	2017/06/08	102	80 - 120	107	80 - 120	<0.000020	mg/L	3.1	20
8654846	Total Beryllium (Be)	2017/06/08	86	80 - 120	88	80 - 120	<0.000010	mg/L	NC	20
8654846	Total Bismuth (Bi)	2017/06/08	97	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8654846	Total Boron (B)	2017/06/08	93	80 - 120	94	80 - 120	<0.010	mg/L	NC	20
8654846	Total Cadmium (Cd)	2017/06/08	104	80 - 120	110	80 - 120	<0.0000050	mg/L	NC	20
8654846	Total Chromium (Cr)	2017/06/08	104	80 - 120	109	80 - 120	<0.00010	mg/L	NC	20
8654846	Total Cobalt (Co)	2017/06/08	104	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8654846	Total Copper (Cu)	2017/06/08	104	80 - 120	108	80 - 120	<0.000050	mg/L	1.5	20
8654846	Total Iron (Fe)	2017/06/08	101	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20
8654846	Total Lead (Pb)	2017/06/08	100	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8654846	Total Lithium (Li)	2017/06/08	91	80 - 120	93	80 - 120	<0.00050	mg/L	NC	20
8654846	Total Manganese (Mn)	2017/06/08	95	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8654846	Total Molybdenum (Mo)	2017/06/08	103	80 - 120	107	80 - 120	<0.000050	mg/L	NC	20
8654846	Total Nickel (Ni)	2017/06/08	106	80 - 120	110	80 - 120	<0.000020	mg/L	NC	20
8654846	Total Phosphorus (P)	2017/06/08					<0.0020	mg/L	NC	20
8654846	Total Selenium (Se)	2017/06/08	97	80 - 120	103	80 - 120	<0.000040	mg/L	NC	20
8654846	Total Silicon (Si)	2017/06/08					<0.050	mg/L	NC	20
8654846	Total Silver (Ag)	2017/06/08	109	80 - 120	113	80 - 120	<0.0000050	mg/L	NC	20
8654846	Total Strontium (Sr)	2017/06/08	98	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8654846	Total Thallium (Tl)	2017/06/08	99	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8654846	Total Tin (Sn)	2017/06/08	105	80 - 120	107	80 - 120	<0.00020	mg/L	NC	20
8654846	Total Titanium (Ti)	2017/06/08	103	80 - 120	110	80 - 120	<0.00050	mg/L	NC	20
8654846	Total Uranium (U)	2017/06/08	98	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8654846	Total Vanadium (V)	2017/06/08	104	80 - 120	109	80 - 120	<0.00020	mg/L	NC	20
8654846	Total Zinc (Zn)	2017/06/08	104	80 - 120	112	80 - 120	<0.00010	mg/L	NC	20
8654846	Total Zirconium (Zr)	2017/06/08					<0.00010	mg/L	NC	20
8654931	Total Suspended Solids	2017/06/08			103	N/A	<1.0	mg/L		
8654988	Strong Acid Dissoc. Cyanide (CN)	2017/06/07	107	80 - 120	103	80 - 120	<0.00050	mg/L	3.8	20
8654992	Weak Acid Dissoc. Cyanide (CN)	2017/06/07	109	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8655003	Acidity (pH 4.5)	2017/06/07					<0.50	mg/L	NC	20
8655003	Acidity (pH 8.3)	2017/06/07			102	80 - 120	<0.50	mg/L	16	20
8655066	pH	2017/06/07			101	97 - 103			0.83	N/A
8655068	Conductivity	2017/06/07			99	80 - 120	<1.0	uS/cm		
8655069	Alkalinity (PP as CaCO3)	2017/06/07					<0.50	mg/L		
8655069	Alkalinity (Total as CaCO3)	2017/06/07	NC	80 - 120	99	80 - 120	<0.50	mg/L		
8655069	Bicarbonate (HCO3)	2017/06/07					<0.50	mg/L		
8655069	Carbonate (CO3)	2017/06/07					<0.50	mg/L		
8655069	Hydroxide (OH)	2017/06/07					<0.50	mg/L		
8655081	pH	2017/06/07			101	97 - 103				
8655097	Conductivity	2017/06/07			100	80 - 120	<1.0	uS/cm		
8655098	Alkalinity (PP as CaCO3)	2017/06/07					<0.50	mg/L	NC	20
8655098	Alkalinity (Total as CaCO3)	2017/06/07	NC	80 - 120	95	80 - 120	<0.50	mg/L	0.58	20
8655098	Bicarbonate (HCO3)	2017/06/07					<0.50	mg/L	0.58	20
8655098	Carbonate (CO3)	2017/06/07					<0.50	mg/L	NC	20
8655098	Hydroxide (OH)	2017/06/07					<0.50	mg/L	NC	20
8655112	pH	2017/06/07			101	97 - 103			1.7	N/A
8655113	Conductivity	2017/06/07			100	80 - 120	<1.0	uS/cm	0	20
8655115	Alkalinity (PP as CaCO3)	2017/06/07					<0.50	mg/L	NC	20
8655115	Alkalinity (Total as CaCO3)	2017/06/07	NC	80 - 120	98	80 - 120	<0.50	mg/L	3.7	20
8655115	Bicarbonate (HCO3)	2017/06/07					<0.50	mg/L	3.7	20
8655115	Carbonate (CO3)	2017/06/07					<0.50	mg/L	NC	20
8655115	Hydroxide (OH)	2017/06/07					<0.50	mg/L	NC	20
8655178	Dissolved Organic Carbon (C)	2017/06/07	102	80 - 120	109	80 - 120	<0.50	mg/L	9.7	20
8655238	Total Mercury (Hg)	2017/06/08	92	80 - 120	94	80 - 120	<0.0000020	mg/L	NC	20
8655442	Dissolved Phosphorus (P)	2017/06/07	94	80 - 120	106	80 - 120	<0.0020	mg/L	0.44	20
8655446	Total Phosphorus (P)	2017/06/07	90	80 - 120	107	80 - 120	<0.0020	mg/L	0.63	20
8655999	Dissolved Chloride (Cl)	2017/06/07	111	80 - 120	101	80 - 120	<0.50	mg/L	3.4	20
8656028	Dissolved Sulphate (SO4)	2017/06/07	119	80 - 120	105	80 - 120	<0.50	mg/L	5.6	20
8656032	Dissolved Chloride (Cl)	2017/06/07	111	80 - 120	98	80 - 120	<0.50	mg/L	NC	20
8656036	Dissolved Sulphate (SO4)	2017/06/07	119	80 - 120	102	80 - 120	<0.50	mg/L	1.0	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8656050	Dissolved Mercury (Hg)	2017/06/08	96	80 - 120	94	80 - 120	<0.0000020	mg/L	NC	20
8656217	Dissolved Mercury (Hg)	2017/06/08	110	80 - 120	110	80 - 120	<0.0000020	mg/L	NC	20
8656240	Nitrate plus Nitrite (N)	2017/06/07	103	80 - 120	97	80 - 120	<0.0020	mg/L	NC	25
8656241	Nitrite (N)	2017/06/07	95	80 - 120	93	80 - 120	<0.0020	mg/L	18	25
8656274	Fluoride (F)	2017/06/07	103	80 - 120	102	80 - 120	0.012, RDL=0.010	mg/L		
8656302	Fluoride (F)	2017/06/07	120	80 - 120	102	80 - 120	0.018, RDL=0.010	mg/L	0	20
8658162	Total Ammonia (N)	2017/06/09	104	80 - 120	99	80 - 120	<0.0050	mg/L	2.0	20
8658741	Dissolved Organic Carbon (C)	2017/06/09	99	80 - 120	103	80 - 120	<0.50	mg/L	4.0	20
8659547	Dissolved Phosphorus (P)	2017/06/10	88	80 - 120	104	80 - 120	<0.0020	mg/L	0.67	20
8660356	Total Ammonia (N)	2017/06/12	102	80 - 120	98	80 - 120	<0.0050	mg/L	6.6	20
8661107	Total Phosphorus (P)	2017/06/10			102	80 - 120	<0.0020	mg/L		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B744321
Report Date: 2017/06/14

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTOI

COC

08439165

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:	Kelli Bergh	Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:	778-233-7058	Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:	kellib@bmcminerals.com	Email:	kwoloshyn@alexcoresource.com	Sampled By:	Jody Inkster	Date Required:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Rush Confirmation #:

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		2017/06/01	14:55	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
2	KZ-6		2017/06/01	13:55	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3	KZ-9		2017/06/01	11:42	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
4	KZ-15		2017/05/31	14:48	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5	KZ-16		2017/05/31	15:43	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
6	KZ-17		2017/05/31	15:20	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
7	KZ-18		2017/06/01	12:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
8	KZ-19		2017/06/01	12:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	

LABORATORY USE ONLY

CUSTODY SEAL (Y) / N Present	Intact	COOLER TEMPERATURES
Y	Y	322
Y	Y	243
Y	Y	223

COOLING MEDIA PRESENT (Y) / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Sayans @0930
2017-06-05
3 4 5
TEMP: 3 / 4 / 3
5 7 6
4 4 4

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Jody Inkster	2017/06/05	9:00	Laurel Berthier	2017/06/06	13:30

B744321_COC

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC # 08439166

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Jody Inkster	Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-21		2017/05/31	13:39	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
2	KZ-22		2017/05/31	13:05	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3	KZ-26		2017/05/31	11:19	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
4	KZ-28		2017/05/31	11:42	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5	KZ-37		2017/06/01	11:22	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
6	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
7																						
8																						
9																						
10																						

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
Y	Y	3.22
Y	Y	2.43
Y	Y	2.23

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Alyssa @ 0930
2017 -06- 05
TEMP: 3 4 5
3 1 4 3
5 7 6
4 4 4

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Jody Inkster	2017/06/05	9:00	Laurel Berthier	2017/06/06	13:30

B744321_COC

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08439311, 08439310

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/06/17
Report #: R2399089
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B746141
Received: 2017/06/09, 14:15

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	15	N/A	2017/06/12	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	12	2017/06/13	2017/06/13	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	3	2017/06/13	2017/06/14	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	15	N/A	2017/06/12	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	15	N/A	2017/06/13	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	15	N/A	2017/06/13	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	14	N/A	2017/06/12	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - unfiltered/unpreserved (1)	1	N/A	2017/06/12	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	12	N/A	2017/06/13	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	3	N/A	2017/06/14	BBY6SOP-00026	SM 22 2510 B m
Fluoride	15	N/A	2017/06/14	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	14	N/A	2017/06/14	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	1	N/A	2017/06/15	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	15	N/A	2017/06/14	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	14	N/A	2017/06/13	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Dissolved-LowLevel) by CVAF	1	N/A	2017/06/14	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	15	2017/06/12	2017/06/12	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance (as Cations/Anions Ratio)	15	N/A	2017/06/14	BBY WI-00033	Auto Calc
Ion Balance	15	N/A	2017/06/14	BBY WI-00033	SM 22 1030E
Sum of cations, anions	15	N/A	2017/06/14	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	15	N/A	2017/06/14	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	15	N/A	2017/06/14	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	1	2017/06/12	2017/06/14	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	14	N/A	2017/06/14	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2017/06/15	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	14	N/A	2017/06/14	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	15	N/A	2017/06/13	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	15	N/A	2017/06/10	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	15	N/A	2017/06/10	BBY6SOP-00010	SM 22 4500-NO3- I m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08439311, 08439310

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/06/17
Report #: R2399089
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B746141
Received: 2017/06/09, 14:15

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrogen - Nitrate (as N) Low Level Calc	15	N/A	2017/06/14	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	13	N/A	2017/06/14	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	1	N/A	2017/06/15	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	12	N/A	2017/06/13	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (2)	3	N/A	2017/06/14	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	15	N/A	2017/06/12	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	15	2017/06/13	2017/06/13	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	15	N/A	2017/06/13	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	15	2017/06/12	2017/06/13	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08439311, 08439310

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/06/17
Report #: R2399089
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B746141
Received: 2017/06/09, 14:15

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Megan Smith, Project Manager
Email: msmith@maxxam.ca
Phone# (604) 734 7276

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RG4869		RG4899		RG4900		
Sampling Date		2017/06/07 13:20		2017/06/07 11:15		2017/06/07 09:25		
COC Number		08439311		08439311		08439311		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	1.3	8659490	2.1	8659490	2.4	N/A	8659490
Cation Sum	meq/L	1.2	8659490	2.0	8659490	2.3	N/A	8659490
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.94	8659488	0.95	8659488	0.96	0.010	8659488
Ion Balance (% Difference)	%	2.9	8659489	2.3	8659489	2.1	N/A	8659489
Nitrate (N)	mg/L	0.0832	8659493	0.0237	8659493	0.0691	0.0020	8659493
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00069	8662182	0.00073	8662182	0.00075	0.00050	8662182
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00079	8662407	<0.00050	8662407	<0.00050	0.00050	8662407
Fluoride (F)	mg/L	0.027	8663801	0.045	8663801	0.048	0.010	8663801
Dissolved Organic Carbon (C)	mg/L	1.88	8661128	2.59	8661129	2.19	0.50	8661130
Acidity (pH 4.5)	mg/L	<0.50	8660634	<0.50	8660634	<0.50	0.50	8660634
Alkalinity (Total as CaCO3)	mg/L	37.1	8662487	86.6	8662487	93.2	0.50	8662427
Acidity (pH 8.3)	mg/L	<0.50	8660634	<0.50	8660634	<0.50	0.50	8660634
Alkalinity (PP as CaCO3)	mg/L	<0.50	8662487	<0.50	8662487	<0.50	0.50	8662427
Bicarbonate (HCO3)	mg/L	45.2	8662487	106	8662487	114	0.50	8662427
Carbonate (CO3)	mg/L	<0.50	8662487	<0.50	8662487	<0.50	0.50	8662427
Hydroxide (OH)	mg/L	<0.50	8662487	<0.50	8662487	<0.50	0.50	8662427
Anions								
Dissolved Sulphate (SO4)	mg/L	26.5	8661603	14.7	8661600	25.6	0.50	8661600
Dissolved Chloride (Cl)	mg/L	0.59	8661602	0.56	8661598	0.53	0.50	8661598
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0032 (1)	8663203	0.0062 (1)	8663203	0.0063 (1)	0.0020	8663203
Total Ammonia (N)	mg/L	0.012	8661444	0.010	8661444	0.015	0.0050	8661444
Nitrate plus Nitrite (N)	mg/L	0.0832	8659546	0.0237	8659546	0.0691	0.0020	8659546
Nitrite (N)	mg/L	<0.0020	8659548	<0.0020	8659548	<0.0020	0.0020	8659548
Total Phosphorus (P)	mg/L	0.0029 (1)	8663215	0.0052 (1)	8663215	0.0083 (1)	0.0020	8663215
Physical Properties								
Conductivity	uS/cm	133	8662494	198	8662494	233	1.0	8662426
pH	pH	7.78	8662495	8.14	8662495	8.13		8662423

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RG4869		RG4899		RG4900		
Sampling Date		2017/06/07 13:20		2017/06/07 11:15		2017/06/07 09:25		
COC Number		08439311		08439311		08439311		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8660319	<1.0	8660319	5.9	1.0	8660319
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RG4901		RG4902		RG4903		
Sampling Date		2017/06/06 15:55		2017/06/06 12:12		2017/06/06 13:25		
COC Number		08439311		08439311		08439311		
	UNITS	KZ-13	QC Batch	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	1.2	8659490	2.3	8659490	1.8	N/A	8659490
Cation Sum	meq/L	1.1	8659490	2.1	8659490	1.7	N/A	8659490
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.94	8659488	0.93	8659488	0.94	0.010	8659488
Ion Balance (% Difference)	%	3.0	8659489	3.8	8659489	3.2	N/A	8659489
Nitrate (N)	mg/L	0.0269	8659493	0.0430	8659493	0.0412	0.0020	8659493
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00083	8662182	0.00080	8662182	0.00080	0.00050	8662182
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8662407	<0.00050	8662407	0.00070	0.00050	8662407
Fluoride (F)	mg/L	0.038	8663801	0.054	8663801	0.045	0.010	8663801
Dissolved Organic Carbon (C)	mg/L	5.01	8661128	1.79	8661129	1.56	0.50	8661129
Acidity (pH 4.5)	mg/L	<0.50	8660634	<0.50	8660636	<0.50	0.50	8660636
Alkalinity (Total as CaCO3)	mg/L	50.4	8662427	92.3	8662444	76.2	0.50	8662444
Acidity (pH 8.3)	mg/L	<0.50	8660634	<0.50	8660636	<0.50	0.50	8660636
Alkalinity (PP as CaCO3)	mg/L	<0.50	8662427	<0.50	8662444	<0.50	0.50	8662444
Bicarbonate (HCO3)	mg/L	61.5	8662427	113	8662444	92.9	0.50	8662444
Carbonate (CO3)	mg/L	<0.50	8662427	<0.50	8662444	<0.50	0.50	8662444
Hydroxide (OH)	mg/L	<0.50	8662427	<0.50	8662444	<0.50	0.50	8662444
Anions								
Dissolved Sulphate (SO4)	mg/L	8.50	8661600	19.0	8661603	14.4	0.50	8661603
Dissolved Chloride (Cl)	mg/L	0.57	8661598	0.52	8661602	0.53	0.50	8661602
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0107 (1)	8663203	0.0052 (1)	8663203	0.0102 (1)	0.0020	8663209
Total Ammonia (N)	mg/L	0.020	8661444	0.022	8661444	0.0057	0.0050	8661444
Nitrate plus Nitrite (N)	mg/L	0.0269 (2)	8659546	0.0430 (2)	8659546	0.0412 (2)	0.0020	8659546
Nitrite (N)	mg/L	<0.0020 (2)	8659548	<0.0020 (2)	8659548	<0.0020 (2)	0.0020	8659548
Total Phosphorus (P)	mg/L	0.0088 (1)	8663215	0.0054 (1)	8663215	0.0036 (1)	0.0020	8663215
Physical Properties								
Conductivity	uS/cm	117	8662426	219	8662443	178	1.0	8662443
pH	pH	7.89	8662423	8.14	8662434	8.03		8662434

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.
(2) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RG4901		RG4902		RG4903		
Sampling Date		2017/06/06 15:55		2017/06/06 12:12		2017/06/06 13:25		
COC Number		08439311		08439311		08439311		
	UNITS	KZ-13	QC Batch	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	2.5	8660319	2.3	8660319	<1.0	1.0	8660319
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RG4904		RG4905		RG4906		RG4907		
Sampling Date		2017/06/06 14:35		2017/06/07 10:15		2017/06/07 09:50		2017/06/06 10:38		
COC Number		08439311		08439311		08439311		08439310		
	UNITS	KZ-17	QC Batch	KZ-18	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Calculated Parameters										
Anion Sum	meq/L	3.4	8659490	3.6	8659490	0.00070	8659490	3.2	N/A	8659490
Cation Sum	meq/L	3.5	8659490	3.5	8659490	0.0066	8659490	3.1	N/A	8659490
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	1.0	8659488	0.96	8659488	NC	8659488	0.97	0.010	8659488
Ion Balance (% Difference)	%	1.4	8659489	2.0	8659489	81	8659489	1.5	N/A	8659489
Nitrate (N)	mg/L	0.141	8659493	0.106	8659493	<0.0020	8659493	<0.0020	0.0020	8659493
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00066	8662182	0.00084	8662182	0.00059	8662182	0.00100	0.00050	8662182
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00053	8662407	0.00057	8662407	0.00059	8662407	0.00083	0.00050	8662407
Fluoride (F)	mg/L	0.074	8663801	0.061	8663801	0.013	8663801	0.120	0.010	8663801
Dissolved Organic Carbon (C)	mg/L	1.44	8661128	2.78	8661128	<0.50	8661128	6.47	0.50	8661128
Acidity (pH 4.5)	mg/L	<0.50	8660636	<0.50	8660636	<0.50	8660636	<0.50	0.50	8660634
Alkalinity (Total as CaCO3)	mg/L	149	8662444	162	8662444	<0.50	8662444	134	0.50	8662427
Acidity (pH 8.3)	mg/L	<0.50	8660636	0.51	8660636	<0.50	8660636	<0.50	0.50	8660634
Alkalinity (PP as CaCO3)	mg/L	<0.50	8662444	<0.50	8662444	<0.50	8662444	<0.50	0.50	8662427
Bicarbonate (HCO3)	mg/L	181	8662444	197	8662444	<0.50	8662444	163	0.50	8662427
Carbonate (CO3)	mg/L	<0.50	8662444	<0.50	8662444	<0.50	8662444	<0.50	0.50	8662427
Hydroxide (OH)	mg/L	<0.50	8662444	<0.50	8662444	<0.50	8662444	<0.50	0.50	8662427
Anions										
Dissolved Sulphate (SO4)	mg/L	22.1	8661603	17.3	8661603	<0.50	8661603	25.5	0.50	8661600
Dissolved Chloride (Cl)	mg/L	<0.50	8661602	0.62	8661602	<0.50	8661602	0.70	0.50	8661598
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0037 (1)	8663209	0.0418 (1)	8663203	<0.0020 (1)	8663209	0.0153 (1)	0.0020	8663203
Total Ammonia (N)	mg/L	0.018	8661444	0.020	8661444	0.0053	8661444	0.022	0.0050	8661444
Nitrate plus Nitrite (N)	mg/L	0.141 (2)	8659546	0.106	8659546	<0.0020	8659546	<0.0020 (2)	0.0020	8659546
Nitrite (N)	mg/L	<0.0020 (2)	8659548	<0.0020	8659548	<0.0020	8659548	<0.0020 (2)	0.0020	8659548
Total Phosphorus (P)	mg/L	0.0031 (1)	8663215	0.0431 (1)	8663215	0.0022 (1)	8663215	0.0184 (1)	0.0020	8663215
Physical Properties										
Conductivity	uS/cm	320	8662443	331	8662443	1.3	8662443	300	1.0	8662426
pH	pH	8.28	8662434	8.23	8662434	5.21	8662434	8.25		8662423

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.
(2) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RG4904		RG4905		RG4906		RG4907		
Sampling Date		2017/06/06 14:35		2017/06/07 10:15		2017/06/07 09:50		2017/06/06 10:38		
COC Number		08439311		08439311		08439311		08439310		
	UNITS	KZ-17	QC Batch	KZ-18	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Physical Properties										
Total Suspended Solids	mg/L	<1.0	8660319	2.3	8660319	<1.0	8660319	1.6	1.0	8660319
RDL = Reportable Detection Limit										

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RG4908		RG4909	RG4910		RG4911		
Sampling Date		2017/06/06 09:20		2017/06/05 12:35	2017/06/06 16:30		2017/06/07 08:30		
COC Number		08439310		08439310	08439310		08439310		
	UNITS	KZ-22	QC Batch	KZ-26	KZ-28	QC Batch	KZ-37	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	2.9	8659490	3.0	1.2	8659490	2.5	N/A	8659490
Cation Sum	meq/L	2.9	8659490	2.8	1.1	8659490	2.5	N/A	8659490
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.98	8659488	0.96	1.0	8659488	0.98	0.010	8659488
Ion Balance (% Difference)	%	0.95	8659489	2.3	0.15	8659489	0.90	N/A	8659489
Nitrate (N)	mg/L	0.0145	8659493	0.0127	0.0270	8659493	0.0737	0.0020	8659493
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00095	8662182	0.00067	0.00086	8662393	0.00083	0.00050	8662393
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00068	8662407	<0.00050	0.00074	8662407	0.00060	0.00050	8662407
Fluoride (F)	mg/L	0.087	8663801	0.086	0.037	8663801	0.049	0.010	8663801
Dissolved Organic Carbon (C)	mg/L	4.53 (1)	8659523	3.20	3.51	8661128	2.62	0.50	8661128
Acidity (pH 4.5)	mg/L	<0.50	8660636	<0.50	<0.50	8660636	<0.50	0.50	8660634
Alkalinity (Total as CaCO3)	mg/L	121	8662444	123	47.8	8662444	98.9	0.50	8662487
Acidity (pH 8.3)	mg/L	<0.50	8660636	<0.50	<0.50	8660636	<0.50	0.50	8660634
Alkalinity (PP as CaCO3)	mg/L	<0.50	8662444	<0.50	<0.50	8662444	<0.50	0.50	8662487
Bicarbonate (HCO3)	mg/L	148	8662444	150	58.4	8662444	121	0.50	8662487
Carbonate (CO3)	mg/L	<0.50	8662444	<0.50	<0.50	8662444	<0.50	0.50	8662487
Hydroxide (OH)	mg/L	<0.50	8662444	<0.50	<0.50	8662444	<0.50	0.50	8662487
Anions									
Dissolved Sulphate (SO4)	mg/L	23.2	8661603	23.5	8.35	8661603	25.1	0.50	8661600
Dissolved Chloride (Cl)	mg/L	0.64	8661602	0.65	0.59	8661602	0.60	0.50	8661598
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0084 (1)	8663203	0.0226 (1)	0.0080 (1)	8663209	0.0075 (1)	0.0020	8663203
Total Ammonia (N)	mg/L	0.033	8661447	0.020	0.020	8661447	0.018	0.0050	8661447
Nitrate plus Nitrite (N)	mg/L	0.0145 (2)	8659546	0.0127 (2)	0.0270 (2)	8659546	0.0737	0.0020	8659546
Nitrite (N)	mg/L	<0.0020 (2)	8659548	<0.0020 (2)	<0.0020 (2)	8659548	<0.0020	0.0020	8659548
Total Phosphorus (P)	mg/L	0.0097 (1)	8663215	0.0218 (1)	0.0076 (1)	8663215	0.0069 (1)	0.0020	8663215
Physical Properties									
Conductivity	uS/cm	272	8662443	275	118	8662443	242	1.0	8662494
pH	pH	8.22	8662434	8.25	7.88	8662434	8.16		8662495

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.
(2) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RG4908		RG4909	RG4910		RG4911		
Sampling Date		2017/06/06 09:20		2017/06/05 12:35	2017/06/06 16:30		2017/06/07 08:30		
COC Number		08439310		08439310	08439310		08439310		
	UNITS	KZ-22	QC Batch	KZ-26	KZ-28	QC Batch	KZ-37	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	1.1	8660319	13.1	2.2	8660319	5.2	1.0	8660319
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RG4912		
Sampling Date		2017/06/10 15:29		
COC Number		08439310		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Calculated Parameters				
Anion Sum	meq/L	0.011	N/A	8659490
Cation Sum	meq/L	0.0050	N/A	8659490
Ion Balance	N/A	0.45 (1)	0.010	8659488
Ion Balance (% Difference)	%	38	N/A	8659489
Nitrate (N)	mg/L	<0.0020	0.0020	8659493
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00068	0.00050	8662393
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00064	0.00050	8662407
Fluoride (F)	mg/L	0.012	0.010	8663801
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8661128
Acidity (pH 4.5)	mg/L	<0.50	0.50	8660634
Alkalinity (Total as CaCO3)	mg/L	0.53	0.50	8662427
Acidity (pH 8.3)	mg/L	<0.50	0.50	8660634
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8662427
Bicarbonate (HCO3)	mg/L	0.65	0.50	8662427
Carbonate (CO3)	mg/L	<0.50	0.50	8662427
Hydroxide (OH)	mg/L	<0.50	0.50	8662427
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8661603
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8661602
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8663203
Total Ammonia (N)	mg/L	<0.0050	0.0050	8661447
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	8659546
Nitrite (N)	mg/L	<0.0020	0.0020	8659548
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8663215
Physical Properties				
Conductivity	uS/cm	1.1	1.0	8662426
pH	pH	5.30		8662423

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RG4912		
Sampling Date		2017/06/10 15:29		
COC Number		08439310		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8660319
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RG4869		RG4899		RG4900		
Sampling Date		2017/06/07 13:20		2017/06/07 11:15		2017/06/07 09:25		
COC Number		08439311		08439311		08439311		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	59.6	8659139	96.1	8659139	112	0.50	8659139
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8661479	<0.0000020	8663261	<0.0000020	0.0000020	8661479
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0115	8660602	0.0104	8660602	0.00589	0.00050	8660602
Dissolved Antimony (Sb)	mg/L	0.000036	8660602	<0.000020	8660602	0.000071	0.000020	8660602
Dissolved Arsenic (As)	mg/L	0.000096	8660602	0.000086	8660602	0.000240	0.000020	8660602
Dissolved Barium (Ba)	mg/L	0.0359	8660602	0.0284	8660602	0.0532	0.000020	8660602
Dissolved Beryllium (Be)	mg/L	<0.000010	8660602	<0.000010	8660602	<0.000010	0.000010	8660602
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8660602	<0.0000050	8660602	<0.0000050	0.0000050	8660602
Dissolved Boron (B)	mg/L	<0.010	8660602	<0.010	8660602	<0.010	0.010	8660602
Dissolved Cadmium (Cd)	mg/L	0.000232	8660602	0.0000110	8660602	0.0000410	0.0000050	8660602
Dissolved Chromium (Cr)	mg/L	<0.00010	8660602	<0.00010	8660602	<0.00010	0.00010	8660602
Dissolved Cobalt (Co)	mg/L	0.0000150	8660602	0.0000130	8660602	0.0000410	0.0000050	8660602
Dissolved Copper (Cu)	mg/L	0.00200	8660602	0.000475	8660602	0.000906	0.000050	8660602
Dissolved Iron (Fe)	mg/L	0.0062	8660602	0.0258	8660602	0.119	0.0010	8660602
Dissolved Lead (Pb)	mg/L	0.0000490	8660602	0.0000060	8660602	0.0000320	0.0000050	8660602
Dissolved Lithium (Li)	mg/L	0.00063	8660602	<0.00050	8660602	0.00124	0.00050	8660602
Dissolved Manganese (Mn)	mg/L	0.000640	8660602	0.000965	8660602	0.0177	0.000050	8660602
Dissolved Molybdenum (Mo)	mg/L	0.000495	8660602	0.000305	8660602	0.000450	0.000050	8660602
Dissolved Nickel (Ni)	mg/L	0.000555	8660602	0.000376	8660602	0.000420	0.000020	8660602
Dissolved Phosphorus (P)	mg/L	0.0054	8660602	0.0034	8660602	0.0088	0.0020	8660602
Dissolved Selenium (Se)	mg/L	0.000539	8660602	0.000488	8660602	0.000687	0.000040	8660602
Dissolved Silicon (Si)	mg/L	1.57	8660602	1.90	8660602	2.09	0.050	8660602
Dissolved Silver (Ag)	mg/L	<0.0000050	8660602	<0.0000050	8660602	<0.0000050	0.0000050	8660602
Dissolved Strontium (Sr)	mg/L	0.0618	8660602	0.0941	8660602	0.121	0.000050	8660602
Dissolved Thallium (Tl)	mg/L	0.0000060	8660602	<0.0000020	8660602	0.0000020	0.0000020	8660602
Dissolved Tin (Sn)	mg/L	<0.00020	8660602	<0.00020	8660602	<0.00020	0.00020	8660602
Dissolved Titanium (Ti)	mg/L	<0.00050	8660602	<0.00050	8660602	<0.00050	0.00050	8660602
Dissolved Uranium (U)	mg/L	0.000997	8660602	0.000434	8660602	0.000733	0.0000020	8660602
Dissolved Vanadium (V)	mg/L	<0.00020	8660602	<0.00020	8660602	<0.00020	0.00020	8660602
Dissolved Zinc (Zn)	mg/L	0.0390	8660602	0.00037	8660602	0.0102	0.00010	8660602

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RG4869		RG4899		RG4900		
Sampling Date		2017/06/07 13:20		2017/06/07 11:15		2017/06/07 09:25		
COC Number		08439311		08439311		08439311		
	UNITS	**KZ-2**	**QC Batch**	**KZ-6**	**QC Batch**	**KZ-9**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	<0.00010	8660602	<0.00010	8660602	<0.00010	0.00010	8660602
Dissolved Calcium (Ca)	mg/L	20.5	8659491	31.9	8659491	37.2	0.050	8659491
Dissolved Magnesium (Mg)	mg/L	2.07	8659491	3.99	8659491	4.74	0.050	8659491
Dissolved Potassium (K)	mg/L	1.19	8659491	0.792	8659491	1.22	0.050	8659491
Dissolved Sodium (Na)	mg/L	0.408	8659491	0.435	8659491	0.737	0.050	8659491
Dissolved Sulphur (S)	mg/L	8.4	8659491	4.9	8659491	8.2	3.0	8659491
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RG4901	RG4902	RG4903		RG4904		
Sampling Date		2017/06/06 15:55	2017/06/06 12:12	2017/06/06 13:25		2017/06/06 14:35		
COC Number		08439311	08439311	08439311		08439311		
	UNITS	KZ-13	KZ-15	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	52.8	102	83.8	8659139	173	0.50	8659139
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8661479	<0.0000020	0.0000020	8661479
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0180	0.00661	0.00538	8660602	0.00234	0.00050	8665539
Dissolved Antimony (Sb)	mg/L	0.000030	0.000037	0.000024	8660602	0.000032	0.000020	8660602
Dissolved Arsenic (As)	mg/L	0.000202	0.000347	0.000233	8660602	0.000209	0.000020	8660602
Dissolved Barium (Ba)	mg/L	0.0772	0.0465	0.0395	8660602	0.0660	0.000020	8660602
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8660602	<0.000010	0.000010	8660602
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8660602	<0.0000050	0.0000050	8660602
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8660602	<0.010	0.010	8660602
Dissolved Cadmium (Cd)	mg/L	0.0000130	0.0000190	0.0000130	8660602	0.0000220	0.0000050	8660602
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8660602	<0.00010	0.00010	8660602
Dissolved Cobalt (Co)	mg/L	0.0000190	0.0000250	0.0000180	8660602	0.0000110	0.0000050	8660602
Dissolved Copper (Cu)	mg/L	0.000694	0.000773	0.000776	8660602	0.000584	0.000050	8660602
Dissolved Iron (Fe)	mg/L	0.0541	0.0411	0.0114	8660602	0.0032	0.0010	8660602
Dissolved Lead (Pb)	mg/L	0.0000220	0.0000140	<0.0000050	8660602	0.0000080	0.0000050	8660602
Dissolved Lithium (Li)	mg/L	0.00110	0.00136	0.00093	8660602	0.00248	0.00050	8660602
Dissolved Manganese (Mn)	mg/L	0.00754	0.0101	0.00217	8660602	0.00117	0.000050	8660602
Dissolved Molybdenum (Mo)	mg/L	0.000502	0.000592	0.000303	8660602	0.000753	0.000050	8660602
Dissolved Nickel (Ni)	mg/L	0.000533	0.000560	0.000441	8660602	0.000541	0.000020	8660602
Dissolved Phosphorus (P)	mg/L	0.0058	0.0034	0.0039	8660602	0.0035	0.0020	8660602
Dissolved Selenium (Se)	mg/L	0.000136	0.000500	0.000340	8660602	0.000759	0.000040	8660602
Dissolved Silicon (Si)	mg/L	2.29	1.97	1.72	8660602	2.99	0.050	8660602
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8660602	<0.0000050	0.0000050	8660602
Dissolved Strontium (Sr)	mg/L	0.0544	0.107	0.0907	8660602	0.168	0.000050	8660602
Dissolved Thallium (Tl)	mg/L	0.0000020	<0.0000020	<0.0000020	8660602	<0.0000020	0.0000020	8660602
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8660602	<0.00020	0.00020	8660602
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8660602	<0.00050	0.00050	8660602
Dissolved Uranium (U)	mg/L	0.000401	0.00106	0.000483	8660602	0.00177	0.0000020	8660602
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8660602	<0.00020	0.00020	8660602
Dissolved Zinc (Zn)	mg/L	0.00206	0.00273	0.00062	8660602	0.00197	0.00010	8660602

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RG4901	RG4902	RG4903		RG4904		
Sampling Date		2017/06/06 15:55	2017/06/06 12:12	2017/06/06 13:25		2017/06/06 14:35		
COC Number		08439311	08439311	08439311		08439311		
	UNITS	KZ-13	KZ-15	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8660602	<0.00010	0.00010	8660602
Dissolved Calcium (Ca)	mg/L	17.7	31.6	26.4	8659491	51.6	0.050	8659491
Dissolved Magnesium (Mg)	mg/L	2.08	5.57	4.35	8659491	10.8	0.050	8659491
Dissolved Potassium (K)	mg/L	1.58	1.08	1.06	8659491	1.15	0.050	8659491
Dissolved Sodium (Na)	mg/L	0.725	0.659	0.610	8659491	1.08	0.050	8659491
Dissolved Sulphur (S)	mg/L	<3.0	6.0	4.6	8659491	7.7	3.0	8659491
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RG4905	RG4906	RG4907		RG4908		
Sampling Date		2017/06/07 10:15	2017/06/07 09:50	2017/06/06 10:38		2017/06/06 09:20		
COC Number		08439311	08439311	08439310		08439310		
	UNITS	KZ-18	KZ-19	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	171	<0.50	152	8659139	140	0.50	8659139
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8661479	<0.0000020	0.0000020	8661479
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0130	<0.00050	0.00599	8660602	0.00567	0.00050	8660602
Dissolved Antimony (Sb)	mg/L	0.000034	<0.000020	0.000109	8660602	0.000079	0.000020	8660602
Dissolved Arsenic (As)	mg/L	0.000688	<0.000020	0.00170	8660602	0.000997	0.000020	8660602
Dissolved Barium (Ba)	mg/L	0.0460	<0.000020	0.0444	8660602	0.0498	0.000020	8660602
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8660602	<0.000010	0.000010	8660602
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8660602	<0.0000050	0.0000050	8660602
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8660602	<0.010	0.010	8660602
Dissolved Cadmium (Cd)	mg/L	0.0000330	<0.0000050	0.0000060	8660602	0.0000120	0.0000050	8660602
Dissolved Chromium (Cr)	mg/L	0.00011	<0.00010	<0.00010	8660602	<0.00010	0.00010	8660602
Dissolved Cobalt (Co)	mg/L	0.0000340	<0.0000050	0.0000660	8660602	0.0000410	0.0000050	8660602
Dissolved Copper (Cu)	mg/L	0.000332	<0.000050	0.000627	8660602	0.000756	0.000050	8660602
Dissolved Iron (Fe)	mg/L	0.0256	<0.0010	0.244	8660602	0.130	0.0010	8660602
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000090	8660602	0.0000280	0.0000050	8665539
Dissolved Lithium (Li)	mg/L	0.00167	<0.00050	0.00264	8660602	0.00218	0.00050	8660602
Dissolved Manganese (Mn)	mg/L	0.0116	0.000053	0.0260	8660602	0.0143	0.000050	8660602
Dissolved Molybdenum (Mo)	mg/L	0.00134	<0.000050	0.00158	8660602	0.000994	0.000050	8660602
Dissolved Nickel (Ni)	mg/L	0.000697	<0.000020	0.00259	8660602	0.00148	0.000020	8660602
Dissolved Phosphorus (P)	mg/L	0.0399	<0.0020	0.0102	8660602	0.0085	0.0020	8660602
Dissolved Selenium (Se)	mg/L	0.00101	<0.000040	0.000414	8660602	0.000472	0.000040	8660602
Dissolved Silicon (Si)	mg/L	2.87	<0.050	2.52	8660602	2.35	0.050	8660602
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8660602	<0.0000050	0.0000050	8660602
Dissolved Strontium (Sr)	mg/L	0.151	<0.000050	0.121	8660602	0.118	0.000050	8660602
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8660602	<0.0000020	0.0000020	8660602
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8660602	<0.00020	0.00020	8660602
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8660602	<0.00050	0.00050	8660602
Dissolved Uranium (U)	mg/L	0.00221	<0.0000020	0.00181	8660602	0.00150	0.0000020	8660602
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8660602	<0.00020	0.00020	8660602

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RG4905	RG4906	RG4907		RG4908		
Sampling Date		2017/06/07 10:15	2017/06/07 09:50	2017/06/06 10:38		2017/06/06 09:20		
COC Number		08439311	08439311	08439310		08439310		
	UNITS	KZ-18	KZ-19	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00136	0.00075 (1)	0.00057	8660602	0.00213	0.00010	8665539
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8660602	<0.00010	0.00010	8660602
Dissolved Calcium (Ca)	mg/L	43.0	<0.050	37.1	8659491	38.2	0.050	8659491
Dissolved Magnesium (Mg)	mg/L	15.5	<0.050	14.4	8659491	10.8	0.050	8659491
Dissolved Potassium (K)	mg/L	0.740	<0.050	1.40	8659491	1.24	0.050	8659491
Dissolved Sodium (Na)	mg/L	0.836	<0.050	1.06	8659491	0.927	0.050	8659491
Dissolved Sulphur (S)	mg/L	5.8	<3.0	8.2	8659491	7.5	3.0	8659491

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RG4909	RG4910	RG4911	RG4912		
Sampling Date		2017/06/05 12:35	2017/06/06 16:30	2017/06/07 08:30	2017/06/10 15:29		
COC Number		08439310	08439310	08439310	08439310		
	UNITS	KZ-26	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	138	53.5	121	<0.50	0.50	8659139
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8661479
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00664	0.0201	0.00816	<0.00050	0.00050	8660602
Dissolved Antimony (Sb)	mg/L	0.000088	0.000032	0.000067	<0.000020	0.000020	8660602
Dissolved Arsenic (As)	mg/L	0.000749	0.000216	0.000258	<0.000020	0.000020	8660602
Dissolved Barium (Ba)	mg/L	0.0487	0.0787	0.0575	<0.000020	0.000020	8660602
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8660602
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8660602
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8660602
Dissolved Cadmium (Cd)	mg/L	0.0000110	0.0000150	0.0000420	<0.0000050	0.0000050	8660602
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8660602
Dissolved Cobalt (Co)	mg/L	0.0000320	0.0000210	0.0000460	<0.0000050	0.0000050	8660602
Dissolved Copper (Cu)	mg/L	0.000860	0.000704	0.000869	<0.000050	0.000050	8660602
Dissolved Iron (Fe)	mg/L	0.0761	0.0547	0.127	<0.0010	0.0010	8660602
Dissolved Lead (Pb)	mg/L	0.0000230	0.0000300	0.0000390	<0.0000050	0.0000050	8660602
Dissolved Lithium (Li)	mg/L	0.00311	0.00121	0.00150	<0.00050	0.00050	8660602
Dissolved Manganese (Mn)	mg/L	0.00508	0.00752	0.0203	<0.000050	0.000050	8660602
Dissolved Molybdenum (Mo)	mg/L	0.00101	0.000519	0.000535	<0.000050	0.000050	8660602
Dissolved Nickel (Ni)	mg/L	0.00138	0.000558	0.000464	<0.000020	0.000020	8660602
Dissolved Phosphorus (P)	mg/L	0.0063	0.0057	0.0054	<0.0020	0.0020	8660602
Dissolved Selenium (Se)	mg/L	0.000403	0.000138	0.000717	<0.000040	0.000040	8660602
Dissolved Silicon (Si)	mg/L	2.61	2.40	2.10	<0.050	0.050	8660602
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8660602
Dissolved Strontium (Sr)	mg/L	0.123	0.0535	0.123	<0.000050	0.000050	8660602
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000020	0.0000020	<0.0000020	0.0000020	8660602
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8660602
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8660602
Dissolved Uranium (U)	mg/L	0.00151	0.000409	0.000874	<0.0000020	0.0000020	8660602
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8660602
Dissolved Zinc (Zn)	mg/L	0.00064	0.00214	0.0103	<0.00010	0.00010	8660602

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RG4909	RG4910	RG4911	RG4912		
Sampling Date		2017/06/05 12:35	2017/06/06 16:30	2017/06/07 08:30	2017/06/10 15:29		
COC Number		08439310	08439310	08439310	08439310		
	UNITS	KZ-26	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8660602
Dissolved Calcium (Ca)	mg/L	36.7	18.0	38.7	<0.050	0.050	8659491
Dissolved Magnesium (Mg)	mg/L	11.3	2.10	5.78	<0.050	0.050	8659491
Dissolved Potassium (K)	mg/L	1.19	1.57	1.21	<0.050	0.050	8659491
Dissolved Sodium (Na)	mg/L	1.02	0.738	0.760	<0.050	0.050	8659491
Dissolved Sulphur (S)	mg/L	7.4	<3.0	8.2	<3.0	3.0	8659491

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RG4869	RG4899	RG4900	RG4901	RG4902		
Sampling Date		2017/06/07 13:20	2017/06/07 11:15	2017/06/07 09:25	2017/06/06 15:55	2017/06/06 12:12		
COC Number		08439311	08439311	08439311	08439311	08439311		
	UNITS	**KZ-2**	**KZ-6**	**KZ-9**	**KZ-13**	**KZ-15**	**RDL**	**QC Batch**
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	58.6	96.7	114	53.7	106	0.50	8659205
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000061	0.0000020	8660615
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0211	0.0173	0.0941	0.0587	0.0165	0.00050	8661458
Total Antimony (Sb)	mg/L	0.000037	<0.000020	0.000071	0.000031	0.000041	0.000020	8661458
Total Arsenic (As)	mg/L	0.000098	0.000105	0.000347	0.000232	0.000431	0.000020	8661458
Total Barium (Ba)	mg/L	0.0365	0.0283	0.0548	0.0775	0.0466	0.000020	8661458
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8661458
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8661458
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8661458
Total Cadmium (Cd)	mg/L	0.000240	0.0000160	0.0000600	0.0000260	0.0000270	0.0000050	8661458
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00025	0.00015	<0.00010	0.00010	8661458
Total Cobalt (Co)	mg/L	0.0000200	0.0000210	0.000126	0.0000530	0.0000440	0.0000050	8661458
Total Copper (Cu)	mg/L	0.00189	0.000533	0.00122	0.000840	0.000876	0.000050	8661458
Total Iron (Fe)	mg/L	0.0174	0.0519	0.366	0.145	0.0949	0.0010	8661458
Total Lead (Pb)	mg/L	0.0000940	0.0000220	0.000264	0.0000730	0.0000480	0.0000050	8661458
Total Lithium (Li)	mg/L	0.00072	<0.00050	0.00147	0.00131	0.00141	0.00050	8661458
Total Manganese (Mn)	mg/L	0.000909	0.00401	0.0221	0.0174	0.0176	0.000050	8661458
Total Molybdenum (Mo)	mg/L	0.000515	0.000337	0.000492	0.000521	0.000622	0.000050	8661458
Total Nickel (Ni)	mg/L	0.000550	0.000390	0.000682	0.000622	0.000606	0.000020	8661458
Total Phosphorus (P)	mg/L	0.0034	0.0074	0.0143	0.0090	0.0058	0.0020	8661458
Total Selenium (Se)	mg/L	0.000520	0.000483	0.000680	0.000153	0.000523	0.000040	8661458
Total Silicon (Si)	mg/L	1.62	2.02	2.37	2.63	2.17	0.050	8661458
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	0.0000070	<0.0000050	<0.0000050	0.0000050	8661458
Total Strontium (Sr)	mg/L	0.0573	0.0903	0.121	0.0534	0.107	0.000050	8661458
Total Thallium (Tl)	mg/L	0.0000070	<0.0000020	0.0000030	0.0000030	0.0000020	0.0000020	8661458
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8661458
Total Titanium (Ti)	mg/L	0.00077	<0.00050	0.00639	0.00311	0.00078	0.00050	8661458
Total Uranium (U)	mg/L	0.00106	0.000467	0.000760	0.000433	0.00112	0.0000020	8661458
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00037	0.00028	<0.00020	0.00020	8661458
Total Zinc (Zn)	mg/L	0.0402	0.00116	0.0146	0.00361	0.00364	0.00010	8661458

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RG4869	RG4899	RG4900	RG4901	RG4902		
Sampling Date		2017/06/07 13:20	2017/06/07 11:15	2017/06/07 09:25	2017/06/06 15:55	2017/06/06 12:12		
COC Number		08439311	08439311	08439311	08439311	08439311		
	UNITS	**KZ-2**	**KZ-6**	**KZ-9**	**KZ-13**	**KZ-15**	**RDL**	**QC Batch**
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8661458
Total Calcium (Ca)	mg/L	20.1	31.8	37.2	18.1	33.0	0.050	8659492
Total Magnesium (Mg)	mg/L	2.02	4.20	5.02	2.07	5.79	0.050	8659492
Total Potassium (K)	mg/L	1.14	0.790	1.20	1.51	1.08	0.050	8659492
Total Sodium (Na)	mg/L	0.406	0.464	0.725	0.710	0.703	0.050	8659492
Total Sulphur (S)	mg/L	8.5	4.9	8.7	<3.0	6.2	3.0	8659492

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RG4903	RG4904	RG4905	RG4906	RG4907		
Sampling Date		2017/06/06 13:25	2017/06/06 14:35	2017/06/07 10:15	2017/06/07 09:50	2017/06/06 10:38		
COC Number		08439311	08439311	08439311	08439311	08439310		
	UNITS	KZ-16	KZ-17	KZ-18	KZ-19	KZ-21	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	90.4	180	174	<0.50	158	0.50	8659205
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8660615
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00784	0.00224	0.0237	<0.00050	0.0171	0.00050	8661458
Total Antimony (Sb)	mg/L	0.000024	0.000034	0.000039	<0.000020	0.000118	0.000020	8661458
Total Arsenic (As)	mg/L	0.000232	0.000210	0.000718	<0.000020	0.00224	0.000020	8661458
Total Barium (Ba)	mg/L	0.0402	0.0619	0.0450	<0.000020	0.0443	0.000020	8661458
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8661458
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8661458
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8661458
Total Cadmium (Cd)	mg/L	0.0000140	0.0000230	0.0000360	<0.0000050	0.0000130	0.0000050	8661458
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00011	<0.00010	0.00013	0.00010	8661458
Total Cobalt (Co)	mg/L	0.0000240	0.0000090	0.0000480	<0.0000050	0.0000870	0.0000050	8661458
Total Copper (Cu)	mg/L	0.000940	0.000632	0.000386	<0.000050	0.000703	0.000050	8661458
Total Iron (Fe)	mg/L	0.0227	0.0020	0.0441	<0.0010	0.385	0.0010	8661458
Total Lead (Pb)	mg/L	0.0000130	<0.0000050	0.0000300	0.0000060	0.0000300	0.0000050	8661458
Total Lithium (Li)	mg/L	0.00103	0.00253	0.00174	<0.00050	0.00280	0.00050	8661458
Total Manganese (Mn)	mg/L	0.00331	0.00140	0.0113	<0.000050	0.0355	0.000050	8661458
Total Molybdenum (Mo)	mg/L	0.000322	0.000712	0.00138	<0.000050	0.00163	0.000050	8661458
Total Nickel (Ni)	mg/L	0.000497	0.000534	0.000651	<0.000020	0.00274	0.000020	8661458
Total Phosphorus (P)	mg/L	0.0047	0.0054	0.0386	0.0021	0.0175	0.0020	8661458
Total Selenium (Se)	mg/L	0.000340	0.000770	0.000984	<0.000040	0.000410	0.000040	8661458
Total Silicon (Si)	mg/L	1.82	2.97	2.88	<0.050	2.91	0.050	8661458
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8661458
Total Strontium (Sr)	mg/L	0.0876	0.188	0.149	<0.000050	0.121	0.000050	8661458
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8661458
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8661458
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00084	<0.00050	0.00060	0.00050	8661458
Total Uranium (U)	mg/L	0.000509	0.00184	0.00231	<0.0000020	0.00188	0.0000020	8661458
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8661458
Total Zinc (Zn)	mg/L	0.00060	0.00201	0.00172	0.00030	0.00167	0.00010	8661458

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RG4903	RG4904	RG4905	RG4906	RG4907		
Sampling Date		2017/06/06 13:25	2017/06/06 14:35	2017/06/07 10:15	2017/06/07 09:50	2017/06/06 10:38		
COC Number		08439311	08439311	08439311	08439311	08439310		
	UNITS	KZ-16	KZ-17	KZ-18	KZ-19	KZ-21	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8661458
Total Calcium (Ca)	mg/L	28.8	51.6	44.9	<0.050	39.3	0.050	8659492
Total Magnesium (Mg)	mg/L	4.51	12.4	15.0	<0.050	14.4	0.050	8659492
Total Potassium (K)	mg/L	1.06	1.23	0.684	<0.050	1.37	0.050	8659492
Total Sodium (Na)	mg/L	0.617	1.20	0.812	<0.050	1.09	0.050	8659492
Total Sulphur (S)	mg/L	4.9	9.4	5.5	<3.0	8.7	3.0	8659492

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RG4908	RG4910	RG4911	RG4912		
Sampling Date		2017/06/06 09:20	2017/06/06 16:30	2017/06/07 08:30	2017/06/10 15:29		
COC Number		08439310	08439310	08439310	08439310		
	UNITS	KZ-22	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	141	54.4	118	<0.50	0.50	8659205
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8660615
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.0149	0.0510	0.0712	<0.00050	0.00050	8661458
Total Antimony (Sb)	mg/L	0.000076	0.000030	0.000072	<0.000020	0.000020	8661458
Total Arsenic (As)	mg/L	0.00117	0.000239	0.000358	<0.000020	0.000020	8661458
Total Barium (Ba)	mg/L	0.0472	0.0779	0.0574	<0.000020	0.000020	8661458
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8661458
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8661458
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8661458
Total Cadmium (Cd)	mg/L	0.0000170	0.0000240	0.0000620	<0.0000050	0.0000050	8661458
Total Chromium (Cr)	mg/L	<0.00010	0.00013	0.00016	<0.00010	0.00010	8661458
Total Cobalt (Co)	mg/L	0.0000590	0.0000470	0.000124	<0.0000050	0.0000050	8661458
Total Copper (Cu)	mg/L	0.000860	0.000788	0.00114	<0.000050	0.000050	8661458
Total Iron (Fe)	mg/L	0.201	0.132	0.316	<0.0010	0.0010	8661458
Total Lead (Pb)	mg/L	0.0000370	0.0000760	0.000271	<0.0000050	0.0000050	8661458
Total Lithium (Li)	mg/L	0.00235	0.00127	0.00157	<0.00050	0.00050	8661458
Total Manganese (Mn)	mg/L	0.0205	0.0206	0.0235	<0.000050	0.000050	8661458
Total Molybdenum (Mo)	mg/L	0.00103	0.000526	0.000530	<0.000050	0.000050	8661458
Total Nickel (Ni)	mg/L	0.00159	0.000635	0.000672	<0.000020	0.000020	8661458
Total Phosphorus (P)	mg/L	0.0125	0.0105	0.0100	<0.0020	0.0020	8661458
Total Selenium (Se)	mg/L	0.000491	0.000141	0.000761	<0.000040	0.000040	8661458
Total Silicon (Si)	mg/L	2.61	2.54	2.29	<0.050	0.050	8661458
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8661458
Total Strontium (Sr)	mg/L	0.117	0.0533	0.123	<0.000050	0.000050	8661458
Total Thallium (Tl)	mg/L	<0.0000020	0.0000030	0.0000030	<0.0000020	0.0000020	8661458
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8661458
Total Titanium (Ti)	mg/L	0.00077	0.00255	0.00510	<0.00050	0.00050	8661458
Total Uranium (U)	mg/L	0.00155	0.000446	0.000872	<0.0000020	0.0000020	8661458
Total Vanadium (V)	mg/L	<0.00020	0.00025	0.00027	<0.00020	0.00020	8661458
Total Zinc (Zn)	mg/L	0.00251	0.00323	0.0140	<0.00010	0.00010	8661458

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RG4908	RG4910	RG4911	RG4912		
Sampling Date		2017/06/06 09:20	2017/06/06 16:30	2017/06/07 08:30	2017/06/10 15:29		
COC Number		08439310	08439310	08439310	08439310		
	UNITS	KZ-22	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8661458
Total Calcium (Ca)	mg/L	38.5	18.3	38.4	<0.050	0.050	8659492
Total Magnesium (Mg)	mg/L	10.9	2.09	5.44	<0.050	0.050	8659492
Total Potassium (K)	mg/L	1.24	1.53	1.14	<0.050	0.050	8659492
Total Sodium (Na)	mg/L	1.01	0.746	0.727	<0.050	0.050	8659492
Total Sulphur (S)	mg/L	7.7	<3.0	8.1	<3.0	3.0	8659492
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RG4909		
Sampling Date		2017/06/05 12:35		
COC Number		08439310		
	UNITS	KZ-26	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	141	0.50	8659205
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8660615
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.175	0.0030	8660611
Total Antimony (Sb)	mg/L	0.000107	0.000020	8660611
Total Arsenic (As)	mg/L	0.00125	0.000020	8660611
Total Barium (Ba)	mg/L	0.0499	0.000050	8660611
Total Beryllium (Be)	mg/L	0.000014	0.000010	8660611
Total Bismuth (Bi)	mg/L	<0.000010	0.000010	8660611
Total Boron (B)	mg/L	<0.010	0.010	8660611
Total Cadmium (Cd)	mg/L	0.0000430	0.0000050	8660611
Total Chromium (Cr)	mg/L	0.00046	0.00010	8660611
Total Cobalt (Co)	mg/L	0.000211	0.000010	8660611
Total Copper (Cu)	mg/L	0.00153	0.00010	8660611
Total Iron (Fe)	mg/L	0.533	0.0050	8660611
Total Lead (Pb)	mg/L	0.000278	0.000020	8660611
Total Lithium (Li)	mg/L	0.00322	0.00050	8660611
Total Manganese (Mn)	mg/L	0.0261	0.00010	8660611
Total Molybdenum (Mo)	mg/L	0.000950	0.000050	8660611
Total Nickel (Ni)	mg/L	0.00206	0.00010	8660611
Total Phosphorus (P)	mg/L	0.0227	0.0050	8660611
Total Selenium (Se)	mg/L	0.000436	0.000040	8660611
Total Silicon (Si)	mg/L	3.11	0.050	8660611
Total Silver (Ag)	mg/L	<0.000010	0.000010	8660611
Total Strontium (Sr)	mg/L	0.114	0.000050	8660611
Total Thallium (Tl)	mg/L	0.0000030	0.0000020	8660611
Total Tin (Sn)	mg/L	<0.00020	0.00020	8660611
Total Titanium (Ti)	mg/L	0.0044	0.0020	8660611
Total Uranium (U)	mg/L	0.00146	0.0000050	8660611
Total Vanadium (V)	mg/L	0.00055	0.00020	8660611
Total Zinc (Zn)	mg/L	0.0036	0.0010	8660611
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RG4909		
Sampling Date		2017/06/05 12:35		
COC Number		08439310		
	UNITS	**KZ-26**	**RDL**	**QC Batch**
Total Zirconium (Zr)	mg/L	0.00012	0.00010	8660611
Total Calcium (Ca)	mg/L	37.4	0.25	8659492
Total Magnesium (Mg)	mg/L	11.6	0.25	8659492
Total Potassium (K)	mg/L	1.14	0.25	8659492
Total Sodium (Na)	mg/L	1.03	0.25	8659492
Total Sulphur (S)	mg/L	7.4	3.0	8659492
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: RG4869
Sample ID: KZ-2
Matrix: Water

Collected: 2017/06/07
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8660634	N/A	2017/06/12	Name Redacted
Alkalinity - Water	AT/ALK	8662487	2017/06/13	2017/06/14	
Chloride by Automated Colourimetry	KONE/COL	8661602	N/A	2017/06/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8662182	N/A	2017/06/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8662407	N/A	2017/06/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8661128	N/A	2017/06/12	
Conductance - water	AT/ALK	8662494	N/A	2017/06/14	
Fluoride	ISE/ISE	8663801	N/A	2017/06/14	
Hardness Total (calculated as CaCO3)	CALC	8659205	N/A	2017/06/14	
Hardness (calculated as CaCO3)	CALC	8659139	N/A	2017/06/14	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8661479	N/A	2017/06/13	
Mercury (Total-LowLevel) by CVAF	CV/AF	8660615	2017/06/12	2017/06/12	
Ion Balance (as Cations/Anions Ratio)	CALC	8659488	N/A	2017/06/14	
Ion Balance	CALC	8659489	N/A	2017/06/14	
Sum of cations, anions	CALC	8659490	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8659491	N/A	2017/06/14	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8660602	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8659492	N/A	2017/06/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8661458	N/A	2017/06/14	
Ammonia-N (Preserved)	KONE/COL	8661444	N/A	2017/06/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8659546	N/A	2017/06/10	
Nitrite (N) (low level)	TRAA/COL	8659548	N/A	2017/06/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8659493	N/A	2017/06/14	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/10	
pH Water	AT/ALK	8662495	N/A	2017/06/14	
Sulphate by Automated Colourimetry	KONE/COL	8661603	N/A	2017/06/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8663203	2017/06/13	2017/06/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8663215	N/A	2017/06/13	
Total Suspended Solids-Low Level	BAL/BAL	8660319	2017/06/12	2017/06/13	

Maxxam ID: RG4899
Sample ID: KZ-6
Matrix: Water

Collected: 2017/06/07
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8660634	N/A	2017/06/12	Name Redacted
Alkalinity - Water	AT/ALK	8662487	2017/06/13	2017/06/14	
Chloride by Automated Colourimetry	KONE/COL	8661598	N/A	2017/06/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8662182	N/A	2017/06/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8662407	N/A	2017/06/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8661129	N/A	2017/06/12	
Conductance - water	AT/ALK	8662494	N/A	2017/06/14	
Fluoride	ISE/ISE	8663801	N/A	2017/06/14	
Hardness Total (calculated as CaCO3)	CALC	8659205	N/A	2017/06/14	
Hardness (calculated as CaCO3)	CALC	8659139	N/A	2017/06/14	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: RG4899
Sample ID: KZ-6
Matrix: Water

Collected: 2017/06/07
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8663261	N/A	2017/06/14	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8660615	2017/06/12	2017/06/12	
Ion Balance (as Cations/Anions Ratio)	CALC	8659488	N/A	2017/06/14	
Ion Balance	CALC	8659489	N/A	2017/06/14	
Sum of cations, anions	CALC	8659490	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8659491	N/A	2017/06/14	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8660602	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8659492	N/A	2017/06/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8661458	N/A	2017/06/14	
Ammonia-N (Preserved)	KONE/COL	8661444	N/A	2017/06/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8659546	N/A	2017/06/10	
Nitrite (N) (low level)	TRAA/COL	8659548	N/A	2017/06/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8659493	N/A	2017/06/14	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/10	
pH Water	AT/ALK	8662495	N/A	2017/06/14	
Sulphate by Automated Colourimetry	KONE/COL	8661600	N/A	2017/06/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8663203	2017/06/13	2017/06/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8663215	N/A	2017/06/13	
Total Suspended Solids-Low Level	BAL/BAL	8660319	2017/06/12	2017/06/13	

Maxxam ID: RG4900
Sample ID: KZ-9
Matrix: Water

Collected: 2017/06/07
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8660634	N/A	2017/06/12	Name Redacted
Alkalinity - Water	AT/ALK	8662427	2017/06/13	2017/06/13	
Chloride by Automated Colourimetry	KONE/COL	8661598	N/A	2017/06/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8662182	N/A	2017/06/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8662407	N/A	2017/06/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8661130	N/A	2017/06/12	
Conductance - water	AT/ALK	8662426	N/A	2017/06/13	
Fluoride	ISE/ISE	8663801	N/A	2017/06/14	
Hardness Total (calculated as CaCO3)	CALC	8659205	N/A	2017/06/14	
Hardness (calculated as CaCO3)	CALC	8659139	N/A	2017/06/14	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8661479	N/A	2017/06/13	
Mercury (Total-LowLevel) by CVAF	CV/AF	8660615	2017/06/12	2017/06/12	
Ion Balance (as Cations/Anions Ratio)	CALC	8659488	N/A	2017/06/14	
Ion Balance	CALC	8659489	N/A	2017/06/14	
Sum of cations, anions	CALC	8659490	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8659491	N/A	2017/06/14	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8660602	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8659492	N/A	2017/06/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8661458	N/A	2017/06/14	
Ammonia-N (Preserved)	KONE/COL	8661444	N/A	2017/06/13	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: RG4900
Sample ID: KZ-9
Matrix: Water

Collected: 2017/06/07
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8659546	N/A	2017/06/10	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8659548	N/A	2017/06/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8659493	N/A	2017/06/14	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/10	
pH Water	AT/ALK	8662423	N/A	2017/06/13	
Sulphate by Automated Colourimetry	KONE/COL	8661600	N/A	2017/06/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8663203	2017/06/13	2017/06/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8663215	N/A	2017/06/13	
Total Suspended Solids-Low Level	BAL/BAL	8660319	2017/06/12	2017/06/13	

Maxxam ID: RG4901
Sample ID: KZ-13
Matrix: Water

Collected: 2017/06/06
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8660634	N/A	2017/06/12	Name Redacted
Alkalinity - Water	AT/ALK	8662427	2017/06/13	2017/06/13	
Chloride by Automated Colourimetry	KONE/COL	8661598	N/A	2017/06/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8662182	N/A	2017/06/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8662407	N/A	2017/06/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8661128	N/A	2017/06/12	
Conductance - water	AT/ALK	8662426	N/A	2017/06/13	
Fluoride	ISE/ISE	8663801	N/A	2017/06/14	
Hardness Total (calculated as CaCO3)	CALC	8659205	N/A	2017/06/14	
Hardness (calculated as CaCO3)	CALC	8659139	N/A	2017/06/14	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8661479	N/A	2017/06/13	
Mercury (Total-LowLevel) by CVAF	CV/AF	8660615	2017/06/12	2017/06/12	
Ion Balance (as Cations/Anions Ratio)	CALC	8659488	N/A	2017/06/14	
Ion Balance	CALC	8659489	N/A	2017/06/14	
Sum of cations, anions	CALC	8659490	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8659491	N/A	2017/06/14	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8660602	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8659492	N/A	2017/06/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8661458	N/A	2017/06/14	
Ammonia-N (Preserved)	KONE/COL	8661444	N/A	2017/06/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8659546	N/A	2017/06/10	
Nitrite (N) (low level)	TRAA/COL	8659548	N/A	2017/06/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8659493	N/A	2017/06/14	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/10	
pH Water	AT/ALK	8662423	N/A	2017/06/13	
Sulphate by Automated Colourimetry	KONE/COL	8661600	N/A	2017/06/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8663203	2017/06/13	2017/06/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8663215	N/A	2017/06/13	
Total Suspended Solids-Low Level	BAL/BAL	8660319	2017/06/12	2017/06/13	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: RG4901 Dup
Sample ID: KZ-13
Matrix: Water

Collected: 2017/06/06
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8661128	N/A	2017/06/12	Name Redacted

Maxxam ID: RG4902
Sample ID: KZ-15
Matrix: Water

Collected: 2017/06/06
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8660636	N/A	2017/06/12	Name Redacted
Alkalinity - Water	AT/ALK	8662444	2017/06/13	2017/06/13	
Chloride by Automated Colourimetry	KONE/COL	8661602	N/A	2017/06/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8662182	N/A	2017/06/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8662407	N/A	2017/06/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8661129	N/A	2017/06/12	
Conductance - water	AT/ALK	8662443	N/A	2017/06/13	
Fluoride	ISE/ISE	8663801	N/A	2017/06/14	
Hardness Total (calculated as CaCO3)	CALC	8659205	N/A	2017/06/14	
Hardness (calculated as CaCO3)	CALC	8659139	N/A	2017/06/14	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8661479	N/A	2017/06/13	
Mercury (Total-LowLevel) by CVAF	CV/AF	8660615	2017/06/12	2017/06/12	
Ion Balance (as Cations/Anions Ratio)	CALC	8659488	N/A	2017/06/14	
Ion Balance	CALC	8659489	N/A	2017/06/14	
Sum of cations, anions	CALC	8659490	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8659491	N/A	2017/06/14	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8660602	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8659492	N/A	2017/06/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8661458	N/A	2017/06/14	
Ammonia-N (Preserved)	KONE/COL	8661444	N/A	2017/06/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8659546	N/A	2017/06/10	
Nitrite (N) (low level)	TRAA/COL	8659548	N/A	2017/06/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8659493	N/A	2017/06/14	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/10	
pH Water	AT/ALK	8662434	N/A	2017/06/13	
Sulphate by Automated Colourimetry	KONE/COL	8661603	N/A	2017/06/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8663203	2017/06/13	2017/06/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8663215	N/A	2017/06/13	
Total Suspended Solids-Low Level	BAL/BAL	8660319	2017/06/12	2017/06/13	

Maxxam ID: RG4902 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2017/06/06
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8661602	N/A	2017/06/12	Name Redacted
Sulphate by Automated Colourimetry	KONE/COL	8661603	N/A	2017/06/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: RG4903
Sample ID: KZ-16
Matrix: Water

Collected: 2017/06/06
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8660636	N/A	2017/06/12	Name Redacted
Alkalinity - Water	AT/ALK	8662444	2017/06/13	2017/06/13	
Chloride by Automated Colourimetry	KONE/COL	8661602	N/A	2017/06/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8662182	N/A	2017/06/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8662407	N/A	2017/06/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8661129	N/A	2017/06/12	
Conductance - water	AT/ALK	8662443	N/A	2017/06/13	
Fluoride	ISE/ISE	8663801	N/A	2017/06/14	
Hardness Total (calculated as CaCO3)	CALC	8659205	N/A	2017/06/14	
Hardness (calculated as CaCO3)	CALC	8659139	N/A	2017/06/14	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8661479	N/A	2017/06/13	
Mercury (Total-LowLevel) by CVAF	CV/AF	8660615	2017/06/12	2017/06/12	
Ion Balance (as Cations/Anions Ratio)	CALC	8659488	N/A	2017/06/14	
Ion Balance	CALC	8659489	N/A	2017/06/14	
Sum of cations, anions	CALC	8659490	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8659491	N/A	2017/06/14	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8660602	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8659492	N/A	2017/06/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8661458	N/A	2017/06/14	
Ammonia-N (Preserved)	KONE/COL	8661444	N/A	2017/06/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8659546	N/A	2017/06/10	
Nitrite (N) (low level)	TRAA/COL	8659548	N/A	2017/06/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8659493	N/A	2017/06/14	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/10	
pH Water	AT/ALK	8662434	N/A	2017/06/13	
Sulphate by Automated Colourimetry	KONE/COL	8661603	N/A	2017/06/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8663209	2017/06/13	2017/06/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8663215	N/A	2017/06/13	
Total Suspended Solids-Low Level	BAL/BAL	8660319	2017/06/12	2017/06/13	

Maxxam ID: RG4904
Sample ID: KZ-17
Matrix: Water

Collected: 2017/06/06
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8660636	N/A	2017/06/12	Name Redacted
Alkalinity - Water	AT/ALK	8662444	2017/06/13	2017/06/13	
Chloride by Automated Colourimetry	KONE/COL	8661602	N/A	2017/06/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8662182	N/A	2017/06/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8662407	N/A	2017/06/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8661128	N/A	2017/06/12	
Conductance - water	AT/ALK	8662443	N/A	2017/06/13	
Fluoride	ISE/ISE	8663801	N/A	2017/06/14	
Hardness Total (calculated as CaCO3)	CALC	8659205	N/A	2017/06/14	
Hardness (calculated as CaCO3)	CALC	8659139	N/A	2017/06/14	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: RG4904
Sample ID: KZ-17
Matrix: Water

Collected: 2017/06/06
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8661479	N/A	2017/06/13	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8660615	2017/06/12	2017/06/12	
Ion Balance (as Cations/Anions Ratio)	CALC	8659488	N/A	2017/06/14	
Ion Balance	CALC	8659489	N/A	2017/06/14	
Sum of cations, anions	CALC	8659490	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8659491	N/A	2017/06/14	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8665539	N/A	2017/06/16	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8659492	N/A	2017/06/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8661458	N/A	2017/06/14	
Ammonia-N (Preserved)	KONE/COL	8661444	N/A	2017/06/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8659546	N/A	2017/06/10	
Nitrite (N) (low level)	TRAA/COL	8659548	N/A	2017/06/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8659493	N/A	2017/06/14	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/10	
pH Water	AT/ALK	8662434	N/A	2017/06/13	
Sulphate by Automated Colourimetry	KONE/COL	8661603	N/A	2017/06/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8663209	2017/06/13	2017/06/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8663215	N/A	2017/06/13	
Total Suspended Solids-Low Level	BAL/BAL	8660319	2017/06/12	2017/06/13	

Maxxam ID: RG4905
Sample ID: KZ-18
Matrix: Water

Collected: 2017/06/07
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8660636	N/A	2017/06/12	Name Redacted
Alkalinity - Water	AT/ALK	8662444	2017/06/13	2017/06/13	
Chloride by Automated Colourimetry	KONE/COL	8661602	N/A	2017/06/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8662182	N/A	2017/06/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8662407	N/A	2017/06/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8661128	N/A	2017/06/12	
Conductance - water	AT/ALK	8662443	N/A	2017/06/13	
Fluoride	ISE/ISE	8663801	N/A	2017/06/14	
Hardness Total (calculated as CaCO3)	CALC	8659205	N/A	2017/06/14	
Hardness (calculated as CaCO3)	CALC	8659139	N/A	2017/06/14	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8661479	N/A	2017/06/13	
Mercury (Total-LowLevel) by CVAF	CV/AF	8660615	2017/06/12	2017/06/12	
Ion Balance (as Cations/Anions Ratio)	CALC	8659488	N/A	2017/06/14	
Ion Balance	CALC	8659489	N/A	2017/06/14	
Sum of cations, anions	CALC	8659490	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8659491	N/A	2017/06/14	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8660602	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8659492	N/A	2017/06/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8661458	N/A	2017/06/14	
Ammonia-N (Preserved)	KONE/COL	8661444	N/A	2017/06/13	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: RG4905
Sample ID: KZ-18
Matrix: Water

Collected: 2017/06/07
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8659546	N/A	2017/06/10	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8659548	N/A	2017/06/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8659493	N/A	2017/06/14	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/10	
pH Water	AT/ALK	8662434	N/A	2017/06/13	
Sulphate by Automated Colourimetry	KONE/COL	8661603	N/A	2017/06/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8663203	2017/06/13	2017/06/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8663215	N/A	2017/06/13	
Total Suspended Solids-Low Level	BAL/BAL	8660319	2017/06/12	2017/06/13	

Maxxam ID: RG4905 Dup
Sample ID: KZ-18
Matrix: Water

Collected: 2017/06/07
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8660636	N/A	2017/06/12	Name Redacted
Fluoride	ISE/ISE	8663801	N/A	2017/06/14	

Maxxam ID: RG4906
Sample ID: KZ-19
Matrix: Water

Collected: 2017/06/07
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8660636	N/A	2017/06/12	Name Redacted
Alkalinity - Water	AT/ALK	8662444	2017/06/13	2017/06/13	
Chloride by Automated Colourimetry	KONE/COL	8661602	N/A	2017/06/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8662182	N/A	2017/06/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8662407	N/A	2017/06/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8661128	N/A	2017/06/12	
Conductance - water	AT/ALK	8662443	N/A	2017/06/13	
Fluoride	ISE/ISE	8663801	N/A	2017/06/14	
Hardness Total (calculated as CaCO3)	CALC	8659205	N/A	2017/06/14	
Hardness (calculated as CaCO3)	CALC	8659139	N/A	2017/06/14	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8661479	N/A	2017/06/13	
Mercury (Total-LowLevel) by CVAF	CV/AF	8660615	2017/06/12	2017/06/12	
Ion Balance (as Cations/Anions Ratio)	CALC	8659488	N/A	2017/06/14	
Ion Balance	CALC	8659489	N/A	2017/06/14	
Sum of cations, anions	CALC	8659490	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8659491	N/A	2017/06/14	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8660602	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8659492	N/A	2017/06/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8661458	N/A	2017/06/14	
Ammonia-N (Preserved)	KONE/COL	8661444	N/A	2017/06/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8659546	N/A	2017/06/10	
Nitrite (N) (low level)	TRAA/COL	8659548	N/A	2017/06/10	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: RG4906
Sample ID: KZ-19
Matrix: Water

Collected: 2017/06/07
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8659493	N/A	2017/06/14	Name Redacted
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/10	
pH Water	AT/ALK	8662434	N/A	2017/06/13	
Sulphate by Automated Colourimetry	KONE/COL	8661603	N/A	2017/06/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8663209	2017/06/13	2017/06/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8663215	N/A	2017/06/13	
Total Suspended Solids-Low Level	BAL/BAL	8660319	2017/06/12	2017/06/13	

Maxxam ID: RG4906 Dup
Sample ID: KZ-19
Matrix: Water

Collected: 2017/06/07
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8659546	N/A	2017/06/10	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8659548	N/A	2017/06/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8663209	2017/06/13	2017/06/13	

Maxxam ID: RG4907
Sample ID: KZ-21
Matrix: Water

Collected: 2017/06/06
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8660634	N/A	2017/06/12	Name Redacted
Alkalinity - Water	AT/ALK	8662427	2017/06/13	2017/06/13	
Chloride by Automated Colourimetry	KONE/COL	8661598	N/A	2017/06/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8662182	N/A	2017/06/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8662407	N/A	2017/06/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8661128	N/A	2017/06/12	
Conductance - water	AT/ALK	8662426	N/A	2017/06/13	
Fluoride	ISE/ISE	8663801	N/A	2017/06/14	
Hardness Total (calculated as CaCO3)	CALC	8659205	N/A	2017/06/14	
Hardness (calculated as CaCO3)	CALC	8659139	N/A	2017/06/14	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8661479	N/A	2017/06/13	
Mercury (Total-LowLevel) by CVAF	CV/AF	8660615	2017/06/12	2017/06/12	
Ion Balance (as Cations/Anions Ratio)	CALC	8659488	N/A	2017/06/14	
Ion Balance	CALC	8659489	N/A	2017/06/14	
Sum of cations, anions	CALC	8659490	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8659491	N/A	2017/06/14	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8660602	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8659492	N/A	2017/06/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8661458	N/A	2017/06/14	
Ammonia-N (Preserved)	KONE/COL	8661444	N/A	2017/06/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8659546	N/A	2017/06/10	
Nitrite (N) (low level)	TRAA/COL	8659548	N/A	2017/06/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8659493	N/A	2017/06/14	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: RG4907
Sample ID: KZ-21
Matrix: Water

Collected: 2017/06/06
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/10	Name Redacted
pH Water	AT/ALK	8662423	N/A	2017/06/13	
Sulphate by Automated Colourimetry	KONE/COL	8661600	N/A	2017/06/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8663203	2017/06/13	2017/06/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8663215	N/A	2017/06/13	
Total Suspended Solids-Low Level	BAL/BAL	8660319	2017/06/12	2017/06/13	

Maxxam ID: RG4907 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2017/06/06
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8662427	2017/06/13	2017/06/13	Name Redacted
Conductance - water	AT/ALK	8662426	N/A	2017/06/13	
pH Water	AT/ALK	8662423	N/A	2017/06/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8663215	N/A	2017/06/13	

Maxxam ID: RG4908
Sample ID: KZ-22
Matrix: Water

Collected: 2017/06/06
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8660636	N/A	2017/06/12	Name Redacted
Alkalinity - Water	AT/ALK	8662444	2017/06/13	2017/06/13	
Chloride by Automated Colourimetry	KONE/COL	8661602	N/A	2017/06/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8662182	N/A	2017/06/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8662407	N/A	2017/06/13	
Carbon (DOC) - unfiltered/unpreserved	TRAA/COL	8659523	N/A	2017/06/12	
Conductance - water	AT/ALK	8662443	N/A	2017/06/13	
Fluoride	ISE/ISE	8663801	N/A	2017/06/14	
Hardness Total (calculated as CaCO3)	CALC	8659205	N/A	2017/06/14	
Hardness (calculated as CaCO3)	CALC	8659139	N/A	2017/06/14	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8661479	N/A	2017/06/13	
Mercury (Total-LowLevel) by CVAF	CV/AF	8660615	2017/06/12	2017/06/12	
Ion Balance (as Cations/Anions Ratio)	CALC	8659488	N/A	2017/06/14	
Ion Balance	CALC	8659489	N/A	2017/06/14	
Sum of cations, anions	CALC	8659490	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8659491	N/A	2017/06/14	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8660602	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8659492	N/A	2017/06/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8661458	N/A	2017/06/14	
Ammonia-N (Preserved)	KONE/COL	8661447	N/A	2017/06/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8659546	N/A	2017/06/10	
Nitrite (N) (low level)	TRAA/COL	8659548	N/A	2017/06/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8659493	N/A	2017/06/14	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: RG4908
Sample ID: KZ-22
Matrix: Water

Collected: 2017/06/06
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/10	Name Redacted
pH Water	AT/ALK	8662434	N/A	2017/06/13	
Sulphate by Automated Colourimetry	KONE/COL	8661603	N/A	2017/06/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8663203	2017/06/13	2017/06/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8663215	N/A	2017/06/13	
Total Suspended Solids-Low Level	BAL/BAL	8660319	2017/06/12	2017/06/13	

Maxxam ID: RG4909
Sample ID: KZ-26
Matrix: Water

Collected: 2017/06/05
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8660636	N/A	2017/06/12	Name Redacted
Alkalinity - Water	AT/ALK	8662444	2017/06/13	2017/06/13	
Chloride by Automated Colourimetry	KONE/COL	8661602	N/A	2017/06/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8662393	N/A	2017/06/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8662407	N/A	2017/06/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8661128	N/A	2017/06/12	
Conductance - water	AT/ALK	8662443	N/A	2017/06/13	
Fluoride	ISE/ISE	8663801	N/A	2017/06/14	
Hardness Total (calculated as CaCO3)	CALC	8659205	N/A	2017/06/15	
Hardness (calculated as CaCO3)	CALC	8659139	N/A	2017/06/14	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8661479	N/A	2017/06/13	
Mercury (Total-LowLevel) by CVAF	CV/AF	8660615	2017/06/12	2017/06/12	
Ion Balance (as Cations/Anions Ratio)	CALC	8659488	N/A	2017/06/14	
Ion Balance	CALC	8659489	N/A	2017/06/14	
Sum of cations, anions	CALC	8659490	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8659491	N/A	2017/06/14	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8660602	N/A	2017/06/14	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8660611	2017/06/12	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8659492	N/A	2017/06/15	
Ammonia-N (Preserved)	KONE/COL	8661447	N/A	2017/06/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8659546	N/A	2017/06/10	
Nitrite (N) (low level)	TRAA/COL	8659548	N/A	2017/06/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8659493	N/A	2017/06/14	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/10	
pH Water	AT/ALK	8662434	N/A	2017/06/13	
Sulphate by Automated Colourimetry	KONE/COL	8661603	N/A	2017/06/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8663209	2017/06/13	2017/06/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8663215	N/A	2017/06/13	
Total Suspended Solids-Low Level	BAL/BAL	8660319	2017/06/12	2017/06/13	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: RG4909 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2017/06/05
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8662444	2017/06/13	2017/06/13	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8662393	N/A	2017/06/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8662407	N/A	2017/06/13	
Conductance - water	AT/ALK	8662443	N/A	2017/06/13	
pH Water	AT/ALK	8662434	N/A	2017/06/13	

Maxxam ID: RG4910
Sample ID: KZ-28
Matrix: Water

Collected: 2017/06/06
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8660636	N/A	2017/06/12	Name Redacted
Alkalinity - Water	AT/ALK	8662444	2017/06/13	2017/06/13	
Chloride by Automated Colourimetry	KONE/COL	8661602	N/A	2017/06/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8662393	N/A	2017/06/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8662407	N/A	2017/06/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8661128	N/A	2017/06/12	
Conductance - water	AT/ALK	8662443	N/A	2017/06/13	
Fluoride	ISE/ISE	8663801	N/A	2017/06/14	
Hardness Total (calculated as CaCO3)	CALC	8659205	N/A	2017/06/14	
Hardness (calculated as CaCO3)	CALC	8659139	N/A	2017/06/14	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8661479	N/A	2017/06/13	
Mercury (Total-LowLevel) by CVAF	CV/AF	8660615	2017/06/12	2017/06/12	
Ion Balance (as Cations/Anions Ratio)	CALC	8659488	N/A	2017/06/14	
Ion Balance	CALC	8659489	N/A	2017/06/14	
Sum of cations, anions	CALC	8659490	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8659491	N/A	2017/06/14	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8660602	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8659492	N/A	2017/06/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8661458	N/A	2017/06/14	
Ammonia-N (Preserved)	KONE/COL	8661447	N/A	2017/06/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8659546	N/A	2017/06/10	
Nitrite (N) (low level)	TRAA/COL	8659548	N/A	2017/06/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8659493	N/A	2017/06/14	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/10	
pH Water	AT/ALK	8662434	N/A	2017/06/13	
Sulphate by Automated Colourimetry	KONE/COL	8661603	N/A	2017/06/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8663209	2017/06/13	2017/06/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8663215	N/A	2017/06/13	
Total Suspended Solids-Low Level	BAL/BAL	8660319	2017/06/12	2017/06/13	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: RG4911
Sample ID: KZ-37
Matrix: Water

Collected: 2017/06/07
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8660634	N/A	2017/06/12	Name Redacted
Alkalinity - Water	AT/ALK	8662487	2017/06/13	2017/06/14	
Chloride by Automated Colourimetry	KONE/COL	8661598	N/A	2017/06/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8662393	N/A	2017/06/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8662407	N/A	2017/06/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8661128	N/A	2017/06/12	
Conductance - water	AT/ALK	8662494	N/A	2017/06/14	
Fluoride	ISE/ISE	8663801	N/A	2017/06/14	
Hardness Total (calculated as CaCO3)	CALC	8659205	N/A	2017/06/14	
Hardness (calculated as CaCO3)	CALC	8659139	N/A	2017/06/14	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8661479	N/A	2017/06/13	
Mercury (Total-LowLevel) by CVAF	CV/AF	8660615	2017/06/12	2017/06/12	
Ion Balance (as Cations/Anions Ratio)	CALC	8659488	N/A	2017/06/14	
Ion Balance	CALC	8659489	N/A	2017/06/14	
Sum of cations, anions	CALC	8659490	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8659491	N/A	2017/06/14	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8660602	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8659492	N/A	2017/06/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8661458	N/A	2017/06/14	
Ammonia-N (Preserved)	KONE/COL	8661447	N/A	2017/06/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8659546	N/A	2017/06/10	
Nitrite (N) (low level)	TRAA/COL	8659548	N/A	2017/06/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8659493	N/A	2017/06/14	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/10	
pH Water	AT/ALK	8662495	N/A	2017/06/14	
Sulphate by Automated Colourimetry	KONE/COL	8661600	N/A	2017/06/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8663203	2017/06/13	2017/06/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8663215	N/A	2017/06/13	
Total Suspended Solids-Low Level	BAL/BAL	8660319	2017/06/12	2017/06/13	

Maxxam ID: RG4912
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/06/10
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8660634	N/A	2017/06/12	Name Redacted
Alkalinity - Water	AT/ALK	8662427	2017/06/13	2017/06/13	
Chloride by Automated Colourimetry	KONE/COL	8661602	N/A	2017/06/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8662393	N/A	2017/06/13	
Cyanide WAD (weak acid dissociable)	TECH/COL	8662407	N/A	2017/06/13	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8661128	N/A	2017/06/12	
Conductance - water	AT/ALK	8662426	N/A	2017/06/13	
Fluoride	ISE/ISE	8663801	N/A	2017/06/14	
Hardness Total (calculated as CaCO3)	CALC	8659205	N/A	2017/06/14	
Hardness (calculated as CaCO3)	CALC	8659139	N/A	2017/06/14	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: RG4912
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/06/10
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8661479	N/A	2017/06/13	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8660615	2017/06/12	2017/06/12	
Ion Balance (as Cations/Anions Ratio)	CALC	8659488	N/A	2017/06/14	
Ion Balance	CALC	8659489	N/A	2017/06/14	
Sum of cations, anions	CALC	8659490	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8659491	N/A	2017/06/14	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8660602	N/A	2017/06/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8659492	N/A	2017/06/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8661458	N/A	2017/06/14	
Ammonia-N (Preserved)	KONE/COL	8661447	N/A	2017/06/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8659546	N/A	2017/06/10	
Nitrite (N) (low level)	TRAA/COL	8659548	N/A	2017/06/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8659493	N/A	2017/06/14	
pH Water	AT/ALK	8662423	N/A	2017/06/13	
Sulphate by Automated Colourimetry	KONE/COL	8661603	N/A	2017/06/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8663203	2017/06/13	2017/06/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8663215	N/A	2017/06/13	
Total Suspended Solids-Low Level	BAL/BAL	8660319	2017/06/12	2017/06/13	

Maxxam ID: RG4912 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/06/10
Shipped:
Received: 2017/06/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8661447	N/A	2017/06/13	Name

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	7.3°C
Package 2	4.0°C
Package 3	7.7°C

Samples collected on June 5th and June 6th were received at analytical lab past recommended hold time for Nitrate, Nitrite, Dissolved Phosphorus and Total Phosphorus.

Sample RG4906 [KZ-19] : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Sample RG4909 [KZ-26] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RG4904, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample RG4908, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8659523	Dissolved Organic Carbon (C)	2017/06/12	94	80 - 120	111	80 - 120	<0.50	mg/L	9.6	20
8659546	Nitrate plus Nitrite (N)	2017/06/10	108	80 - 120	101	80 - 120	<0.0020	mg/L	NC	25
8659548	Nitrite (N)	2017/06/10	102	80 - 120	93	80 - 120	<0.0020	mg/L	NC	25
8660319	Total Suspended Solids	2017/06/13			103	80 - 120	<1.0	mg/L		
8660602	Dissolved Aluminum (Al)	2017/06/14	113	80 - 120	118	80 - 120	<0.00050	mg/L	0.18	20
8660602	Dissolved Antimony (Sb)	2017/06/14	101	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
8660602	Dissolved Arsenic (As)	2017/06/14	101	80 - 120	108	80 - 120	<0.000020	mg/L	5.8	20
8660602	Dissolved Barium (Ba)	2017/06/14	100	80 - 120	108	80 - 120	<0.000020	mg/L	0.66	20
8660602	Dissolved Beryllium (Be)	2017/06/14	114	80 - 120	108	80 - 120	<0.000010	mg/L	NC	20
8660602	Dissolved Bismuth (Bi)	2017/06/14	99	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8660602	Dissolved Boron (B)	2017/06/14	107	80 - 120	107	80 - 120	<0.010	mg/L	NC	20
8660602	Dissolved Cadmium (Cd)	2017/06/14	100	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8660602	Dissolved Chromium (Cr)	2017/06/14	99	80 - 120	106	80 - 120	<0.00010	mg/L	NC	20
8660602	Dissolved Cobalt (Co)	2017/06/14	99	80 - 120	110	80 - 120	<0.0000050	mg/L	15	20
8660602	Dissolved Copper (Cu)	2017/06/14	99	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20
8660602	Dissolved Iron (Fe)	2017/06/14	107	80 - 120	110	80 - 120	<0.0010	mg/L	NC	20
8660602	Dissolved Lead (Pb)	2017/06/14	102	80 - 120	108	80 - 120	<0.0000050	mg/L	0	20
8660602	Dissolved Lithium (Li)	2017/06/14	114	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8660602	Dissolved Manganese (Mn)	2017/06/14	101	80 - 120	107	80 - 120	<0.000050	mg/L	NC	20
8660602	Dissolved Molybdenum (Mo)	2017/06/14	102	80 - 120	110	80 - 120	<0.000050	mg/L	NC	20
8660602	Dissolved Nickel (Ni)	2017/06/14	101	80 - 120	109	80 - 120	<0.000020	mg/L	15	20
8660602	Dissolved Phosphorus (P)	2017/06/14					<0.0020	mg/L		
8660602	Dissolved Selenium (Se)	2017/06/14	104	80 - 120	107	80 - 120	<0.000040	mg/L	NC	20
8660602	Dissolved Silicon (Si)	2017/06/14					<0.050	mg/L	1.4	20
8660602	Dissolved Silver (Ag)	2017/06/14	106	80 - 120	111	80 - 120	<0.0000050	mg/L	NC	20
8660602	Dissolved Strontium (Sr)	2017/06/14	101	80 - 120	103	80 - 120	<0.000050	mg/L	3.3	20
8660602	Dissolved Thallium (Tl)	2017/06/14	100	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
8660602	Dissolved Tin (Sn)	2017/06/14	101	80 - 120	107	80 - 120	<0.00020	mg/L	NC	20
8660602	Dissolved Titanium (Ti)	2017/06/14	93	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
8660602	Dissolved Uranium (U)	2017/06/14	105	80 - 120	108	80 - 120	<0.0000020	mg/L	5.1	20
8660602	Dissolved Vanadium (V)	2017/06/14	103	80 - 120	109	80 - 120	<0.00020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8660602	Dissolved Zinc (Zn)	2017/06/14	103	80 - 120	108	80 - 120	<0.00010	mg/L	6.2	20
8660602	Dissolved Zirconium (Zr)	2017/06/14					<0.00010	mg/L	NC	20
8660611	Total Aluminum (Al)	2017/06/14	109	80 - 120	108	80 - 120	<0.0030	mg/L		
8660611	Total Antimony (Sb)	2017/06/14	99	80 - 120	97	80 - 120	<0.000020	mg/L		
8660611	Total Arsenic (As)	2017/06/14	101	80 - 120	95	80 - 120	<0.000020	mg/L		
8660611	Total Barium (Ba)	2017/06/14	NC	80 - 120	97	80 - 120	<0.000050	mg/L		
8660611	Total Beryllium (Be)	2017/06/14	110	80 - 120	107	80 - 120	<0.000010	mg/L		
8660611	Total Bismuth (Bi)	2017/06/14	96	80 - 120	96	80 - 120	<0.000010	mg/L		
8660611	Total Boron (B)	2017/06/14	109	80 - 120	98	80 - 120	<0.010	mg/L		
8660611	Total Cadmium (Cd)	2017/06/14	98	80 - 120	96	80 - 120	<0.0000050	mg/L		
8660611	Total Chromium (Cr)	2017/06/14	98	80 - 120	97	80 - 120	<0.00010	mg/L		
8660611	Total Cobalt (Co)	2017/06/14	96	80 - 120	97	80 - 120	<0.000010	mg/L		
8660611	Total Copper (Cu)	2017/06/14	95	80 - 120	99	80 - 120	<0.00010	mg/L		
8660611	Total Iron (Fe)	2017/06/14	NC	80 - 120	104	80 - 120	<0.0050	mg/L		
8660611	Total Lead (Pb)	2017/06/14	99	80 - 120	97	80 - 120	<0.000020	mg/L		
8660611	Total Lithium (Li)	2017/06/14	NC	80 - 120	102	80 - 120	<0.00050	mg/L		
8660611	Total Manganese (Mn)	2017/06/14	NC	80 - 120	97	80 - 120	<0.00010	mg/L		
8660611	Total Molybdenum (Mo)	2017/06/14	107	80 - 120	97	80 - 120	<0.000050	mg/L		
8660611	Total Nickel (Ni)	2017/06/14	96	80 - 120	98	80 - 120	<0.00010	mg/L		
8660611	Total Phosphorus (P)	2017/06/14					<0.0050	mg/L		
8660611	Total Selenium (Se)	2017/06/14	101	80 - 120	99	80 - 120	<0.000040	mg/L		
8660611	Total Silicon (Si)	2017/06/14					<0.050	mg/L		
8660611	Total Silver (Ag)	2017/06/14	101	80 - 120	102	80 - 120	<0.000010	mg/L		
8660611	Total Strontium (Sr)	2017/06/14	NC	80 - 120	92	80 - 120	<0.000050	mg/L		
8660611	Total Thallium (Tl)	2017/06/14	97	80 - 120	95	80 - 120	<0.0000020	mg/L		
8660611	Total Tin (Sn)	2017/06/14	96	80 - 120	97	80 - 120	<0.00020	mg/L		
8660611	Total Titanium (Ti)	2017/06/14	97	80 - 120	95	80 - 120	<0.0020	mg/L		
8660611	Total Uranium (U)	2017/06/14	103	80 - 120	99	80 - 120	<0.0000050	mg/L		
8660611	Total Vanadium (V)	2017/06/14	101	80 - 120	99	80 - 120	<0.00020	mg/L		
8660611	Total Zinc (Zn)	2017/06/14	92	80 - 120	95	80 - 120	<0.0010	mg/L		
8660611	Total Zirconium (Zr)	2017/06/14					<0.00010	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8660615	Total Mercury (Hg)	2017/06/13	97	80 - 120	102	80 - 120	<0.0000020	mg/L	3.5	20
8660634	Acidity (pH 4.5)	2017/06/12					<0.50	mg/L	NC	20
8660634	Acidity (pH 8.3)	2017/06/12			95	80 - 120	<0.50	mg/L	34 (1)	20
8660636	Acidity (pH 4.5)	2017/06/12					<0.50	mg/L	NC	20
8660636	Acidity (pH 8.3)	2017/06/12			96	80 - 120	<0.50	mg/L	2.0	20
8661128	Dissolved Organic Carbon (C)	2017/06/12	99	80 - 120	111	80 - 120	<0.50	mg/L	10	20
8661129	Dissolved Organic Carbon (C)	2017/06/12	99	80 - 120	110	80 - 120	<0.50	mg/L	NC	20
8661130	Dissolved Organic Carbon (C)	2017/06/12	104	80 - 120	107	80 - 120	<0.50	mg/L	15	20
8661444	Total Ammonia (N)	2017/06/13	108	80 - 120	103	80 - 120	<0.0050	mg/L	4.3	20
8661447	Total Ammonia (N)	2017/06/13	103	80 - 120	101	80 - 120	<0.0050	mg/L	NC	20
8661458	Total Aluminum (Al)	2017/06/14	103	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
8661458	Total Antimony (Sb)	2017/06/14	102	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8661458	Total Arsenic (As)	2017/06/14	103	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8661458	Total Barium (Ba)	2017/06/14	102	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8661458	Total Beryllium (Be)	2017/06/14	108	80 - 120	106	80 - 120	<0.000010	mg/L	NC	20
8661458	Total Bismuth (Bi)	2017/06/14	102	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8661458	Total Boron (B)	2017/06/14	104	80 - 120	102	80 - 120	<0.010	mg/L	NC	20
8661458	Total Cadmium (Cd)	2017/06/14	103	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8661458	Total Chromium (Cr)	2017/06/14	98	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8661458	Total Cobalt (Co)	2017/06/14	99	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8661458	Total Copper (Cu)	2017/06/14	102	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8661458	Total Iron (Fe)	2017/06/14	104	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20
8661458	Total Lead (Pb)	2017/06/14	103	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8661458	Total Lithium (Li)	2017/06/14	102	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8661458	Total Manganese (Mn)	2017/06/14	100	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
8661458	Total Molybdenum (Mo)	2017/06/14	103	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8661458	Total Nickel (Ni)	2017/06/14	102	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8661458	Total Phosphorus (P)	2017/06/14					<0.0020	mg/L	NC	20
8661458	Total Selenium (Se)	2017/06/14	108	80 - 120	104	80 - 120	<0.000040	mg/L	NC	20
8661458	Total Silicon (Si)	2017/06/14					<0.050	mg/L	NC	20
8661458	Total Silver (Ag)	2017/06/14	108	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8661458	Total Strontium (Sr)	2017/06/14	96	80 - 120	96	80 - 120	<0.000050	mg/L	NC	20
8661458	Total Thallium (Tl)	2017/06/14	101	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8661458	Total Tin (Sn)	2017/06/14	105	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8661458	Total Titanium (Ti)	2017/06/14	91	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8661458	Total Uranium (U)	2017/06/14	107	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8661458	Total Vanadium (V)	2017/06/14	100	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8661458	Total Zinc (Zn)	2017/06/14	102	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8661458	Total Zirconium (Zr)	2017/06/14					<0.00010	mg/L	NC	20
8661479	Dissolved Mercury (Hg)	2017/06/13	99	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8661598	Dissolved Chloride (Cl)	2017/06/12			97	80 - 120	<0.50	mg/L		
8661600	Dissolved Sulphate (SO4)	2017/06/12	113	80 - 120	95	80 - 120	<0.50	mg/L	1.9	20
8661602	Dissolved Chloride (Cl)	2017/06/12	115	80 - 120	99	80 - 120	<0.50	mg/L	0.58	20
8661603	Dissolved Sulphate (SO4)	2017/06/12	120	80 - 120	96	80 - 120	<0.50	mg/L	0.66	20
8662182	Strong Acid Dissoc. Cyanide (CN)	2017/06/13	112	80 - 120	104	80 - 120	<0.00050	mg/L	2.6	20
8662393	Strong Acid Dissoc. Cyanide (CN)	2017/06/13	109	80 - 120	106	80 - 120	<0.00050	mg/L	13	20
8662407	Weak Acid Dissoc. Cyanide (CN)	2017/06/13	109	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8662423	pH	2017/06/13			102	97 - 103			0	N/A
8662426	Conductivity	2017/06/13			98	80 - 120	<1.0	uS/cm	0	20
8662427	Alkalinity (PP as CaCO3)	2017/06/13					<0.50	mg/L	NC	20
8662427	Alkalinity (Total as CaCO3)	2017/06/13	NC	80 - 120	99	80 - 120	<0.50	mg/L	0.20	20
8662427	Bicarbonate (HCO3)	2017/06/13					<0.50	mg/L	0.20	20
8662427	Carbonate (CO3)	2017/06/13					<0.50	mg/L	NC	20
8662427	Hydroxide (OH)	2017/06/13					<0.50	mg/L	NC	20
8662434	pH	2017/06/13			102	97 - 103			0	N/A
8662443	Conductivity	2017/06/13			100	80 - 120	<1.0	uS/cm	0.37	20
8662444	Alkalinity (PP as CaCO3)	2017/06/13					<0.50	mg/L	NC	20
8662444	Alkalinity (Total as CaCO3)	2017/06/13	102	80 - 120	97	80 - 120	<0.50	mg/L	0.70	20
8662444	Bicarbonate (HCO3)	2017/06/13					<0.50	mg/L	0.70	20
8662444	Carbonate (CO3)	2017/06/13					<0.50	mg/L	NC	20
8662444	Hydroxide (OH)	2017/06/13					<0.50	mg/L	NC	20
8662487	Alkalinity (PP as CaCO3)	2017/06/14					<0.50	mg/L	NC	20

Maxxam Job #: B746141
Report Date: 2017/06/17

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8662487	Alkalinity (Total as CaCO3)	2017/06/14	99	80 - 120	96	80 - 120	<0.50	mg/L	1.7	20
8662487	Bicarbonate (HCO3)	2017/06/14					<0.50	mg/L	1.7	20
8662487	Carbonate (CO3)	2017/06/14					<0.50	mg/L	NC	20
8662487	Hydroxide (OH)	2017/06/14					<0.50	mg/L	NC	20
8662494	Conductivity	2017/06/14			102	80 - 120	<1.0	uS/cm		
8662495	pH	2017/06/14			102	97 - 103				
8663203	Dissolved Phosphorus (P)	2017/06/13	91	80 - 120	109	80 - 120	<0.0020	mg/L		
8663209	Dissolved Phosphorus (P)	2017/06/13	95	80 - 120	103	80 - 120	<0.0020	mg/L	10	20
8663215	Total Phosphorus (P)	2017/06/13	101	80 - 120	100	80 - 120	<0.0020	mg/L	3.7	20
8663261	Dissolved Mercury (Hg)	2017/06/14	107	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
8663801	Fluoride (F)	2017/06/14	116	80 - 120	98	80 - 120	0.017, RDL=0.010	mg/L	0	20
8665539	Dissolved Aluminum (Al)	2017/06/16	108	80 - 120	108	80 - 120	<0.00050	mg/L	NC	20
8665539	Dissolved Lead (Pb)	2017/06/16	99	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8665539	Dissolved Zinc (Zn)	2017/06/16	NC	80 - 120	104	80 - 120	<0.00010	mg/L	1.1	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B746141
Report Date: 2017/06/17

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Name Redacted Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC 08439311

BBY FCD-00077/05

Page 1 2

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: BMC MINERALS LTD.	Company Name: ALEXCO ENVIRONMENTAL	Quotation #: B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:	Contact Name: KAI WOLOSHYN	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 530-1130 WEST PENDER ST	Address: UNIT 3 151 INDUSTRIAL RD	Project #: BMC-15-01	Rush TAT (Surcharges will be applied)
Vancouver, BC PC: V6E 4A4	Whitehorse, YK PC: V1A 2V3	Site Location: Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:	Phone: (867) 668-6463	Site #:	
Email:	Email: kwoloshyn@alexcoresource.com	Sampled By: Signature Redacted	Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		07-Jun-17	13:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3	KZ-6		07-Jun-17	11:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
4	KZ-9		07-Jun-17	9:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	KZ-13		06-Jun-17	15:55	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6	KZ-15		06-Jun-17	12:12	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
7	KZ-16		06-Jun-17	13:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
8	KZ-17		06-Jun-17	14:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
9	KZ-18		07-Jun-17	10:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
10	KZ-19		07-Jun-17	9:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
✓	✓	5, 4, 4 / 5, 9, 10 / 2, 4, 9 /

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE @ 1415
Signature
BY: Redacted
2017 -06- 09
8 8 6
TEMP: 4 / 4 / 4
6 7 10

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	09/06/2017	10:30	Signature Redacted	2017/06/10	5,4,4 / 5,9,10 / 2,4,9

B746141_COC

BDI 2017/06/10
Time: 15:29

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC # 08439310

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature	Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL					# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-21		06-Jun-17	10:38	Water	x	x	x	x	x	x	x	x	x	x	x	x					11	
2	KZ-22		06-Jun-17	9:20	Water	x	x	x	x	x	x	x	x	x	x	x	x					11	
3	KZ-26		05-Jun-17	12:35	Water	x	x	x	x	x	x	x	x	x	x	x	x					11	
4	KZ-28		06-Jun-17	16:30	Water	x	x	x	x	x	x	x	x	x	x	x	x					11	
5	KZ-37		07-Jun-17	8:30	Water	x	x	x	x	x	x	x	x	x	x	x	x					11	
6	Trip Blank		n/a	n/a	Water	x	x	x	x	x	x	x	x	x	x	x	x					11	
7																							
8																							
9																							
10																							

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
✓	✓	5, 4, 4
		5, 9, 10
		2, 4, 9

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE

BY: Signature @ 1415

2017-06-09

8 8 6

TEMP: 4 / 4 / 4

6 7 10

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	09/06/2017	10:30	Signature Redacted	2017/06/10	5, 4, 4 5, 9, 10 2, 4, 9

Time: 15:29

B746141_COC

Your Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08439493, 08439494

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/06/26
Report #: R2402984
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B748588
Received: 2017/06/16, 16:25

Sample Matrix: Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	14	N/A	2017/06/19	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	14	2017/06/19	2017/06/19	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	14	N/A	2017/06/19	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	14	N/A	2017/06/20	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	14	N/A	2017/06/20	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	14	N/A	2017/06/19	BBY6SOP-00003	SM 22 5310 C m
Conductance - water	13	N/A	2017/06/19	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	1	N/A	2017/06/21	BBY6SOP-00026	SM 22 2510 B m
Fluoride	3	N/A	2017/06/20	BBY6SOP-00048	SM 22 4500-F C m
Fluoride	11	N/A	2017/06/21	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	11	N/A	2017/06/20	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	3	N/A	2017/06/21	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	14	N/A	2017/06/20	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	14	N/A	2017/06/21	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	14	2017/06/21	2017/06/21	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance (as Cations/Anions Ratio)	14	N/A	2017/06/20	BBY WI-00033	Auto Calc
Ion Balance	14	N/A	2017/06/20	BBY WI-00033	SM 22 1030E
Sum of cations, anions	14	N/A	2017/06/20	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	14	N/A	2017/06/20	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	14	N/A	2017/06/19	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	3	2017/06/19	2017/06/20	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	11	N/A	2017/06/20	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	3	N/A	2017/06/21	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	11	N/A	2017/06/20	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	13	N/A	2017/06/20	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	1	N/A	2017/06/22	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	14	N/A	2017/06/17	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	14	N/A	2017/06/17	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N) Low Level Calc	14	N/A	2017/06/20	BBY6SOP-00010	SM 22 4500-NO3- I m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08439493, 08439494

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/06/26
Report #: R2402984
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B748588
Received: 2017/06/16, 16:25

Sample Matrix: Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Filter and HNO3 Preserve for Metals	3	N/A	2017/06/17	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	10	N/A	2017/06/20	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	14	N/A	2017/06/19	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	14	N/A	2017/06/19	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	14	2017/06/22	2017/06/22	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	14	N/A	2017/06/20	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	10	2017/06/19	2017/06/20	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	4	2017/06/20	2017/06/21	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Your Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08439493, 08439494

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/06/26
Report #: R2402984
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B748588
Received: 2017/06/16, 16:25

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RH7997	RH8032	RH8033		RH8034		
Sampling Date		2017/06/13 13:33	2017/06/13 14:40	2017/06/13 16:54		2017/06/14 15:53		
COC Number		08439493	08439493	08439493		08439493		
	UNITS	KZ-2	KZ-6	KZ-9	QC Batch	KZ-15	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	1.3	1.7	1.9	8667418	2.0	N/A	8667418
Cation Sum	meq/L	1.2	1.6	1.8	8667418	1.9	N/A	8667418
Filter and HNO3 Preservation	N/A	FIELD	FIELD	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.91	0.95	0.93	8667416	0.95	0.010	8667416
Ion Balance (% Difference)	%	4.8	2.5	3.6	8667417	2.7	N/A	8667417
Nitrate (N)	mg/L	0.0776	0.0056	0.0251	8667421	0.0237	0.0020	8667421
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00054	0.00071	8669858	0.00059	0.00050	8669858
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00062	0.00095	8669859	0.00062	0.00050	8669859
Fluoride (F)	mg/L	0.033	0.045	0.048	8671416	0.054	0.010	8671416
Dissolved Organic Carbon (C)	mg/L	2.62	3.55	5.67	8668534	4.98	0.50	8668534
Acidity (pH 4.5)	mg/L	<0.50	<0.50	<0.50	8668818	<0.50	0.50	8668818
Alkalinity (Total as CaCO3)	mg/L	32.4	71.4	70.9	8668831	78.0	0.50	8668831
Acidity (pH 8.3)	mg/L	<0.50	<0.50	<0.50	8668818	<0.50	0.50	8668818
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	<0.50	8668831	<0.50	0.50	8668831
Bicarbonate (HCO3)	mg/L	39.5	87.1	86.5	8668831	95.1	0.50	8668831
Carbonate (CO3)	mg/L	<0.50	<0.50	<0.50	8668831	<0.50	0.50	8668831
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	8668831	<0.50	0.50	8668831
Anions								
Dissolved Sulphate (SO4)	mg/L	30.3	12.7	21.8	8669401	19.7	0.50	8669401
Dissolved Chloride (Cl)	mg/L	0.55	0.56	0.64	8669400	0.59	0.50	8669400
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0030 (1)	0.0031 (1)	0.0041 (1)	8672675	0.0036 (1)	0.0020	8672675
Total Ammonia (N)	mg/L	0.047	0.065	0.047	8669268	0.090	0.0050	8669268
Nitrate plus Nitrite (N)	mg/L	0.0776 (1)	0.0056 (1)	0.0251 (1)	8667473	0.0237	0.0020	8667473
Nitrite (N)	mg/L	<0.0020 (1)	<0.0020 (1)	<0.0020 (1)	8667474	<0.0020	0.0020	8667474
Total Phosphorus (P)	mg/L	0.0082 (2)	0.0075 (2)	0.0117 (2)	8668906	0.0055 (3)	0.0020	8668906

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.
(2) Sample arrived to laboratory past recommended hold time.
(3) Sample preserved to extend hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RH7997	RH8032	RH8033		RH8034		
Sampling Date		2017/06/13 13:33	2017/06/13 14:40	2017/06/13 16:54		2017/06/14 15:53		
COC Number		08439493	08439493	08439493		08439493		
	UNITS	KZ-2	KZ-6	KZ-9	QC Batch	KZ-15	RDL	QC Batch
Physical Properties								
Conductivity	uS/cm	134	166	182	8668834	189	1.0	8668834
pH	pH	7.78	8.14	8.08	8668833	8.14		8668833
Physical Properties								
Total Suspended Solids	mg/L	1.4	4.0	14.4	8668187	3.6	1.0	8668839
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RH8035		RH8036		RH8037		RH8038		
Sampling Date		2017/06/14 16:06		2017/06/14 15:22		2017/06/13 17:12		2017/06/13 17:27		
COC Number		08439493		08439493		08439493		08439493		
	UNITS	KZ-16	QC Batch	KZ-17	QC Batch	KZ-18	QC Batch	KZ-19	RDL	QC Batch
Calculated Parameters										
Anion Sum	meq/L	1.7	8667418	2.3	8667418	2.0	8667418	1.9	N/A	8667418
Cation Sum	meq/L	1.6	8667418	2.2	8667418	2.1	8667418	1.8	N/A	8667418
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.94	8667416	0.93	8667416	1.1	8667416	0.93	0.010	8667416
Ion Balance (% Difference)	%	3.2	8667417	3.6	8667417	2.7	8667417	3.5	N/A	8667417
Nitrate (N)	mg/L	0.0252	8667421	0.0730	8667421	0.0257	8667421	0.0247	0.0020	8667421
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00063	8669858	<0.00050	8669858	0.00085	8669858	0.00061	0.00050	8669858
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00057	8669859	<0.00050	8669859	0.00071	8669859	0.00058	0.00050	8669859
Fluoride (F)	mg/L	0.046	8671416	0.081	8671416	0.052	8671416	0.049	0.010	8671416
Dissolved Organic Carbon (C)	mg/L	4.60	8668534	3.14	8668534	12.7	8668534	5.80	0.50	8668534
Acidity (pH 4.5)	mg/L	<0.50	8668818	<0.50	8668818	<0.50	8668818	<0.50	0.50	8668818
Alkalinity (Total as CaCO3)	mg/L	68.2	8668831	98.4	8668831	93.2	8668831	73.3	0.50	8668831
Acidity (pH 8.3)	mg/L	<0.50	8668818	<0.50	8668818	0.66	8668818	<0.50	0.50	8668818
Alkalinity (PP as CaCO3)	mg/L	<0.50	8668831	<0.50	8668831	<0.50	8668831	<0.50	0.50	8668831
Bicarbonate (HCO3)	mg/L	83.2	8668831	120	8668831	114	8668831	89.4	0.50	8668831
Carbonate (CO3)	mg/L	<0.50	8668831	<0.50	8668831	<0.50	8668831	<0.50	0.50	8668831
Hydroxide (OH)	mg/L	<0.50	8668831	<0.50	8668831	<0.50	8668831	<0.50	0.50	8668831
Anions										
Dissolved Sulphate (SO4)	mg/L	13.6	8669401	15.6	8669401	4.33	8669401	20.7	0.50	8669401
Dissolved Chloride (Cl)	mg/L	0.69	8669400	0.61	8669400	0.76	8669400	0.70	0.50	8669400
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0038 (1)	8672675	0.0035 (1)	8672675	0.0218 (1)	8672675	0.0053 (1)	0.0020	8672675
Total Ammonia (N)	mg/L	0.058	8669270	0.065	8669268	0.060	8669270	0.090	0.0050	8669268
Nitrate plus Nitrite (N)	mg/L	0.0252	8667473	0.0730	8667473	0.0257 (1)	8667473	0.0247 (1)	0.0020	8667473
Nitrite (N)	mg/L	<0.0020	8667474	<0.0020	8667474	<0.0020 (1)	8667474	<0.0020 (1)	0.0020	8667474
Total Phosphorus (P)	mg/L	0.0043 (2)	8668906	0.0038 (2)	8668906	0.0235 (3)	8668906	0.0113 (3)	0.0020	8668906

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.
(2) Sample preserved to extend hold time.
(3) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RH8035		RH8036		RH8037		RH8038		
Sampling Date		2017/06/14 16:06		2017/06/14 15:22		2017/06/13 17:12		2017/06/13 17:27		
COC Number		08439493		08439493		08439493		08439493		
	UNITS	KZ-16	QC Batch	KZ-17	QC Batch	KZ-18	QC Batch	KZ-19	RDL	QC Batch
Physical Properties										
Conductivity	uS/cm	161	8668834	221	8668834	199	8668834	186	1.0	8668834
pH	pH	8.09	8668833	8.12	8668833	8.15	8668833	8.12		8668833
Physical Properties										
Total Suspended Solids	mg/L	<1.0	8668839	<1.0	8668839	<1.0	8668187	12.1	1.0	8668187
RDL = Reportable Detection Limit										

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RH8061		RH8062		RH8063		RH8064		
Sampling Date		2017/06/14 13:45		2017/06/14 13:00		2017/06/14 11:27		2017/06/13 15:51		
COC Number		08439494		08439494		08439494		08439494		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Calculated Parameters										
Anion Sum	meq/L	2.8	8667418	2.4	8667418	2.5	8667418	0.013	N/A	8667418
Cation Sum	meq/L	2.6	8667418	2.3	8667418	2.4	8667418	0.0011	N/A	8667418
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.96	8667416	0.96	8667416	0.98	8667416	0.059 (1)	0.010	8667416
Ion Balance (% Difference)	%	2.1	8667417	1.9	8667417	0.96	8667417	89	N/A	8667417
Nitrate (N)	mg/L	0.0039	8667421	0.0154	8667421	0.0203	8667421	<0.0020	0.0020	8667421
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00075	8669858	0.00071	8669858	0.00078	8669858	<0.00050	0.00050	8669858
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00065	8669859	0.00063	8669859	0.00055	8669859	<0.00050	0.00050	8669859
Fluoride (F)	mg/L	0.110	8671416	0.083	8671416	0.071	8670106	0.011	0.010	8671416
Dissolved Organic Carbon (C)	mg/L	10.5	8668534	8.76	8668534	9.96	8668534	<0.50	0.50	8668534
Acidity (pH 4.5)	mg/L	<0.50	8668818	<0.50	8668818	<0.50	8668818	<0.50	0.50	8668818
Alkalinity (Total as CaCO3)	mg/L	113	8668831	98.4	8668831	104	8668831	0.61	0.50	8668831
Acidity (pH 8.3)	mg/L	<0.50	8668818	<0.50	8668818	<0.50	8668818	<0.50	0.50	8668818
Alkalinity (PP as CaCO3)	mg/L	<0.50	8668831	<0.50	8668831	<0.50	8668831	<0.50	0.50	8668831
Bicarbonate (HCO3)	mg/L	138	8668831	120	8668831	127	8668831	0.74	0.50	8668831
Carbonate (CO3)	mg/L	<0.50	8668831	<0.50	8668831	<0.50	8668831	<0.50	0.50	8668831
Hydroxide (OH)	mg/L	<0.50	8668831	<0.50	8668831	<0.50	8668831	<0.50	0.50	8668831
Anions										
Dissolved Sulphate (SO4)	mg/L	22.1	8669401	19.4	8669401	18.6	8669401	<0.50	0.50	8669401
Dissolved Chloride (Cl)	mg/L	0.67	8669400	0.76	8669400	0.90	8669400	<0.50	0.50	8669400
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0121 (2)	8672676	0.0065 (2)	8672676	0.0142 (2)	8672676	0.0021 (2)	0.0020	8672676
Total Ammonia (N)	mg/L	0.12	8669268	0.17	8669270	0.067	8669268	<0.0050	0.0050	8672016
Nitrate plus Nitrite (N)	mg/L	0.0039	8667473	0.0154	8667473	0.0203	8667473	<0.0020 (2)	0.0020	8667473
Nitrite (N)	mg/L	<0.0020	8667474	<0.0020	8667474	<0.0020	8667474	<0.0020 (2)	0.0020	8667474

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

(2) Sample analysed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RH8061		RH8062		RH8063		RH8064		
Sampling Date		2017/06/14 13:45		2017/06/14 13:00		2017/06/14 11:27		2017/06/13 15:51		
COC Number		08439494		08439494		08439494		08439494		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Total Phosphorus (P)	mg/L	0.0278 (1)	8668906	0.0144 (1)	8668906	0.0610 (1)	8668906	<0.0020 (2)	0.0020	8668906
Physical Properties										
Conductivity	uS/cm	256	8668834	228	8668834	235	8668834	1.1	1.0	8670611
pH	pH	8.25	8668833	8.18	8668833	8.22	8668833	5.95		8668833
Physical Properties										
Total Suspended Solids	mg/L	6.9	8669844	4.8	8669844	54.7	8669844	<1.0	1.0	8668187

RDL = Reportable Detection Limit
(1) Sample preserved to extend hold time.
(2) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RH8065		RH8066		
Sampling Date		2017/06/13 17:27		2017/06/17 15:21		
COC Number		08439494		08439494		
	UNITS	KZ-37	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters						
Anion Sum	meq/L	1.9	8667418	0.00080	N/A	8667418
Cation Sum	meq/L	1.8	8667418	0.0027	N/A	8667418
Filter and HNO3 Preservation	N/A	FIELD	ONSITE			ONSITE
Ion Balance	N/A	0.96	8667416	NC	0.010	8667416
Ion Balance (% Difference)	%	1.9	8667417	54	N/A	8667417
Nitrate (N)	mg/L	0.0252	8667421	<0.0020	0.0020	8667421
Misc. Inorganics						
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00073	8669858	<0.00050	0.00050	8669858
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00089	8669859	<0.00050	0.00050	8669859
Fluoride (F)	mg/L	0.053	8670106	0.015	0.010	8670106
Dissolved Organic Carbon (C)	mg/L	5.99	8668534	<0.50	0.50	8668534
Acidity (pH 4.5)	mg/L	<0.50	8668818	<0.50	0.50	8668818
Alkalinity (Total as CaCO3)	mg/L	72.7	8668831	<0.50	0.50	8668824
Acidity (pH 8.3)	mg/L	<0.50	8668818	<0.50	0.50	8668818
Alkalinity (PP as CaCO3)	mg/L	<0.50	8668831	<0.50	0.50	8668824
Bicarbonate (HCO3)	mg/L	88.6	8668831	<0.50	0.50	8668824
Carbonate (CO3)	mg/L	<0.50	8668831	<0.50	0.50	8668824
Hydroxide (OH)	mg/L	<0.50	8668831	<0.50	0.50	8668824
Anions						
Dissolved Sulphate (SO4)	mg/L	20.6	8669401	<0.50	0.50	8669401
Dissolved Chloride (Cl)	mg/L	0.73	8669400	<0.50	0.50	8669400
Nutrients						
Dissolved Phosphorus (P)	mg/L	0.0051 (1)	8672676	0.0043 (1)	0.0020	8672676
Total Ammonia (N)	mg/L	0.097	8669268	<0.0050	0.0050	8669268
Nitrate plus Nitrite (N)	mg/L	0.0277 (1)	8667473	<0.0020	0.0020	8667473
Nitrite (N)	mg/L	0.0025 (1)	8667474	<0.0020	0.0020	8667474
Total Phosphorus (P)	mg/L	0.0086 (2)	8668906	<0.0020	0.0020	8668906
Physical Properties						
Conductivity	uS/cm	186	8668834	1.1	1.0	8668829

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample analysed past recommended hold time.
(2) Sample arrived to laboratory past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RH8065		RH8066		
Sampling Date		2017/06/13 17:27		2017/06/17 15:21		
COC Number		08439494		08439494		
	UNITS	KZ-37	QC Batch	TRIP BLANK	RDL	QC Batch
pH	pH	8.08	8668833	5.57		8668828
Physical Properties						
Total Suspended Solids	mg/L	10.6	8668187	<1.0	1.0	8669844
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RH7997	RH8032	RH8033	RH8034	RH8035		
Sampling Date		2017/06/13 13:33	2017/06/13 14:40	2017/06/13 16:54	2017/06/14 15:53	2017/06/14 16:06		
COC Number		08439493	08439493	08439493	08439493	08439493		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-15	KZ-16	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	56.3	79.4	85.3	91.5	75.8	0.50	8667042
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8670487
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0151	0.0110	0.0135	0.0107	0.0105	0.00050	8668393
Dissolved Antimony (Sb)	mg/L	0.000022	<0.000020	0.000058	0.000030	<0.000020	0.000020	8668393
Dissolved Arsenic (As)	mg/L	0.000090	0.000112	0.000221	0.000357	0.000250	0.000020	8668393
Dissolved Barium (Ba)	mg/L	0.0330	0.0224	0.0421	0.0386	0.0346	0.000020	8668393
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8668393
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8668393
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8668393
Dissolved Cadmium (Cd)	mg/L	0.000274	0.0000100	0.0000430	0.0000210	0.0000150	0.0000050	8668393
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8668393
Dissolved Cobalt (Co)	mg/L	0.0000180	0.0000190	0.0000420	0.0000280	0.0000220	0.0000050	8668393
Dissolved Copper (Cu)	mg/L	0.00246	0.000536	0.00157	0.00128	0.00127	0.000050	8668393
Dissolved Iron (Fe)	mg/L	0.0102	0.0285	0.0879	0.0393	0.0130	0.0010	8668393
Dissolved Lead (Pb)	mg/L	0.0000700	0.0000110	0.0000470	0.0000140	0.0000060	0.0000050	8668393
Dissolved Lithium (Li)	mg/L	0.00053	<0.00050	0.00091	0.00097	0.00075	0.00050	8668393
Dissolved Manganese (Mn)	mg/L	0.000366	0.00239	0.0113	0.00731	0.00182	0.000050	8668393
Dissolved Molybdenum (Mo)	mg/L	0.000505	0.000249	0.000402	0.000515	0.000278	0.000050	8668393
Dissolved Nickel (Ni)	mg/L	0.000604	0.000412	0.000665	0.000733	0.000581	0.000020	8668393
Dissolved Phosphorus (P)	mg/L	0.0031	0.0048	0.0047	0.0052	0.0044	0.0020	8668393
Dissolved Selenium (Se)	mg/L	0.000661	0.000399	0.000569	0.000426	0.000276	0.000040	8668393
Dissolved Silicon (Si)	mg/L	1.64	1.93	2.02	2.04	1.84	0.050	8668393
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8668393
Dissolved Strontium (Sr)	mg/L	0.0601	0.0758	0.0903	0.0881	0.0784	0.000050	8668393
Dissolved Thallium (Tl)	mg/L	0.0000060	<0.0000020	0.0000020	<0.0000020	<0.0000020	0.0000020	8668393
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8668393
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8668393
Dissolved Uranium (U)	mg/L	0.000956	0.000256	0.000389	0.000699	0.000379	0.0000020	8668393
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8668393

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RH7997	RH8032	RH8033	RH8034	RH8035		
Sampling Date		2017/06/13 13:33	2017/06/13 14:40	2017/06/13 16:54	2017/06/14 15:53	2017/06/14 16:06		
COC Number		08439493	08439493	08439493	08439493	08439493		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-15	KZ-16	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0503	0.00046	0.0114	0.00280	0.00081	0.00010	8668393
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8668393
Dissolved Calcium (Ca)	mg/L	19.5	26.5	28.5	28.9	24.4	0.050	8667420
Dissolved Magnesium (Mg)	mg/L	1.84	3.22	3.45	4.67	3.60	0.050	8667420
Dissolved Potassium (K)	mg/L	1.13	0.548	0.948	0.917	0.881	0.050	8667420
Dissolved Sodium (Na)	mg/L	0.439	0.424	0.542	0.591	0.530	0.050	8667420
Dissolved Sulphur (S)	mg/L	9.0	4.1	6.6	5.6	4.4	3.0	8667420

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RH8036	RH8037	RH8038	RH8061	RH8062		
Sampling Date		2017/06/14 15:22	2017/06/13 17:12	2017/06/13 17:27	2017/06/14 13:45	2017/06/14 13:00		
COC Number		08439493	08439493	08439493	08439494	08439494		
	UNITS	KZ-17	KZ-18	KZ-19	KZ-21	KZ-22	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	105	102	86.5	128	112	0.50	8667042
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000025	<0.0000020	<0.0000020	<0.0000020	0.0000020	8670487
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00534	0.0542	0.0192	0.00977	0.0109	0.00050	8668393
Dissolved Antimony (Sb)	mg/L	0.000027	0.000040	0.000052	0.000131	0.000082	0.000020	8668393
Dissolved Arsenic (As)	mg/L	0.000192	0.000450	0.000271	0.00151	0.00103	0.000020	8668393
Dissolved Barium (Ba)	mg/L	0.0428	0.0268	0.0424	0.0367	0.0381	0.000020	8668393
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8668393
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8668393
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8668393
Dissolved Cadmium (Cd)	mg/L	0.0000140	0.0000320	0.0000440	0.0000100	0.0000140	0.0000050	8668393
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00022	<0.00010	0.00013	<0.00010	0.00010	8668393
Dissolved Cobalt (Co)	mg/L	0.0000150	0.0000360	0.0000430	0.0000810	0.0000510	0.0000050	8668393
Dissolved Copper (Cu)	mg/L	0.00139	0.00127	0.00162	0.000974	0.00119	0.000050	8668393
Dissolved Iron (Fe)	mg/L	0.0051	0.0390	0.0847	0.190	0.113	0.0010	8668393
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000060	0.0000460	0.0000130	0.0000100	0.0000050	8668393
Dissolved Lithium (Li)	mg/L	0.00192	0.00090	0.00089	0.00184	0.00157	0.00050	8668393
Dissolved Manganese (Mn)	mg/L	0.000221	0.00320	0.0116	0.0292	0.0158	0.000050	8668393
Dissolved Molybdenum (Mo)	mg/L	0.000476	0.000717	0.000454	0.00120	0.000825	0.000050	8668393
Dissolved Nickel (Ni)	mg/L	0.000562	0.00172	0.000757	0.00315	0.00198	0.000020	8668393
Dissolved Phosphorus (P)	mg/L	0.0034	0.0199	0.0064	0.0119	0.0083	0.0020	8668393
Dissolved Selenium (Se)	mg/L	0.000440	0.000525	0.000560	0.000428	0.000410	0.000040	8668393
Dissolved Silicon (Si)	mg/L	2.29	2.61	2.09	3.04	2.56	0.050	8668393
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8668393
Dissolved Strontium (Sr)	mg/L	0.107	0.0897	0.0918	0.0976	0.0951	0.000050	8668393
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	<0.0000020	<0.0000020	0.0000020	8668393
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8668393
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00062	<0.00050	<0.00050	<0.00050	0.00050	8668393
Dissolved Uranium (U)	mg/L	0.000701	0.000712	0.000429	0.00125	0.000980	0.0000020	8668393
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8668393

RDL = Reportable Detection Limit

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RH8036	RH8037	RH8038	RH8061	RH8062		
Sampling Date		2017/06/14 15:22	2017/06/13 17:12	2017/06/13 17:27	2017/06/14 13:45	2017/06/14 13:00		
COC Number		08439493	08439493	08439493	08439494	08439494		
	UNITS	KZ-17	KZ-18	KZ-19	KZ-21	KZ-22	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00083	0.00145	0.0106	0.00151	0.00151	0.00010	8668393
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00018	0.00010	0.00012	<0.00010	0.00010	8668393
Dissolved Calcium (Ca)	mg/L	31.7	26.8	28.1	32.2	30.7	0.050	8667420
Dissolved Magnesium (Mg)	mg/L	6.23	8.62	3.99	11.6	8.54	0.050	8667420
Dissolved Potassium (K)	mg/L	1.05	0.470	0.943	0.889	0.877	0.050	8667420
Dissolved Sodium (Na)	mg/L	0.682	0.528	0.562	0.786	0.700	0.050	8667420
Dissolved Sulphur (S)	mg/L	5.0	3.3	6.8	6.7	6.3	3.0	8667420

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RH8063	RH8064	RH8065	RH8066		
Sampling Date		2017/06/14 11:27	2017/06/13 15:51	2017/06/13 17:27	2017/06/17 15:21		
COC Number		08439494	08439494	08439494	08439494		
	UNITS	KZ-26	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	119	<0.50	88.8	<0.50	0.50	8667042
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8670487
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.0116	<0.00050	0.0188	<0.00050	0.00050	8668393
Dissolved Antimony (Sb)	mg/L	0.000107	<0.000020	0.000047	<0.000020	0.000020	8668393
Dissolved Arsenic (As)	mg/L	0.000829	<0.000020	0.000260	<0.000020	0.000020	8668393
Dissolved Barium (Ba)	mg/L	0.0413	<0.000020	0.0419	<0.000020	0.000020	8668393
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8668393
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8668393
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8668393
Dissolved Cadmium (Cd)	mg/L	0.0000130	<0.0000050	0.0000420	<0.0000050	0.0000050	8668393
Dissolved Chromium (Cr)	mg/L	0.00010	<0.00010	0.00010	<0.00010	0.00010	8668393
Dissolved Cobalt (Co)	mg/L	0.0000530	<0.0000050	0.0000390	<0.0000050	0.0000050	8668393
Dissolved Copper (Cu)	mg/L	0.00147	<0.000050	0.00163	<0.000050	0.000050	8668393
Dissolved Iron (Fe)	mg/L	0.100	<0.0010	0.0875	<0.0010	0.0010	8668393
Dissolved Lead (Pb)	mg/L	0.0000350	<0.0000050	0.0000420	<0.0000050	0.0000050	8668393
Dissolved Lithium (Li)	mg/L	0.00202	<0.00050	0.00092	<0.00050	0.00050	8668393
Dissolved Manganese (Mn)	mg/L	0.00909	<0.000050	0.0116	<0.000050	0.000050	8668393
Dissolved Molybdenum (Mo)	mg/L	0.000802	<0.000050	0.000437	<0.000050	0.000050	8668393
Dissolved Nickel (Ni)	mg/L	0.00204	<0.000020	0.000703	<0.000020	0.000020	8668393
Dissolved Phosphorus (P)	mg/L	0.0075	<0.0020	0.0062	<0.0020	0.0020	8668393
Dissolved Selenium (Se)	mg/L	0.000356	<0.000040	0.000583	<0.000040	0.000040	8668393
Dissolved Silicon (Si)	mg/L	2.77	<0.050	2.09	<0.050	0.050	8668393
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8668393
Dissolved Strontium (Sr)	mg/L	0.0995	<0.000050	0.0890	<0.000050	0.000050	8668393
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8668393
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8668393
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8668393
Dissolved Uranium (U)	mg/L	0.00101	<0.0000020	0.000426	<0.0000020	0.0000020	8668393
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8668393
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RH8063	RH8064	RH8065	RH8066		
Sampling Date		2017/06/14 11:27	2017/06/13 15:51	2017/06/13 17:27	2017/06/17 15:21		
COC Number		08439494	08439494	08439494	08439494		
	UNITS	KZ-26	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00075	<0.00010	0.0108	<0.00010	0.00010	8668393
Dissolved Zirconium (Zr)	mg/L	0.00012	<0.00010	0.00011	<0.00010	0.00010	8668393
Dissolved Calcium (Ca)	mg/L	32.1	<0.050	29.0	<0.050	0.050	8667420
Dissolved Magnesium (Mg)	mg/L	9.46	<0.050	3.99	<0.050	0.050	8667420
Dissolved Potassium (K)	mg/L	0.848	<0.050	0.922	<0.050	0.050	8667420
Dissolved Sodium (Na)	mg/L	0.805	<0.050	0.559	<0.050	0.050	8667420
Dissolved Sulphur (S)	mg/L	5.8	<3.0	6.8	<3.0	3.0	8667420
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RH7997	RH8032	RH8033	RH8034	RH8035		
Sampling Date		2017/06/13 13:33	2017/06/13 14:40	2017/06/13 16:54	2017/06/14 15:53	2017/06/14 16:06		
COC Number		08439493	08439493	08439493	08439493	08439493		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-15	KZ-16	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	61.5	82.6	88.4	92.4	78.3	0.50	8667089
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8670504
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0312	0.116	0.178	0.0297	0.0138	0.00050	8668669
Total Antimony (Sb)	mg/L	0.000027	<0.000020	0.000058	0.000036	0.000022	0.000020	8668669
Total Arsenic (As)	mg/L	0.000109	0.000155	0.000466	0.000458	0.000251	0.000020	8668669
Total Barium (Ba)	mg/L	0.0370	0.0253	0.0465	0.0414	0.0360	0.000020	8668669
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8668669
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	0.0000130	<0.0000050	<0.0000050	0.0000050	8668669
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8668669
Total Cadmium (Cd)	mg/L	0.000296	0.0000290	0.000115	0.0000360	0.0000170	0.0000050	8668669
Total Chromium (Cr)	mg/L	<0.00010	0.00031	0.00042	0.00012	<0.00010	0.00010	8668669
Total Cobalt (Co)	mg/L	0.0000310	0.000123	0.000275	0.0000690	0.0000270	0.0000050	8668669
Total Copper (Cu)	mg/L	0.00252	0.000822	0.00230	0.00139	0.00129	0.000050	8668669
Total Iron (Fe)	mg/L	0.0311	0.179	0.560	0.109	0.0204	0.0010	8668669
Total Lead (Pb)	mg/L	0.000161	0.000272	0.000527	0.000107	0.0000110	0.0000050	8668669
Total Lithium (Li)	mg/L	0.00057	<0.00050	0.00120	0.00107	0.00080	0.00050	8668669
Total Manganese (Mn)	mg/L	0.00110	0.0103	0.0237	0.0180	0.00290	0.000050	8668669
Total Molybdenum (Mo)	mg/L	0.000533	0.000259	0.000451	0.000525	0.000275	0.000050	8668669
Total Nickel (Ni)	mg/L	0.000689	0.000691	0.00118	0.000830	0.000583	0.000020	8668669
Total Phosphorus (P)	mg/L	0.0038	0.0077	0.0182	0.0100	0.0070	0.0020	8668669
Total Selenium (Se)	mg/L	0.000745	0.000340	0.000532	0.000441	0.000291	0.000040	8668669
Total Silicon (Si)	mg/L	1.97	2.17	2.41	2.17	1.99	0.050	8668669
Total Silver (Ag)	mg/L	0.0000050	<0.0000050	0.0000160	0.0000070	<0.0000050	0.0000050	8668669
Total Strontium (Sr)	mg/L	0.0653	0.0810	0.0936	0.0939	0.0823	0.000050	8668669
Total Thallium (Tl)	mg/L	0.0000070	0.0000020	0.0000050	<0.0000020	<0.0000020	0.0000020	8668669
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8668669
Total Titanium (Ti)	mg/L	0.00113	0.00700	0.0143	0.00134	<0.00050	0.00050	8668669
Total Uranium (U)	mg/L	0.00103	0.000271	0.000413	0.000727	0.000397	0.0000020	8668669
Total Vanadium (V)	mg/L	<0.00020	0.00042	0.00056	<0.00020	<0.00020	0.00020	8668669

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RH7997	RH8032	RH8033	RH8034	RH8035		
Sampling Date		2017/06/13 13:33	2017/06/13 14:40	2017/06/13 16:54	2017/06/14 15:53	2017/06/14 16:06		
COC Number		08439493	08439493	08439493	08439493	08439493		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-15	KZ-16	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0528	0.00152	0.0215	0.00443	0.00106	0.00010	8668669
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00014	<0.00010	<0.00010	0.00010	8668669
Total Calcium (Ca)	mg/L	21.3	27.5	29.6	29.1	25.3	0.050	8667173
Total Magnesium (Mg)	mg/L	2.02	3.38	3.50	4.79	3.69	0.050	8667173
Total Potassium (K)	mg/L	1.21	0.565	0.980	0.906	0.895	0.050	8667173
Total Sodium (Na)	mg/L	0.484	0.439	0.549	0.605	0.564	0.050	8667173
Total Sulphur (S)	mg/L	10.1	4.3	6.8	5.7	4.4	3.0	8667173

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RH8036	RH8037	RH8062	RH8064	RH8065		
Sampling Date		2017/06/14 15:22	2017/06/13 17:12	2017/06/14 13:00	2017/06/13 15:51	2017/06/13 17:27		
COC Number		08439493	08439493	08439494	08439494	08439494		
	UNITS	KZ-17	KZ-18	KZ-22	KZ-28	KZ-37	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	116	107	118	<0.50	89.7	0.50	8667089
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8670504
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00394	0.0618	0.0417	0.00080	0.114	0.00050	8668669
Total Antimony (Sb)	mg/L	0.000023	0.000038	0.000088	<0.000020	0.000060	0.000020	8668669
Total Arsenic (As)	mg/L	0.000182	0.000462	0.00161	<0.000020	0.000482	0.000020	8668669
Total Barium (Ba)	mg/L	0.0472	0.0280	0.0426	<0.000020	0.0457	0.000020	8668669
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000011	0.000010	8668669
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8668669
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8668669
Total Cadmium (Cd)	mg/L	0.0000150	0.0000330	0.0000300	<0.0000050	0.0000900	0.0000050	8668669
Total Chromium (Cr)	mg/L	<0.00010	0.00022	0.00015	<0.00010	0.00027	0.00010	8668669
Total Cobalt (Co)	mg/L	0.0000140	0.0000400	0.000132	<0.0000050	0.000170	0.0000050	8668669
Total Copper (Cu)	mg/L	0.00123	0.00131	0.00143	<0.000050	0.00205	0.000050	8668669
Total Iron (Fe)	mg/L	0.0035	0.0476	0.321	<0.0010	0.407	0.0010	8668669
Total Lead (Pb)	mg/L	<0.0000050	0.0000130	0.0000790	<0.0000050	0.000464	0.0000050	8668669
Total Lithium (Li)	mg/L	0.00203	0.00090	0.00170	<0.00050	0.00102	0.00050	8668669
Total Manganese (Mn)	mg/L	0.000283	0.00377	0.0384	<0.000050	0.0217	0.000050	8668669
Total Molybdenum (Mo)	mg/L	0.000486	0.000741	0.000826	<0.000050	0.000447	0.000050	8668669
Total Nickel (Ni)	mg/L	0.000523	0.00179	0.00226	<0.000020	0.00105	0.000020	8668669
Total Phosphorus (P)	mg/L	0.0035	0.0231	0.0159	<0.0020	0.0191	0.0020	8668669
Total Selenium (Se)	mg/L	0.000477	0.000543	0.000413	<0.000040	0.000558	0.000040	8668669
Total Silicon (Si)	mg/L	2.43	2.88	2.78	<0.050	2.34	0.050	8668669
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000070	0.0000050	8668669
Total Strontium (Sr)	mg/L	0.114	0.0915	0.102	<0.000050	0.0924	0.000050	8668669
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000040	0.0000020	8668669
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8668669
Total Titanium (Ti)	mg/L	<0.00050	0.00086	0.00149	<0.00050	0.00754	0.00050	8668669
Total Uranium (U)	mg/L	0.000812	0.000727	0.00105	<0.0000020	0.000447	0.0000020	8668669
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00027	0.00020	8668669

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RH8036	RH8037	RH8062	RH8064	RH8065		
Sampling Date		2017/06/14 15:22	2017/06/13 17:12	2017/06/14 13:00	2017/06/13 15:51	2017/06/13 17:27		
COC Number		08439493	08439493	08439494	08439494	08439494		
	UNITS	KZ-17	KZ-18	KZ-22	KZ-28	KZ-37	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00081	0.00166	0.00321	<0.00010	0.0187	0.00010	8668669
Total Zirconium (Zr)	mg/L	<0.00010	0.00019	0.00013	<0.00010	0.00015	0.00010	8668669
Total Calcium (Ca)	mg/L	34.8	28.4	32.1	<0.050	29.3	0.050	8667173
Total Magnesium (Mg)	mg/L	7.02	8.91	9.32	<0.050	4.01	0.050	8667173
Total Potassium (K)	mg/L	1.06	0.472	0.927	<0.050	0.911	0.050	8667173
Total Sodium (Na)	mg/L	0.768	0.560	0.772	<0.050	0.563	0.050	8667173
Total Sulphur (S)	mg/L	5.4	3.6	6.6	<3.0	6.9	3.0	8667173

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RH8066		
Sampling Date		2017/06/17 15:21		
COC Number		08439494		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	<0.50	0.50	8667089
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8670504
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	<0.00050	0.00050	8668669
Total Antimony (Sb)	mg/L	<0.000020	0.000020	8668669
Total Arsenic (As)	mg/L	<0.000020	0.000020	8668669
Total Barium (Ba)	mg/L	<0.000020	0.000020	8668669
Total Beryllium (Be)	mg/L	<0.000010	0.000010	8668669
Total Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8668669
Total Boron (B)	mg/L	<0.010	0.010	8668669
Total Cadmium (Cd)	mg/L	<0.0000050	0.0000050	8668669
Total Chromium (Cr)	mg/L	<0.00010	0.00010	8668669
Total Cobalt (Co)	mg/L	<0.0000050	0.0000050	8668669
Total Copper (Cu)	mg/L	<0.000050	0.000050	8668669
Total Iron (Fe)	mg/L	<0.0010	0.0010	8668669
Total Lead (Pb)	mg/L	<0.0000050	0.0000050	8668669
Total Lithium (Li)	mg/L	<0.00050	0.00050	8668669
Total Manganese (Mn)	mg/L	<0.000050	0.000050	8668669
Total Molybdenum (Mo)	mg/L	<0.000050	0.000050	8668669
Total Nickel (Ni)	mg/L	<0.000020	0.000020	8668669
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8668669
Total Selenium (Se)	mg/L	<0.000040	0.000040	8668669
Total Silicon (Si)	mg/L	<0.050	0.050	8668669
Total Silver (Ag)	mg/L	<0.0000050	0.0000050	8668669
Total Strontium (Sr)	mg/L	<0.000050	0.000050	8668669
Total Thallium (Tl)	mg/L	<0.0000020	0.0000020	8668669
Total Tin (Sn)	mg/L	<0.00020	0.00020	8668669
Total Titanium (Ti)	mg/L	<0.00050	0.00050	8668669
Total Uranium (U)	mg/L	<0.0000020	0.0000020	8668669
Total Vanadium (V)	mg/L	<0.00020	0.00020	8668669
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RH8066		
Sampling Date		2017/06/17 15:21		
COC Number		08439494		
	UNITS	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	<0.00010	0.00010	8668669
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8668669
Total Calcium (Ca)	mg/L	<0.050	0.050	8667173
Total Magnesium (Mg)	mg/L	<0.050	0.050	8667173
Total Potassium (K)	mg/L	<0.050	0.050	8667173
Total Sodium (Na)	mg/L	<0.050	0.050	8667173
Total Sulphur (S)	mg/L	<3.0	3.0	8667173
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RH8038	RH8061	RH8063		
Sampling Date		2017/06/13 17:27	2017/06/14 13:45	2017/06/14 11:27		
COC Number		08439493	08439494	08439494		
	UNITS	KZ-19	KZ-21	KZ-26	RDL	QC Batch
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	86.6	134	118	0.50	8667089
Elements						
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8670504
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.103	0.0694	0.477	0.0030	8668368
Total Antimony (Sb)	mg/L	0.000054	0.000148	0.000178	0.000020	8668368
Total Arsenic (As)	mg/L	0.000434	0.00284	0.00240	0.000020	8668368
Total Barium (Ba)	mg/L	0.0443	0.0426	0.0653	0.000050	8668368
Total Beryllium (Be)	mg/L	0.000011	<0.000010	0.000035	0.000010	8668368
Total Bismuth (Bi)	mg/L	<0.000010	<0.000010	0.000014	0.000010	8668368
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	8668368
Total Cadmium (Cd)	mg/L	0.0000780	0.0000290	0.000102	0.0000050	8668368
Total Chromium (Cr)	mg/L	0.00029	0.00027	0.00136	0.00010	8668368
Total Cobalt (Co)	mg/L	0.000164	0.000233	0.000846	0.000010	8668368
Total Copper (Cu)	mg/L	0.00205	0.00136	0.00402	0.00010	8668368
Total Iron (Fe)	mg/L	0.382	0.594	1.23	0.0050	8668368
Total Lead (Pb)	mg/L	0.000418	0.000107	0.00120	0.000020	8668368
Total Lithium (Li)	mg/L	0.00099	0.00190	0.00238	0.00050	8668368
Total Manganese (Mn)	mg/L	0.0213	0.0753	0.0878	0.00010	8668368
Total Molybdenum (Mo)	mg/L	0.000430	0.00125	0.000710	0.000050	8668368
Total Nickel (Ni)	mg/L	0.00103	0.00381	0.00512	0.00010	8668368
Total Phosphorus (P)	mg/L	0.0277	0.0351	0.0775	0.0050	8668368
Total Selenium (Se)	mg/L	0.000533	0.000415	0.000427	0.000040	8668368
Total Silicon (Si)	mg/L	2.27	3.29	3.41	0.050	8668368
Total Silver (Ag)	mg/L	<0.000010	<0.000010	0.000025	0.000010	8668368
Total Strontium (Sr)	mg/L	0.0930	0.106	0.107	0.000050	8668368
Total Thallium (Tl)	mg/L	0.0000030	0.0000020	0.0000100	0.0000020	8668368
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8668368
Total Titanium (Ti)	mg/L	0.0065	0.0031	0.0139	0.0020	8668368
Total Uranium (U)	mg/L	0.000437	0.00135	0.00107	0.0000050	8668368
Total Vanadium (V)	mg/L	0.00035	0.00039	0.00198	0.00020	8668368
RDL = Reportable Detection Limit						

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RH8038	RH8061	RH8063		
Sampling Date		2017/06/13 17:27	2017/06/14 13:45	2017/06/14 11:27		
COC Number		08439493	08439494	08439494		
	UNITS	KZ-19	KZ-21	KZ-26	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0180	0.0041	0.0094	0.0010	8668368
Total Zirconium (Zr)	mg/L	0.00015	0.00017	0.00047	0.00010	8668368
Total Calcium (Ca)	mg/L	28.4	33.8	31.7	0.25	8667173
Total Magnesium (Mg)	mg/L	3.81	12.1	9.53	0.25	8667173
Total Potassium (K)	mg/L	0.89	0.93	0.91	0.25	8667173
Total Sodium (Na)	mg/L	0.54	0.84	0.83	0.25	8667173
Total Sulphur (S)	mg/L	6.7	7.3	6.1	3.0	8667173
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RH7997
Sample ID: KZ-2
Matrix: Water

Collected: 2017/06/13
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8668818	N/A	2017/06/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8668831	2017/06/19	2017/06/19	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8669400	N/A	2017/06/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8669858	N/A	2017/06/20	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8669859	N/A	2017/06/20	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8668534	N/A	2017/06/19	Isabel Choi
Conductance - water	AT/ALK	8668834	N/A	2017/06/19	Wilson Au Yueng
Fluoride	ISE/ISE	8671416	N/A	2017/06/21	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8667089	N/A	2017/06/20	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8667042	N/A	2017/06/20	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8670487	N/A	2017/06/21	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8670504	2017/06/21	2017/06/21	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8667416	N/A	2017/06/20	Automated Statchk
Ion Balance	CALC	8667417	N/A	2017/06/20	Automated Statchk
Sum of cations, anions	CALC	8667418	N/A	2017/06/20	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8667420	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8668393	N/A	2017/06/19	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8667173	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8668669	N/A	2017/06/20	Andrew An
Ammonia-N (Preserved)	KONE/COL	8669268	N/A	2017/06/20	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8667473	N/A	2017/06/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8667474	N/A	2017/06/17	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8667421	N/A	2017/06/20	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/17	Marilou H. Truant
pH Water	AT/ALK	8668833	N/A	2017/06/19	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8669401	N/A	2017/06/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8672675	2017/06/22	2017/06/22	Isabel Choi
Total Phosphorus - Low Level Unpreserved	KONE/COL	8668906	N/A	2017/06/20	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8668187	2017/06/19	2017/06/20	Beatriz Ortega

Maxxam ID: RH7997 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2017/06/13
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8669858	N/A	2017/06/20	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8669859	N/A	2017/06/20	Tatyana Serzhanova
Elements by ICPMS Low Level (total)	ICP/CRCM	8668669	N/A	2017/06/20	Andrew An

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RH8032
Sample ID: KZ-6
Matrix: Water

Collected: 2017/06/13
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8668818	N/A	2017/06/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8668831	2017/06/19	2017/06/19	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8669400	N/A	2017/06/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8669858	N/A	2017/06/20	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8669859	N/A	2017/06/20	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8668534	N/A	2017/06/19	Isabel Choi
Conductance - water	AT/ALK	8668834	N/A	2017/06/19	Wilson Au Yueng
Fluoride	ISE/ISE	8671416	N/A	2017/06/21	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8667089	N/A	2017/06/20	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8667042	N/A	2017/06/20	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8670487	N/A	2017/06/21	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8670504	2017/06/21	2017/06/21	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8667416	N/A	2017/06/20	Automated Statchk
Ion Balance	CALC	8667417	N/A	2017/06/20	Automated Statchk
Sum of cations, anions	CALC	8667418	N/A	2017/06/20	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8667420	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8668393	N/A	2017/06/19	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8667173	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8668669	N/A	2017/06/20	Andrew An
Ammonia-N (Preserved)	KONE/COL	8669268	N/A	2017/06/20	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8667473	N/A	2017/06/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8667474	N/A	2017/06/17	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8667421	N/A	2017/06/20	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/17	Marilou H. Truant
pH Water	AT/ALK	8668833	N/A	2017/06/19	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8669401	N/A	2017/06/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8672675	2017/06/22	2017/06/22	Isabel Choi
Total Phosphorus - Low Level Unpreserved	KONE/COL	8668906	N/A	2017/06/20	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8668187	2017/06/19	2017/06/20	Beatriz Ortega

Maxxam ID: RH8033
Sample ID: KZ-9
Matrix: Water

Collected: 2017/06/13
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8668818	N/A	2017/06/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8668831	2017/06/19	2017/06/19	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8669400	N/A	2017/06/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8669858	N/A	2017/06/20	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8669859	N/A	2017/06/20	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8668534	N/A	2017/06/19	Isabel Choi
Conductance - water	AT/ALK	8668834	N/A	2017/06/19	Wilson Au Yueng
Fluoride	ISE/ISE	8671416	N/A	2017/06/21	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8667089	N/A	2017/06/20	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RH8033
Sample ID: KZ-9
Matrix: Water

Collected: 2017/06/13
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8667042	N/A	2017/06/20	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8670487	N/A	2017/06/21	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8670504	2017/06/21	2017/06/21	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8667416	N/A	2017/06/20	Automated Statchk
Ion Balance	CALC	8667417	N/A	2017/06/20	Automated Statchk
Sum of cations, anions	CALC	8667418	N/A	2017/06/20	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8667420	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8668393	N/A	2017/06/19	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8667173	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8668669	N/A	2017/06/20	Andrew An
Ammonia-N (Preserved)	KONE/COL	8669268	N/A	2017/06/20	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8667473	N/A	2017/06/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8667474	N/A	2017/06/17	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8667421	N/A	2017/06/20	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/17	Marilou H. Truant
pH Water	AT/ALK	8668833	N/A	2017/06/19	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8669401	N/A	2017/06/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8672675	2017/06/22	2017/06/22	Isabel Choi
Total Phosphorus - Low Level Unpreserved	KONE/COL	8668906	N/A	2017/06/20	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8668187	2017/06/19	2017/06/20	Beatriz Ortega

Maxxam ID: RH8033 Dup
Sample ID: KZ-9
Matrix: Water

Collected: 2017/06/13
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8669400	N/A	2017/06/19	Balwinder Bassi
Nitrate+Nitrite (N) (low level)	TRAA/COL	8667473	N/A	2017/06/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8667474	N/A	2017/06/17	Isaac Wang
Sulphate by Automated Colourimetry	KONE/COL	8669401	N/A	2017/06/19	Balwinder Bassi

Maxxam ID: RH8034
Sample ID: KZ-15
Matrix: Water

Collected: 2017/06/14
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8668818	N/A	2017/06/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8668831	2017/06/19	2017/06/19	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8669400	N/A	2017/06/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8669858	N/A	2017/06/20	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8669859	N/A	2017/06/20	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8668534	N/A	2017/06/19	Isabel Choi
Conductance - water	AT/ALK	8668834	N/A	2017/06/19	Wilson Au Yueng
Fluoride	ISE/ISE	8671416	N/A	2017/06/21	Balwinder Bassi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RH8034
Sample ID: KZ-15
Matrix: Water

Collected: 2017/06/14
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness Total (calculated as CaCO3)	CALC	8667089	N/A	2017/06/20	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8667042	N/A	2017/06/20	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8670487	N/A	2017/06/21	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8670504	2017/06/21	2017/06/21	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8667416	N/A	2017/06/20	Automated Statchk
Ion Balance	CALC	8667417	N/A	2017/06/20	Automated Statchk
Sum of cations, anions	CALC	8667418	N/A	2017/06/20	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8667420	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8668393	N/A	2017/06/19	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8667173	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8668669	N/A	2017/06/20	Andrew An
Ammonia-N (Preserved)	KONE/COL	8669268	N/A	2017/06/20	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8667473	N/A	2017/06/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8667474	N/A	2017/06/17	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8667421	N/A	2017/06/20	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/17	Marilou H. Truant
pH Water	AT/ALK	8668833	N/A	2017/06/19	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8669401	N/A	2017/06/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8672675	2017/06/22	2017/06/22	Isabel Choi
Total Phosphorus - Low Level Unpreserved	KONE/COL	8668906	N/A	2017/06/20	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8668839	2017/06/19	2017/06/20	Tajinder Sohal

Maxxam ID: RH8035
Sample ID: KZ-16
Matrix: Water

Collected: 2017/06/14
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8668818	N/A	2017/06/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8668831	2017/06/19	2017/06/19	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8669400	N/A	2017/06/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8669858	N/A	2017/06/20	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8669859	N/A	2017/06/20	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8668534	N/A	2017/06/19	Isabel Choi
Conductance - water	AT/ALK	8668834	N/A	2017/06/19	Wilson Au Yueng
Fluoride	ISE/ISE	8671416	N/A	2017/06/21	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8667089	N/A	2017/06/20	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8667042	N/A	2017/06/20	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8670487	N/A	2017/06/21	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8670504	2017/06/21	2017/06/21	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8667416	N/A	2017/06/20	Automated Statchk
Ion Balance	CALC	8667417	N/A	2017/06/20	Automated Statchk
Sum of cations, anions	CALC	8667418	N/A	2017/06/20	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8667420	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8668393	N/A	2017/06/19	Andrew An

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RH8035
Sample ID: KZ-16
Matrix: Water

Collected: 2017/06/14
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8667173	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8668669	N/A	2017/06/20	Andrew An
Ammonia-N (Preserved)	KONE/COL	8669270	N/A	2017/06/20	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8667473	N/A	2017/06/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8667474	N/A	2017/06/17	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8667421	N/A	2017/06/20	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/17	Marilou H. Truant
pH Water	AT/ALK	8668833	N/A	2017/06/19	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8669401	N/A	2017/06/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8672675	2017/06/22	2017/06/22	Isabel Choi
Total Phosphorus - Low Level Unpreserved	KONE/COL	8668906	N/A	2017/06/20	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8668839	2017/06/19	2017/06/20	Tajinder Sohal

Maxxam ID: RH8036
Sample ID: KZ-17
Matrix: Water

Collected: 2017/06/14
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8668818	N/A	2017/06/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8668831	2017/06/19	2017/06/19	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8669400	N/A	2017/06/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8669858	N/A	2017/06/20	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8669859	N/A	2017/06/20	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8668534	N/A	2017/06/19	Isabel Choi
Conductance - water	AT/ALK	8668834	N/A	2017/06/19	Wilson Au Yueng
Fluoride	ISE/ISE	8671416	N/A	2017/06/21	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8667089	N/A	2017/06/20	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8667042	N/A	2017/06/20	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8670487	N/A	2017/06/21	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8670504	2017/06/21	2017/06/21	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8667416	N/A	2017/06/20	Automated Statchk
Ion Balance	CALC	8667417	N/A	2017/06/20	Automated Statchk
Sum of cations, anions	CALC	8667418	N/A	2017/06/20	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8667420	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8668393	N/A	2017/06/19	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8667173	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8668669	N/A	2017/06/20	Andrew An
Ammonia-N (Preserved)	KONE/COL	8669268	N/A	2017/06/20	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8667473	N/A	2017/06/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8667474	N/A	2017/06/17	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8667421	N/A	2017/06/20	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/17	Marilou H. Truant
pH Water	AT/ALK	8668833	N/A	2017/06/19	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8669401	N/A	2017/06/19	Balwinder Bassi

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RH8036 **Collected:** 2017/06/14
Sample ID: KZ-17 **Shipped:**
Matrix: Water **Received:** 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8672675	2017/06/22	2017/06/22	Isabel Choi
Total Phosphorus - Low Level Unpreserved	KONE/COL	8668906	N/A	2017/06/20	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8668839	2017/06/19	2017/06/20	Tajinder Sohal

Maxxam ID: RH8036 Dup **Collected:** 2017/06/14
Sample ID: KZ-17 **Shipped:**
Matrix: Water **Received:** 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8668534	N/A	2017/06/19	Isabel Choi

Maxxam ID: RH8037 **Collected:** 2017/06/13
Sample ID: KZ-18 **Shipped:**
Matrix: Water **Received:** 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8668818	N/A	2017/06/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8668831	2017/06/19	2017/06/19	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8669400	N/A	2017/06/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8669858	N/A	2017/06/20	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8669859	N/A	2017/06/20	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8668534	N/A	2017/06/19	Isabel Choi
Conductance - water	AT/ALK	8668834	N/A	2017/06/19	Wilson Au Yueng
Fluoride	ISE/ISE	8671416	N/A	2017/06/21	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8667089	N/A	2017/06/20	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8667042	N/A	2017/06/20	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8670487	N/A	2017/06/21	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8670504	2017/06/21	2017/06/21	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8667416	N/A	2017/06/20	Automated Statchk
Ion Balance	CALC	8667417	N/A	2017/06/20	Automated Statchk
Sum of cations, anions	CALC	8667418	N/A	2017/06/20	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8667420	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8668393	N/A	2017/06/19	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8667173	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8668669	N/A	2017/06/20	Andrew An
Ammonia-N (Preserved)	KONE/COL	8669270	N/A	2017/06/20	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8667473	N/A	2017/06/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8667474	N/A	2017/06/17	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8667421	N/A	2017/06/20	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/17	Marilou H. Truant
pH Water	AT/ALK	8668833	N/A	2017/06/19	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8669401	N/A	2017/06/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8672675	2017/06/22	2017/06/22	Isabel Choi
Total Phosphorus - Low Level Unpreserved	KONE/COL	8668906	N/A	2017/06/20	Diana Cruz

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RH8037
Sample ID: KZ-18
Matrix: Water

Collected: 2017/06/13
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Suspended Solids-Low Level	BAL/BAL	8668187	2017/06/19	2017/06/20	Beatriz Ortega

Maxxam ID: RH8038
Sample ID: KZ-19
Matrix: Water

Collected: 2017/06/13
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8668818	N/A	2017/06/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8668831	2017/06/19	2017/06/19	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8669400	N/A	2017/06/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8669858	N/A	2017/06/20	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8669859	N/A	2017/06/20	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8668534	N/A	2017/06/19	Isabel Choi
Conductance - water	AT/ALK	8668834	N/A	2017/06/19	Wilson Au Yueng
Fluoride	ISE/ISE	8671416	N/A	2017/06/21	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8667089	N/A	2017/06/21	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8667042	N/A	2017/06/20	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8670487	N/A	2017/06/21	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8670504	2017/06/21	2017/06/21	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8667416	N/A	2017/06/20	Automated Statchk
Ion Balance	CALC	8667417	N/A	2017/06/20	Automated Statchk
Sum of cations, anions	CALC	8667418	N/A	2017/06/20	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8667420	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8668393	N/A	2017/06/19	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8668368	2017/06/19	2017/06/20	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8667173	N/A	2017/06/21	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8669268	N/A	2017/06/20	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8667473	N/A	2017/06/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8667474	N/A	2017/06/17	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8667421	N/A	2017/06/20	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/17	Marilou H. Truant
pH Water	AT/ALK	8668833	N/A	2017/06/19	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8669401	N/A	2017/06/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8672675	2017/06/22	2017/06/22	Isabel Choi
Total Phosphorus - Low Level Unpreserved	KONE/COL	8668906	N/A	2017/06/20	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8668187	2017/06/19	2017/06/20	Beatriz Ortega

Maxxam ID: RH8061
Sample ID: KZ-21
Matrix: Water

Collected: 2017/06/14
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8668818	N/A	2017/06/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8668831	2017/06/19	2017/06/19	Wilson Au Yueng

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RH8061
Sample ID: KZ-21
Matrix: Water

Collected: 2017/06/14
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	KONE/COL	8669400	N/A	2017/06/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8669858	N/A	2017/06/20	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8669859	N/A	2017/06/20	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8668534	N/A	2017/06/19	Isabel Choi
Conductance - water	AT/ALK	8668834	N/A	2017/06/19	Wilson Au Yueng
Fluoride	ISE/ISE	8671416	N/A	2017/06/21	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8667089	N/A	2017/06/21	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8667042	N/A	2017/06/20	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8670487	N/A	2017/06/21	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8670504	2017/06/21	2017/06/21	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8667416	N/A	2017/06/20	Automated Statchk
Ion Balance	CALC	8667417	N/A	2017/06/20	Automated Statchk
Sum of cations, anions	CALC	8667418	N/A	2017/06/20	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8667420	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8668393	N/A	2017/06/19	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8668368	2017/06/19	2017/06/20	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8667173	N/A	2017/06/21	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8669268	N/A	2017/06/20	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8667473	N/A	2017/06/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8667474	N/A	2017/06/17	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8667421	N/A	2017/06/20	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/17	Marilou H. Truant
pH Water	AT/ALK	8668833	N/A	2017/06/19	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8669401	N/A	2017/06/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8672676	2017/06/22	2017/06/22	Isabel Choi
Total Phosphorus - Low Level Unpreserved	KONE/COL	8668906	N/A	2017/06/20	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8669844	2017/06/20	2017/06/21	Tajinder Sohal

Maxxam ID: RH8061 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2017/06/14
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8672676	2017/06/22	2017/06/22	Isabel Choi

Maxxam ID: RH8062
Sample ID: KZ-22
Matrix: Water

Collected: 2017/06/14
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8668818	N/A	2017/06/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8668831	2017/06/19	2017/06/19	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8669400	N/A	2017/06/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8669858	N/A	2017/06/20	Tatyana Serzhanova

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RH8062
Sample ID: KZ-22
Matrix: Water

Collected: 2017/06/14
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide WAD (weak acid dissociable)	TECH/COL	8669859	N/A	2017/06/20	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8668534	N/A	2017/06/19	Isabel Choi
Conductance - water	AT/ALK	8668834	N/A	2017/06/19	Wilson Au Yueng
Fluoride	ISE/ISE	8671416	N/A	2017/06/21	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8667089	N/A	2017/06/20	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8667042	N/A	2017/06/20	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8670487	N/A	2017/06/21	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8670504	2017/06/21	2017/06/21	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8667416	N/A	2017/06/20	Automated Statchk
Ion Balance	CALC	8667417	N/A	2017/06/20	Automated Statchk
Sum of cations, anions	CALC	8667418	N/A	2017/06/20	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8667420	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8668393	N/A	2017/06/19	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8667173	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8668669	N/A	2017/06/20	Andrew An
Ammonia-N (Preserved)	KONE/COL	8669270	N/A	2017/06/20	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8667473	N/A	2017/06/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8667474	N/A	2017/06/17	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8667421	N/A	2017/06/20	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/17	Marilou H. Truant
pH Water	AT/ALK	8668833	N/A	2017/06/19	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8669401	N/A	2017/06/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8672676	2017/06/22	2017/06/22	Isabel Choi
Total Phosphorus - Low Level Unpreserved	KONE/COL	8668906	N/A	2017/06/20	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8669844	2017/06/20	2017/06/21	Tajinder Sohal

Maxxam ID: RH8063
Sample ID: KZ-26
Matrix: Water

Collected: 2017/06/14
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8668818	N/A	2017/06/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8668831	2017/06/19	2017/06/19	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8669400	N/A	2017/06/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8669858	N/A	2017/06/20	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8669859	N/A	2017/06/20	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8668534	N/A	2017/06/19	Isabel Choi
Conductance - water	AT/ALK	8668834	N/A	2017/06/19	Wilson Au Yueng
Fluoride	ISE/ISE	8670106	N/A	2017/06/20	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8667089	N/A	2017/06/21	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8667042	N/A	2017/06/20	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8670487	N/A	2017/06/21	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8670504	2017/06/21	2017/06/21	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8667416	N/A	2017/06/20	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RH8063
Sample ID: KZ-26
Matrix: Water

Collected: 2017/06/14
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance	CALC	8667417	N/A	2017/06/20	Automated Statchk
Sum of cations, anions	CALC	8667418	N/A	2017/06/20	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8667420	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8668393	N/A	2017/06/19	Andrew An
Elements by ICPMS Digested LL (total)	ICP/CRCM	8668368	2017/06/19	2017/06/20	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8667173	N/A	2017/06/21	Automated Statchk
Ammonia-N (Preserved)	KONE/COL	8669268	N/A	2017/06/20	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8667473	N/A	2017/06/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8667474	N/A	2017/06/17	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8667421	N/A	2017/06/20	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/17	Marilou H. Truant
pH Water	AT/ALK	8668833	N/A	2017/06/19	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8669401	N/A	2017/06/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8672676	2017/06/22	2017/06/22	Isabel Choi
Total Phosphorus - Low Level Unpreserved	KONE/COL	8668906	N/A	2017/06/20	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8669844	2017/06/20	2017/06/21	Tajinder Sohal

Maxxam ID: RH8063 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2017/06/14
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8670106	N/A	2017/06/20	Isaac Wang

Maxxam ID: RH8064
Sample ID: KZ-28
Matrix: Water

Collected: 2017/06/13
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8668818	N/A	2017/06/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8668831	2017/06/19	2017/06/19	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8669400	N/A	2017/06/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8669858	N/A	2017/06/20	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8669859	N/A	2017/06/20	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8668534	N/A	2017/06/19	Isabel Choi
Conductance - water	AT/ALK	8670611	N/A	2017/06/21	Maria Maclean
Fluoride	ISE/ISE	8671416	N/A	2017/06/21	Balwinder Bassi
Hardness Total (calculated as CaCO3)	CALC	8667089	N/A	2017/06/20	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8667042	N/A	2017/06/20	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8670487	N/A	2017/06/21	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8670504	2017/06/21	2017/06/21	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8667416	N/A	2017/06/20	Automated Statchk
Ion Balance	CALC	8667417	N/A	2017/06/20	Automated Statchk
Sum of cations, anions	CALC	8667418	N/A	2017/06/20	David Huang

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RH8064
Sample ID: KZ-28
Matrix: Water

Collected: 2017/06/13
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8667420	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8668393	N/A	2017/06/19	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8667173	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8668669	N/A	2017/06/20	Andrew An
Ammonia-N (Preserved)	KONE/COL	8672016	N/A	2017/06/22	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8667473	N/A	2017/06/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8667474	N/A	2017/06/17	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8667421	N/A	2017/06/20	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/17	Marilou H. Truant
pH Water	AT/ALK	8668833	N/A	2017/06/19	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8669401	N/A	2017/06/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8672676	2017/06/22	2017/06/22	Isabel Choi
Total Phosphorus - Low Level Unpreserved	KONE/COL	8668906	N/A	2017/06/20	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8668187	2017/06/19	2017/06/20	Beatriz Ortega

Maxxam ID: RH8064 Dup
Sample ID: KZ-28
Matrix: Water

Collected: 2017/06/13
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8668831	2017/06/19	2017/06/19	Wilson Au Yueng
Fluoride	ISE/ISE	8671416	N/A	2017/06/21	Balwinder Bassi
pH Water	AT/ALK	8668833	N/A	2017/06/19	Wilson Au Yueng

Maxxam ID: RH8065
Sample ID: KZ-37
Matrix: Water

Collected: 2017/06/13
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8668818	N/A	2017/06/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8668831	2017/06/19	2017/06/19	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8669400	N/A	2017/06/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8669858	N/A	2017/06/20	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8669859	N/A	2017/06/20	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8668534	N/A	2017/06/19	Isabel Choi
Conductance - water	AT/ALK	8668834	N/A	2017/06/19	Wilson Au Yueng
Fluoride	ISE/ISE	8670106	N/A	2017/06/20	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8667089	N/A	2017/06/20	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8667042	N/A	2017/06/20	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8670487	N/A	2017/06/21	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8670504	2017/06/21	2017/06/21	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8667416	N/A	2017/06/20	Automated Statchk
Ion Balance	CALC	8667417	N/A	2017/06/20	Automated Statchk
Sum of cations, anions	CALC	8667418	N/A	2017/06/20	Automated Statchk

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RH8065
Sample ID: KZ-37
Matrix: Water

Collected: 2017/06/13
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8667420	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8668393	N/A	2017/06/19	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8667173	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8668669	N/A	2017/06/20	Andrew An
Ammonia-N (Preserved)	KONE/COL	8669268	N/A	2017/06/20	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8667473	N/A	2017/06/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8667474	N/A	2017/06/17	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8667421	N/A	2017/06/20	Automated Statchk
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/06/17	Marilou H. Truant
pH Water	AT/ALK	8668833	N/A	2017/06/19	Wilson Au Yueng
Sulphate by Automated Colourimetry	KONE/COL	8669401	N/A	2017/06/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8672676	2017/06/22	2017/06/22	Isabel Choi
Total Phosphorus - Low Level Unpreserved	KONE/COL	8668906	N/A	2017/06/20	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8668187	2017/06/19	2017/06/20	Beatriz Ortega

Maxxam ID: RH8066
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/06/17
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8668818	N/A	2017/06/19	Wilson Au Yueng
Alkalinity - Water	AT/ALK	8668824	2017/06/19	2017/06/19	Wilson Au Yueng
Chloride by Automated Colourimetry	KONE/COL	8669400	N/A	2017/06/19	Balwinder Bassi
Cyanide SAD (strong acid dissociable)	TECH/COL	8669858	N/A	2017/06/20	Tatyana Serzhanova
Cyanide WAD (weak acid dissociable)	TECH/COL	8669859	N/A	2017/06/20	Tatyana Serzhanova
Carbon (DOC) - field filtered/preserved	TRAA/COL	8668534	N/A	2017/06/19	Isabel Choi
Conductance - water	AT/ALK	8668829	N/A	2017/06/19	Wilson Au Yueng
Fluoride	ISE/ISE	8670106	N/A	2017/06/20	Isaac Wang
Hardness Total (calculated as CaCO3)	CALC	8667089	N/A	2017/06/20	Automated Statchk
Hardness (calculated as CaCO3)	CALC	8667042	N/A	2017/06/20	Automated Statchk
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8670487	N/A	2017/06/21	Edwin Lamigo
Mercury (Total-LowLevel) by CVAF	CV/AF	8670504	2017/06/21	2017/06/21	Edwin Lamigo
Ion Balance (as Cations/Anions Ratio)	CALC	8667416	N/A	2017/06/20	Automated Statchk
Ion Balance	CALC	8667417	N/A	2017/06/20	Automated Statchk
Sum of cations, anions	CALC	8667418	N/A	2017/06/20	Automated Statchk
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8667420	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8668393	N/A	2017/06/19	Andrew An
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8667173	N/A	2017/06/20	Automated Statchk
Elements by ICPMS Low Level (total)	ICP/CRCM	8668669	N/A	2017/06/20	Andrew An
Ammonia-N (Preserved)	KONE/COL	8669268	N/A	2017/06/20	Clare Kwok
Nitrate+Nitrite (N) (low level)	TRAA/COL	8667473	N/A	2017/06/17	Isaac Wang
Nitrite (N) (low level)	TRAA/COL	8667474	N/A	2017/06/17	Isaac Wang
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8667421	N/A	2017/06/20	Automated Statchk
pH Water	AT/ALK	8668828	N/A	2017/06/19	Wilson Au Yueng

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

TEST SUMMARY

Maxxam ID: RH8066
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/06/17
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate by Automated Colourimetry	KONE/COL	8669401	N/A	2017/06/19	Balwinder Bassi
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8672676	2017/06/22	2017/06/22	Isabel Choi
Total Phosphorus - Low Level Unpreserved	KONE/COL	8668906	N/A	2017/06/20	Diana Cruz
Total Suspended Solids-Low Level	BAL/BAL	8669844	2017/06/20	2017/06/21	Tajinder Sohal

Maxxam ID: RH8066 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/06/17
Shipped:
Received: 2017/06/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8669268	N/A	2017/06/20	Clare Kwok

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.7°C
Package 2	4.7°C
Package 3	5.3°C

Samples collected on June 13th arrived at analytical lab past recommended hold time for Nitrate, Nitrite, Total Phosphorus and Dissolved Phosphorus.

Sample RH7997 [KZ-2] : Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample RH8038 [KZ-19] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RH8061 [KZ-21] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RH8063 [KZ-26] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RH8066 [TRIP BLANK] : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8667473	Nitrate plus Nitrite (N)	2017/06/17	99	80 - 120	109	80 - 120	<0.0020	mg/L	3.2	25
8667474	Nitrite (N)	2017/06/17	98	80 - 120	103	80 - 120	<0.0020	mg/L	NC	25
8668187	Total Suspended Solids	2017/06/20			100	80 - 120	<1.0	mg/L		
8668368	Total Aluminum (Al)	2017/06/20	92	80 - 120	100	80 - 120	<0.0030	mg/L		
8668368	Total Antimony (Sb)	2017/06/20	97	80 - 120	98	80 - 120	<0.000020	mg/L		
8668368	Total Arsenic (As)	2017/06/20	101	80 - 120	99	80 - 120	<0.000020	mg/L		
8668368	Total Barium (Ba)	2017/06/20	NC	80 - 120	98	80 - 120	<0.000050	mg/L		
8668368	Total Beryllium (Be)	2017/06/20	96	80 - 120	93	80 - 120	<0.000010	mg/L		
8668368	Total Bismuth (Bi)	2017/06/20	96	80 - 120	99	80 - 120	<0.000010	mg/L		
8668368	Total Boron (B)	2017/06/20	92	80 - 120	90	80 - 120	<0.010	mg/L		
8668368	Total Cadmium (Cd)	2017/06/20	99	80 - 120	100	80 - 120	<0.0000050	mg/L		
8668368	Total Chromium (Cr)	2017/06/20	109	80 - 120	109	80 - 120	<0.00010	mg/L		
8668368	Total Cobalt (Co)	2017/06/20	103	80 - 120	107	80 - 120	<0.000010	mg/L		
8668368	Total Copper (Cu)	2017/06/20	105	80 - 120	108	80 - 120	<0.00010	mg/L		
8668368	Total Iron (Fe)	2017/06/20	NC	80 - 120	101	80 - 120	<0.0050	mg/L		
8668368	Total Lead (Pb)	2017/06/20	98	80 - 120	100	80 - 120	<0.000020	mg/L		
8668368	Total Lithium (Li)	2017/06/20	90	80 - 120	92	80 - 120	<0.00050	mg/L		
8668368	Total Manganese (Mn)	2017/06/20	103	80 - 120	99	80 - 120	<0.00010	mg/L		
8668368	Total Molybdenum (Mo)	2017/06/20	101	80 - 120	99	80 - 120	<0.000050	mg/L		
8668368	Total Nickel (Ni)	2017/06/20	110	80 - 120	108	80 - 120	<0.00010	mg/L		
8668368	Total Phosphorus (P)	2017/06/20					<0.0050	mg/L		
8668368	Total Selenium (Se)	2017/06/20	103	80 - 120	102	80 - 120	<0.000040	mg/L		
8668368	Total Silicon (Si)	2017/06/20					<0.050	mg/L		
8668368	Total Silver (Ag)	2017/06/20	105	80 - 120	106	80 - 120	<0.000010	mg/L		
8668368	Total Strontium (Sr)	2017/06/20	NC	80 - 120	98	80 - 120	<0.000050	mg/L		
8668368	Total Thallium (Tl)	2017/06/20	98	80 - 120	100	80 - 120	<0.0000020	mg/L		
8668368	Total Tin (Sn)	2017/06/20	100	80 - 120	105	80 - 120	<0.00020	mg/L		
8668368	Total Titanium (Ti)	2017/06/20	111	80 - 120	103	80 - 120	<0.0020	mg/L		
8668368	Total Uranium (U)	2017/06/20	99	80 - 120	98	80 - 120	<0.0000050	mg/L		
8668368	Total Vanadium (V)	2017/06/20	109	80 - 120	107	80 - 120	<0.00020	mg/L		
8668368	Total Zinc (Zn)	2017/06/20	103	80 - 120	104	80 - 120	<0.0010	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8668368	Total Zirconium (Zr)	2017/06/20					<0.00010	mg/L		
8668393	Dissolved Aluminum (Al)	2017/06/19	98	80 - 120	96	80 - 120	<0.00050	mg/L	14	20
8668393	Dissolved Antimony (Sb)	2017/06/19	101	80 - 120	96	80 - 120	<0.000020	mg/L	4.2	20
8668393	Dissolved Arsenic (As)	2017/06/19	103	80 - 120	108	80 - 120	<0.000020	mg/L	5.0	20
8668393	Dissolved Barium (Ba)	2017/06/19	NC	80 - 120	95	80 - 120	<0.000020	mg/L	2.7	20
8668393	Dissolved Beryllium (Be)	2017/06/19	103	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
8668393	Dissolved Bismuth (Bi)	2017/06/19	95	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8668393	Dissolved Boron (B)	2017/06/19	102	80 - 120	96	80 - 120	<0.010	mg/L	NC	20
8668393	Dissolved Cadmium (Cd)	2017/06/19	104	80 - 120	102	80 - 120	<0.0000050	mg/L	11	20
8668393	Dissolved Chromium (Cr)	2017/06/19	106	80 - 120	108	80 - 120	<0.00010	mg/L	NC	20
8668393	Dissolved Cobalt (Co)	2017/06/19	103	80 - 120	107	80 - 120	<0.0000050	mg/L	6.3	20
8668393	Dissolved Copper (Cu)	2017/06/19	NC	80 - 120	109	80 - 120	<0.000050	mg/L	1.6	20
8668393	Dissolved Iron (Fe)	2017/06/19	102	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
8668393	Dissolved Lead (Pb)	2017/06/19	99	80 - 120	98	80 - 120	<0.0000050	mg/L	0.16	20
8668393	Dissolved Lithium (Li)	2017/06/19	94	80 - 120	94	80 - 120	<0.00050	mg/L	1.3	20
8668393	Dissolved Manganese (Mn)	2017/06/19	97	80 - 120	105	80 - 120	<0.000050	mg/L	7.8	20
8668393	Dissolved Molybdenum (Mo)	2017/06/19	98	80 - 120	103	80 - 120	<0.000050	mg/L	1.4	20
8668393	Dissolved Nickel (Ni)	2017/06/19	106	80 - 120	111	80 - 120	<0.000020	mg/L	1.4	20
8668393	Dissolved Phosphorus (P)	2017/06/19					<0.0020	mg/L		
8668393	Dissolved Selenium (Se)	2017/06/19	107	80 - 120	105	80 - 120	<0.000040	mg/L	1.1	20
8668393	Dissolved Silicon (Si)	2017/06/19					<0.050	mg/L	8.4	20
8668393	Dissolved Silver (Ag)	2017/06/19	105	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8668393	Dissolved Strontium (Sr)	2017/06/19	NC	80 - 120	101	80 - 120	<0.000050	mg/L	0.77	20
8668393	Dissolved Thallium (Tl)	2017/06/19	99	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8668393	Dissolved Tin (Sn)	2017/06/19	101	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8668393	Dissolved Titanium (Ti)	2017/06/19	99	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8668393	Dissolved Uranium (U)	2017/06/19	100	80 - 120	97	80 - 120	<0.0000020	mg/L	1.8	20
8668393	Dissolved Vanadium (V)	2017/06/19	107	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8668393	Dissolved Zinc (Zn)	2017/06/19	106	80 - 120	106	80 - 120	<0.00010	mg/L	0.20	20
8668393	Dissolved Zirconium (Zr)	2017/06/19					<0.00010	mg/L	NC	20
8668534	Dissolved Organic Carbon (C)	2017/06/19	102	80 - 120	108	80 - 120	<0.50	mg/L	14	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8668669	Total Aluminum (Al)	2017/06/20	101	80 - 120	98	80 - 120	<0.00050	mg/L	8.8	20
8668669	Total Antimony (Sb)	2017/06/20	96	80 - 120	98	80 - 120	<0.000020	mg/L	3.6	20
8668669	Total Arsenic (As)	2017/06/20	109	80 - 120	100	80 - 120	<0.000020	mg/L	2.8	20
8668669	Total Barium (Ba)	2017/06/20	NC	80 - 120	97	80 - 120	<0.000020	mg/L	2.5	20
8668669	Total Beryllium (Be)	2017/06/20	97	80 - 120	93	80 - 120	<0.000010	mg/L	NC	20
8668669	Total Bismuth (Bi)	2017/06/20	102	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8668669	Total Boron (B)	2017/06/20	97	80 - 120	92	80 - 120	<0.010	mg/L	NC	20
8668669	Total Cadmium (Cd)	2017/06/20	99	80 - 120	102	80 - 120	<0.0000050	mg/L	1.4	20
8668669	Total Chromium (Cr)	2017/06/20	102	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20
8668669	Total Cobalt (Co)	2017/06/20	100	80 - 120	103	80 - 120	<0.0000050	mg/L	10	20
8668669	Total Copper (Cu)	2017/06/20	101	80 - 120	105	80 - 120	<0.000050	mg/L	1.2	20
8668669	Total Iron (Fe)	2017/06/20	96	80 - 120	102	80 - 120	<0.0010	mg/L	2.2	20
8668669	Total Lead (Pb)	2017/06/20	99	80 - 120	99	80 - 120	<0.0000050	mg/L	3.2	20
8668669	Total Lithium (Li)	2017/06/20	92	80 - 120	92	80 - 120	<0.00050	mg/L	1.4	20
8668669	Total Manganese (Mn)	2017/06/20	102	80 - 120	98	80 - 120	<0.000050	mg/L	5.4	20
8668669	Total Molybdenum (Mo)	2017/06/20	99	80 - 120	101	80 - 120	<0.000050	mg/L	3.2	20
8668669	Total Nickel (Ni)	2017/06/20	102	80 - 120	106	80 - 120	<0.000020	mg/L	7.5	20
8668669	Total Phosphorus (P)	2017/06/20					<0.0020	mg/L	4.2	20
8668669	Total Selenium (Se)	2017/06/20	105	80 - 120	104	80 - 120	<0.000040	mg/L	3.4	20
8668669	Total Silicon (Si)	2017/06/20					<0.050	mg/L	1.5	20
8668669	Total Silver (Ag)	2017/06/20	100	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8668669	Total Strontium (Sr)	2017/06/20	NC	80 - 120	98	80 - 120	<0.000050	mg/L	3.6	20
8668669	Total Thallium (Tl)	2017/06/20	100	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8668669	Total Tin (Sn)	2017/06/20	97	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
8668669	Total Titanium (Ti)	2017/06/20	101	80 - 120	96	80 - 120	<0.00050	mg/L	11	20
8668669	Total Uranium (U)	2017/06/20	97	80 - 120	96	80 - 120	<0.0000020	mg/L	3.8	20
8668669	Total Vanadium (V)	2017/06/20	101	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8668669	Total Zinc (Zn)	2017/06/20	NC	80 - 120	104	80 - 120	<0.00010	mg/L	0.26	20
8668669	Total Zirconium (Zr)	2017/06/20					<0.00010	mg/L	NC	20
8668818	Acidity (pH 4.5)	2017/06/19					<0.50	mg/L	NC	20
8668818	Acidity (pH 8.3)	2017/06/19			100	80 - 120	<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8668824	Alkalinity (PP as CaCO3)	2017/06/19					<0.50	mg/L		
8668824	Alkalinity (Total as CaCO3)	2017/06/19	98	80 - 120	98	80 - 120	<0.50	mg/L	0.69	20
8668824	Bicarbonate (HCO3)	2017/06/19					<0.50	mg/L		
8668824	Carbonate (CO3)	2017/06/19					<0.50	mg/L		
8668824	Hydroxide (OH)	2017/06/19					<0.50	mg/L		
8668828	pH	2017/06/19			102	97 - 103			0.17	N/A
8668829	Conductivity	2017/06/16			101	80 - 120	<1.0	uS/cm	0.38	20
8668831	Alkalinity (PP as CaCO3)	2017/06/19					<0.50	mg/L	NC	20
8668831	Alkalinity (Total as CaCO3)	2017/06/19	NC	80 - 120	94	80 - 120	<0.50	mg/L	NC	20
8668831	Bicarbonate (HCO3)	2017/06/19					<0.50	mg/L	NC	20
8668831	Carbonate (CO3)	2017/06/19					<0.50	mg/L	NC	20
8668831	Hydroxide (OH)	2017/06/19					<0.50	mg/L	NC	20
8668833	pH	2017/06/19			102	97 - 103			0.50	N/A
8668834	Conductivity	2017/06/19			100	80 - 120	<1.0	uS/cm		
8668839	Total Suspended Solids	2017/06/20			100	80 - 120	<1.0	mg/L		
8668906	Total Phosphorus (P)	2017/06/20	95	80 - 120	97	80 - 120	<0.0020	mg/L	0.17	20
8669268	Total Ammonia (N)	2017/06/20	98	80 - 120	100	80 - 120	<0.0050	mg/L	NC	20
8669270	Total Ammonia (N)	2017/06/20	NC	80 - 120	97	80 - 120	<0.0050	mg/L	0.14	20
8669400	Dissolved Chloride (Cl)	2017/06/19	111	80 - 120	97	80 - 120	<0.50	mg/L	11	20
8669401	Dissolved Sulphate (SO4)	2017/06/19	NC	80 - 120	98	80 - 120	0.91, RDL=0.50	mg/L	0.81	20
8669844	Total Suspended Solids	2017/06/21			99	80 - 120	<1.0	mg/L		
8669858	Strong Acid Dissoc. Cyanide (CN)	2017/06/20	105	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8669859	Weak Acid Dissoc. Cyanide (CN)	2017/06/20	106	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
8670106	Fluoride (F)	2017/06/20	97	80 - 120	98	80 - 120	0.016, RDL=0.010	mg/L	2.8	20
8670487	Dissolved Mercury (Hg)	2017/06/21	100	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8670504	Total Mercury (Hg)	2017/06/21	92	80 - 120	94	80 - 120	<0.0000020	mg/L	NC	20
8670611	Conductivity	2017/06/21			100	80 - 120	<1.0	uS/cm		
8671416	Fluoride (F)	2017/06/21	98	80 - 120	102	80 - 120	0.015, RDL=0.010	mg/L	17	20
8672016	Total Ammonia (N)	2017/06/22	106	80 - 120	103	80 - 120	<0.0050	mg/L	6.9	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B748588
Report Date: 2017/06/26

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8672675	Dissolved Phosphorus (P)	2017/06/22	103	80 - 120	87	80 - 120	<0.0020	mg/L	4.5	20
8672676	Dissolved Phosphorus (P)	2017/06/22	93	80 - 120	94	80 - 120	<0.0020	mg/L	11	20

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08441883, 08441887

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/08/10
Report #: R2426064
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B760842
Received: 2017/07/21, 13:45

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	15	N/A	2017/07/26	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Water	12	2017/07/25	2017/07/25	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Water	3	2017/07/25	2017/07/26	BBY6SOP-00026	SM 22 2320 B m
Chloride by Automated Colourimetry	15	N/A	2017/07/24	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	15	N/A	2017/07/25	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	15	N/A	2017/07/25	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) (1, 2)	15	N/A	2017/07/26	CAL SOP-00077	MMCW 119 1996 m
Conductance - water	12	2017/07/25	2017/07/25	BBY6SOP-00026	SM 22 2510 B m
Conductance - water	3	2017/07/25	2017/07/26	BBY6SOP-00026	SM 22 2510 B m
Fluoride	15	N/A	2017/07/23	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	10	N/A	2017/07/25	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	5	N/A	2017/07/26	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	14	N/A	2017/07/25	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	1	N/A	2017/08/09	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	15	N/A	2017/07/25	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	15	2017/07/25	2017/07/25	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance (as Cations/Anions Ratio)	14	N/A	2017/07/26	BBY WI-00033	Auto Calc
Ion Balance (as Cations/Anions Ratio)	1	N/A	2017/08/09	BBY WI-00033	Auto Calc
Ion Balance	14	N/A	2017/07/26	BBY WI-00033	SM 22 1030E
Ion Balance	1	N/A	2017/08/09	BBY WI-00033	SM 22 1030E
Sum of cations, anions	14	N/A	2017/07/25	Calc	
Sum of cations, anions	1	N/A	2017/08/09	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	14	N/A	2017/07/25	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2017/08/09	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	13	N/A	2017/07/24	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	1	N/A	2017/07/25	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	1	N/A	2017/08/03	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	5	2017/07/24	2017/07/25	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	10	N/A	2017/07/25	BBY7SOP-00003,	BCLM2005,EPA6020bR2m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08441883, 08441887

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/08/10
Report #: R2426064
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B760842
Received: 2017/07/21, 13:45

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Na, K, Ca, Mg, S by CRC ICPMS (total)	5	N/A	2017/07/26	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	10	N/A	2017/07/25	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N (Preserved)	14	N/A	2017/07/24	BBY6SOP-00009	SM 22 4500-NH3- G m
Ammonia-N (Preserved)	1	N/A	2017/07/28	BBY6SOP-00009	SM 22 4500-NH3- G m
Nitrate+Nitrite (N) (low level)	15	N/A	2017/07/22	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	15	N/A	2017/07/22	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N) Low Level Calc	15	N/A	2017/07/25	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	9	N/A	2017/07/25	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	5	N/A	2017/07/26	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (3)	12	2017/07/25	2017/07/25	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (3)	3	2017/07/25	2017/07/26	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate by Automated Colourimetry	14	N/A	2017/07/24	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate by Automated Colourimetry	1	N/A	2017/07/25	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	15	2017/07/22	2017/07/25	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	15	2017/07/22	2017/07/25	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	8	2017/07/24	2017/07/25	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	7	2017/07/25	2017/07/26	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08441883, 08441887

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/08/10
Report #: R2426064
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B760842
Received: 2017/07/21, 13:45

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) This test was performed by Maxxam Calgary Environmental
(2) DOC present in the sample should be considered as non-purgeable DOC. Dissolved > Total Imbalance: Whenever applicable, Dissolved >Total for any parameter that falls within method uncertainty for duplicates is likely equivalent. If RPD is >20% samples were reanalyzed and confirmed.
(3) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Megan Smith, Project Manager
Email: msmith@maxxam.ca
Phone# (604) 734 7276

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RO5342		RO5343		RO5344	RO5345		
Sampling Date		2017/07/20 11:00		2017/07/19 17:00		2017/07/19 15:35	2017/07/20 14:50		
COC Number		08441883		08441883		08441883	08441883		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	KZ-13	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	1.5	8703620	2.4	8721223	2.7	1.2	N/A	8703620
Cation Sum	meq/L	1.5	8703620	2.3	8721223	2.7	1.2	N/A	8703620
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD	FIELD		ONSITE
Ion Balance	N/A	1.0	8703619	0.99	8721221	1.0	1.0	0.010	8703619
Ion Balance (% Difference)	%	0.36	8703782	0.74	8721222	0.25	0.28	N/A	8703782
Nitrate (N)	mg/L	0.0668	8703668	0.0069	8703668	0.0429	0.0187	0.0020	8703668
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00062	8705974	<0.00050	8705974	0.00054	0.00064	0.00050	8705974
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00075	8705978	0.00073	8705978	0.00080	0.00079	0.00050	8705978
Fluoride (F)	mg/L	0.033	8703940	0.052	8703942	0.056	0.042	0.010	8703940
Dissolved Organic Carbon (C)	mg/L	1.4	8706642	3.1	8706642	3.3	5.8	0.50	8706642
Acidity (pH 4.5)	mg/L	<0.50	8707219	<0.50	8707227	<0.50	<0.50	0.50	8707219
Alkalinity (Total as CaCO3)	mg/L	38.7	8706069	99.4	8706075	105	48.7	0.50	8706069
Acidity (pH 8.3)	mg/L	<0.50	8707219	<0.50	8707227	<0.50	<0.50	0.50	8707219
Alkalinity (PP as CaCO3)	mg/L	<0.50	8706069	<0.50	8706075	<0.50	<0.50	0.50	8706069
Bicarbonate (HCO3)	mg/L	47.2	8706069	121	8706075	128	59.4	0.50	8706069
Carbonate (CO3)	mg/L	<0.50	8706069	<0.50	8706075	<0.50	<0.50	0.50	8706069
Hydroxide (OH)	mg/L	<0.50	8706069	<0.50	8706075	<0.50	<0.50	0.50	8706069
Anions									
Dissolved Sulphate (SO4)	mg/L	35.3	8705321	17.6	8705321	26.8	9.01	0.50	8705321
Dissolved Chloride (Cl)	mg/L	<0.50	8705320	<0.50	8705320	<0.50	<0.50	0.50	8705320
Nutrients									
Dissolved Phosphorus (P)	mg/L	<0.0020	8703856	0.0029	8703856	0.0041	0.0049	0.0020	8703856
Total Ammonia (N)	mg/L	0.016	8705016	0.015	8705016	0.019	0.018	0.0050	8705016
Nitrate plus Nitrite (N)	mg/L	0.0668	8703849	0.0069	8703851	0.0429	0.0187	0.0020	8703849
Nitrite (N)	mg/L	<0.0020	8703850	<0.0020	8703852	<0.0020	<0.0020	0.0020	8703850
Total Phosphorus (P)	mg/L	0.0023	8703855	0.0036	8703855	0.0046	0.0050	0.0020	8703855
Physical Properties									
Conductivity	uS/cm	159	8706074	224	8706079	251	116	1.0	8706074
pH	pH	7.82	8706073	8.21	8706078	8.23	7.94		8706073

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RO5342		RO5343		RO5344	RO5345		
Sampling Date		2017/07/20 11:00		2017/07/19 17:00		2017/07/19 15:35	2017/07/20 14:50		
COC Number		08441883		08441883		08441883	08441883		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	KZ-13	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	4.0	8704483	1.8	8704483	5.9	1.8	1.0	8704483
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RO5346		RO5347		RO5348		RO5349		
Sampling Date		2017/07/19 10:32		2017/07/19 11:30		2017/07/19 11:55		2017/07/19 16:02		
COC Number		08441883		08441883		08441883		08441883		
	UNITS	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	QC Batch	KZ-18	RDL	QC Batch
Calculated Parameters										
Anion Sum	meq/L	2.5	8703620	2.2	8703620	2.7	8703620	3.0	N/A	8703620
Cation Sum	meq/L	2.5	8703620	2.2	8703620	2.5	8703620	3.0	N/A	8703620
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	1.0	8703619	1.0	8703619	0.94	8703619	1.0	0.010	8703619
Ion Balance (% Difference)	%	0.12	8703782	0.28	8703782	3.3	8703782	0.015	N/A	8703782
Nitrate (N)	mg/L	0.0315	8703668	0.0334	8703668	0.0752	8703668	0.0168	0.0020	8703668
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00054	8705974	0.00051	8705974	<0.00050	8705974	0.00062	0.00050	8705974
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00086	8705978	0.00073	8705978	0.00172	8705978	0.00150	0.00050	8705978
Fluoride (F)	mg/L	0.056	8703940	0.045	8703942	0.079	8703942	0.051	0.010	8703942
Dissolved Organic Carbon (C)	mg/L	2.7	8706642	2.2	8706642	1.2	8706642	3.7	0.50	8706642
Acidity (pH 4.5)	mg/L	<0.50	8707219	<0.50	8707227	<0.50	8707227	<0.50	0.50	8707227
Alkalinity (Total as CaCO3)	mg/L	102	8706069	88.6	8706069	110	8706075	126	0.50	8706069
Acidity (pH 8.3)	mg/L	<0.50	8707219	<0.50	8707227	<0.50	8707227	<0.50	0.50	8707227
Alkalinity (PP as CaCO3)	mg/L	<0.50	8706069	<0.50	8706069	<0.50	8706075	0.59	0.50	8706069
Bicarbonate (HCO3)	mg/L	124	8706069	108	8706069	134	8706075	152	0.50	8706069
Carbonate (CO3)	mg/L	<0.50	8706069	<0.50	8706069	<0.50	8706075	0.71	0.50	8706069
Hydroxide (OH)	mg/L	<0.50	8706069	<0.50	8706069	<0.50	8706075	<0.50	0.50	8706069
Anions										
Dissolved Sulphate (SO4)	mg/L	22.6	8705321	19.7	8705321	22.8	8707013	22.2	0.50	8705321
Dissolved Chloride (Cl)	mg/L	<0.50	8705320	<0.50	8705320	<0.50	8705322	<0.50	0.50	8705320
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0040	8703856	0.0045	8703856	0.0023	8703856	0.0080	0.0020	8703856
Total Ammonia (N)	mg/L	0.055	8705016	0.012	8705016	0.0084	8705016	0.015	0.0050	8705016
Nitrate plus Nitrite (N)	mg/L	0.0315	8703849	0.0334	8703851	0.0752	8703851	0.0168	0.0020	8703851
Nitrite (N)	mg/L	<0.0020	8703850	<0.0020	8703852	<0.0020	8703852	<0.0020	0.0020	8703852
Total Phosphorus (P)	mg/L	0.0042	8703855	0.0053	8703855	0.0024	8703855	0.0088	0.0020	8703855
Physical Properties										
Conductivity	uS/cm	238	8706074	211	8706074	250	8706079	278	1.0	8706074
pH	pH	8.21	8706073	8.18	8706073	8.25	8706078	8.30		8706073

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RO5346		RO5347		RO5348		RO5349		
Sampling Date		2017/07/19 10:32		2017/07/19 11:30		2017/07/19 11:55		2017/07/19 16:02		
COC Number		08441883		08441883		08441883		08441883		
	UNITS	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	QC Batch	KZ-18	RDL	QC Batch
Physical Properties										
Total Suspended Solids	mg/L	2.2	8704483	1.7	8704483	<1.0	8704483	2.7	1.0	8704483
RDL = Reportable Detection Limit										

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RO5350		RO5351	RO5352		RO5353		
Sampling Date		2017/07/20 10:30		2017/07/19 09:15	2017/07/19 08:35		2017/07/18 15:30		
COC Number		08441883		08441887	08441887		08441887		
	UNITS	KZ-19	QC Batch	KZ-21	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	1.5	8703620	3.0	2.9	8703620	3.4	N/A	8703620
Cation Sum	meq/L	1.5	8703620	3.0	2.9	8703620	3.4	N/A	8703620
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.98	8703619	1.0	1.0	8703619	1.0	0.010	8703619
Ion Balance (% Difference)	%	0.98	8703782	0.44	0.81	8703782	0.34	N/A	8703782
Nitrate (N)	mg/L	0.0649	8703668	<0.0020	0.0131	8703668	0.0095	0.0020	8703668
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00051	8705974	0.00096	0.00078	8705974	0.00070	0.00050	8705974
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00072	8705978	0.00102	0.00105	8705978	0.00087	0.00050	8705978
Fluoride (F)	mg/L	0.035	8703942	0.098	0.081	8703942	0.088	0.010	8703942
Dissolved Organic Carbon (C)	mg/L	1.5	8706646	12	8.3	8706646	6.5	0.50	8706646
Acidity (pH 4.5)	mg/L	<0.50	8707227	<0.50	<0.50	8707227	<0.50	0.50	8707227
Alkalinity (Total as CaCO3)	mg/L	39.6	8706069	123	118	8706075	139	0.50	8706069
Acidity (pH 8.3)	mg/L	<0.50	8707227	<0.50	<0.50	8707227	<0.50	0.50	8707227
Alkalinity (PP as CaCO3)	mg/L	<0.50	8706069	<0.50	<0.50	8706075	1.85	0.50	8706069
Bicarbonate (HCO3)	mg/L	48.3	8706069	150	145	8706075	165	0.50	8706069
Carbonate (CO3)	mg/L	<0.50	8706069	<0.50	<0.50	8706075	2.22	0.50	8706069
Hydroxide (OH)	mg/L	<0.50	8706069	<0.50	<0.50	8706075	<0.50	0.50	8706069
Anions									
Dissolved Sulphate (SO4)	mg/L	35.8	8705321	24.4	24.8	8705323	27.9	0.50	8705321
Dissolved Chloride (Cl)	mg/L	<0.50	8705320	0.63	<0.50	8705322	0.55	0.50	8705320
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0026	8703856	0.0356	0.0196	8703856	0.0871	0.0020	8703856
Total Ammonia (N)	mg/L	0.029	8705016	0.025	0.023	8705016	0.013	0.0050	8705016
Nitrate plus Nitrite (N)	mg/L	0.0649	8703851	<0.0020	0.0131	8703851	0.0211	0.0020	8703851
Nitrite (N)	mg/L	<0.0020	8703852	<0.0020	<0.0020	8703852	0.0116	0.0020	8703852
Total Phosphorus (P)	mg/L	0.0030	8703855	0.0358	0.0278	8703855	0.0946	0.0020	8703855
Physical Properties									
Conductivity	uS/cm	160	8706074	277	270	8706079	307	1.0	8706074
pH	pH	7.82	8706073	8.26	8.27	8706078	8.34		8706073

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RO5350		RO5351	RO5352		RO5353		
Sampling Date		2017/07/20 10:30		2017/07/19 09:15	2017/07/19 08:35		2017/07/18 15:30		
COC Number		08441883		08441887	08441887		08441887		
	UNITS	KZ-19	QC Batch	KZ-21	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8705661	21.7	14.3	8705661	73.8	1.0	8705661
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RO5354		RO5355		RO5356		
Sampling Date		2017/07/19 14:30		2017/07/19 15:02		2017/07/22 15:40		
COC Number		08441887		08441887		08441887		
	UNITS	KZ-28	QC Batch	KZ-37	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	0.0000	8703620	2.7	8703620	0.0000	N/A	8703620
Cation Sum	meq/L	0.0022	8703620	2.7	8703620	0.0042	N/A	8703620
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE			ONSITE
Ion Balance	N/A	NC	8703619	1.0	8703619	NC	0.010	8703619
Ion Balance (% Difference)	%	NC	8703782	0.38	8703782	NC	N/A	8703782
Nitrate (N)	mg/L	<0.0020	8703668	0.0370	8703668	<0.0020	0.0020	8703668
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8705974	0.00067	8705974	<0.00050	0.00050	8705974
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00072	8705978	0.00123	8705978	0.00062	0.00050	8705978
Fluoride (F)	mg/L	<0.010	8703942	0.054	8703942	<0.010	0.010	8703940
Dissolved Organic Carbon (C)	mg/L	<0.50	8706646	3.7	8706646	<0.50	0.50	8706646
Acidity (pH 4.5)	mg/L	<0.50	8707227	<0.50	8707227	<0.50	0.50	8707219
Alkalinity (Total as CaCO3)	mg/L	<0.50	8706069	108	8706069	<0.50	0.50	8706043
Acidity (pH 8.3)	mg/L	<0.50	8707227	<0.50	8707227	<0.50	0.50	8707219
Alkalinity (PP as CaCO3)	mg/L	<0.50	8706069	<0.50	8706069	<0.50	0.50	8706043
Bicarbonate (HCO3)	mg/L	<0.50	8706069	132	8706069	<0.50	0.50	8706043
Carbonate (CO3)	mg/L	<0.50	8706069	<0.50	8706069	<0.50	0.50	8706043
Hydroxide (OH)	mg/L	<0.50	8706069	<0.50	8706069	<0.50	0.50	8706043
Anions								
Dissolved Sulphate (SO4)	mg/L	<0.50	8705321	25.8	8705321	<0.50	0.50	8705321
Dissolved Chloride (Cl)	mg/L	<0.50	8705320	<0.50	8705320	<0.50	0.50	8705320
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020	8703856	0.0054	8703856	<0.0020	0.0020	8703856
Total Ammonia (N)	mg/L	<0.0050	8709579	0.015	8705016	<0.0050	0.0050	8705016
Nitrate plus Nitrite (N)	mg/L	<0.0020	8703851	0.0370	8703851	<0.0020	0.0020	8703851
Nitrite (N)	mg/L	<0.0020	8703852	<0.0020	8703852	<0.0020	0.0020	8703852
Total Phosphorus (P)	mg/L	0.0024	8703855	0.0067	8703855	<0.0020	0.0020	8703855
Physical Properties								
Conductivity	uS/cm	<1.0	8706074	259	8706074	<1.0	1.0	8706049
pH	pH	5.67	8706073	8.24	8706073	5.38		8706046

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RO5354		RO5355		RO5356		
Sampling Date		2017/07/19 14:30		2017/07/19 15:02		2017/07/22 15:40		
COC Number		08441887		08441887		08441887		
	UNITS	KZ-28	QC Batch	KZ-37	QC Batch	TRIP BLANK	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8705661	7.3	8705661	<1.0	1.0	8705661
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RO5342		RO5343		RO5344		
Sampling Date		2017/07/20 11:00		2017/07/19 17:00		2017/07/19 15:35		
COC Number		08441883		08441883		08441883		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	73.4	8703416	114	8720133	130	0.50	8703416
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8705715	<0.0000020	8705715	<0.0000020	0.0000020	8705715
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0226	8704490	0.00894	8715416	0.0108	0.00050	8704490
Dissolved Antimony (Sb)	mg/L	0.000060	8704490	<0.000020	8715416	0.000094	0.000020	8704490
Dissolved Arsenic (As)	mg/L	0.000091	8704490	0.000075	8715416	0.000225	0.000020	8704490
Dissolved Barium (Ba)	mg/L	0.0419	8704490	0.0321	8715416	0.0632	0.000020	8704490
Dissolved Beryllium (Be)	mg/L	<0.000010	8704490	<0.000010	8715416	<0.000010	0.000010	8704490
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8704490	<0.0000050	8715416	<0.0000050	0.0000050	8704490
Dissolved Boron (B)	mg/L	<0.010	8704490	<0.010	8715416	<0.010	0.010	8704490
Dissolved Cadmium (Cd)	mg/L	0.000459	8704490	0.0000110	8715416	0.0000700	0.0000050	8704490
Dissolved Chromium (Cr)	mg/L	<0.00010	8704490	<0.00010	8715416	<0.00010	0.00010	8704490
Dissolved Cobalt (Co)	mg/L	0.0000280	8704490	0.0000150	8715416	0.0000270	0.0000050	8704490
Dissolved Copper (Cu)	mg/L	0.00157	8704490	0.000297	8715416	0.000928	0.000050	8704490
Dissolved Iron (Fe)	mg/L	0.0053	8704490	0.0182	8715416	0.0749	0.0010	8704490
Dissolved Lead (Pb)	mg/L	0.000131	8704490	0.0000050	8715416	0.0000810	0.0000050	8704490
Dissolved Lithium (Li)	mg/L	0.00069	8704490	<0.00050	8715416	0.00133	0.00050	8704490
Dissolved Manganese (Mn)	mg/L	0.00109	8704490	0.00132	8715416	0.0111	0.000050	8704490
Dissolved Molybdenum (Mo)	mg/L	0.000575	8704490	0.000313	8715416	0.000475	0.000050	8704490
Dissolved Nickel (Ni)	mg/L	0.000681	8704490	0.000254	8715416	0.000449	0.000020	8704490
Dissolved Phosphorus (P)	mg/L	0.0024	8704490	0.0052	8715416	0.0036	0.0020	8704490
Dissolved Selenium (Se)	mg/L	0.000652	8704490	0.000407	8715416	0.000785	0.000040	8704490
Dissolved Silicon (Si)	mg/L	2.10	8704490	2.29	8715416	2.86	0.050	8704490
Dissolved Silver (Ag)	mg/L	<0.0000050	8704490	<0.0000050	8715416	<0.0000050	0.0000050	8704490
Dissolved Strontium (Sr)	mg/L	0.0794	8704490	0.113	8715416	0.138	0.000050	8704490
Dissolved Thallium (Tl)	mg/L	0.0000060	8704490	<0.0000020	8715416	0.0000020	0.0000020	8704490
Dissolved Tin (Sn)	mg/L	<0.00020	8704490	0.00022	8715416	<0.00020	0.00020	8704490
Dissolved Titanium (Ti)	mg/L	<0.00050	8704490	<0.00050	8715416	<0.00050	0.00050	8704490
Dissolved Uranium (U)	mg/L	0.00109	8704490	0.000426	8715416	0.000772	0.0000020	8704490
Dissolved Vanadium (V)	mg/L	<0.00020	8704490	<0.00020	8715416	<0.00020	0.00020	8704490
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RO5342		RO5343		RO5344		
Sampling Date		2017/07/20 11:00		2017/07/19 17:00		2017/07/19 15:35		
COC Number		08441883		08441883		08441883		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0766	8704490	0.00066	8715416	0.0131	0.00010	8704490
Dissolved Zirconium (Zr)	mg/L	0.00014	8704490	<0.00010	8715416	<0.00010	0.00010	8704490
Dissolved Calcium (Ca)	mg/L	25.5	8703784	37.7	8720134	43.8	0.050	8703784
Dissolved Magnesium (Mg)	mg/L	2.36	8703784	4.82	8720134	5.02	0.050	8703784
Dissolved Potassium (K)	mg/L	1.17	8703784	0.484	8720134	0.962	0.050	8703784
Dissolved Sodium (Na)	mg/L	0.528	8703784	0.697	8720134	0.834	0.050	8703784
Dissolved Sulphur (S)	mg/L	12.6	8703784	5.9	8720134	8.9	3.0	8703784
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RO5345	RO5346	RO5347	RO5348	RO5349		
Sampling Date		2017/07/20 14:50	2017/07/19 10:32	2017/07/19 11:30	2017/07/19 11:55	2017/07/19 16:02		
COC Number		08441883	08441883	08441883	08441883	08441883		
	UNITS	KZ-13	KZ-15	KZ-16	KZ-17	KZ-18	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	55.0	123	106	122	147	0.50	8703416
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8705715
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0187	0.00600	0.00497	0.00200	0.0176	0.00050	8704490
Dissolved Antimony (Sb)	mg/L	0.000043	0.000041	0.000024	0.000031	0.000025	0.000020	8704490
Dissolved Arsenic (As)	mg/L	0.000207	0.000350	0.000231	0.000207	0.000262	0.000020	8704490
Dissolved Barium (Ba)	mg/L	0.0800	0.0515	0.0466	0.0520	0.0346	0.000020	8704490
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8704490
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8704490
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8704490
Dissolved Cadmium (Cd)	mg/L	0.0000210	0.0000270	0.0000170	0.0000160	0.0000200	0.0000050	8704490
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8704490
Dissolved Cobalt (Co)	mg/L	0.0000210	0.0000190	0.0000160	0.0000110	0.0000130	0.0000050	8704490
Dissolved Copper (Cu)	mg/L	0.000750	0.000670	0.000584	0.000633	0.000348	0.000050	8704490
Dissolved Iron (Fe)	mg/L	0.0358	0.0265	0.0060	0.0020	0.0067	0.0010	8704490
Dissolved Lead (Pb)	mg/L	0.0000130	0.0000170	<0.0000050	0.0000060	<0.0000050	0.0000050	8704490
Dissolved Lithium (Li)	mg/L	0.00098	0.00131	0.00104	0.00228	0.00100	0.00050	8704490
Dissolved Manganese (Mn)	mg/L	0.00600	0.00850	0.00209	0.000505	0.00133	0.000050	8704490
Dissolved Molybdenum (Mo)	mg/L	0.000485	0.000631	0.000327	0.000603	0.000665	0.000050	8704490
Dissolved Nickel (Ni)	mg/L	0.000536	0.000477	0.000328	0.000381	0.000612	0.000020	8704490
Dissolved Phosphorus (P)	mg/L	0.0033	0.0039	0.0021	0.0038	0.0099	0.0020	8704490
Dissolved Selenium (Se)	mg/L	0.000150	0.000545	0.000418	0.000503	0.000593	0.000040	8704490
Dissolved Silicon (Si)	mg/L	3.05	2.60	2.45	2.91	2.88	0.050	8704490
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8704490
Dissolved Strontium (Sr)	mg/L	0.0560	0.125	0.111	0.128	0.132	0.000050	8704490
Dissolved Thallium (Tl)	mg/L	0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8704490
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8704490
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8704490
Dissolved Uranium (U)	mg/L	0.000310	0.00101	0.000666	0.000894	0.00107	0.0000020	8704490
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8704490

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RO5345	RO5346	RO5347	RO5348	RO5349		
Sampling Date		2017/07/20 14:50	2017/07/19 10:32	2017/07/19 11:30	2017/07/19 11:55	2017/07/19 16:02		
COC Number		08441883	08441883	08441883	08441883	08441883		
	UNITS	KZ-13	KZ-15	KZ-16	KZ-17	KZ-18	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00275	0.00292	0.00071	0.00106	0.00110	0.00010	8704490
Dissolved Zirconium (Zr)	mg/L	0.00013	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8704490
Dissolved Calcium (Ca)	mg/L	18.6	38.8	34.3	37.8	38.0	0.050	8703784
Dissolved Magnesium (Mg)	mg/L	2.06	6.28	4.95	6.85	12.7	0.050	8703784
Dissolved Potassium (K)	mg/L	1.18	0.844	0.842	1.04	0.350	0.050	8703784
Dissolved Sodium (Na)	mg/L	0.822	0.786	0.730	0.846	0.730	0.050	8703784
Dissolved Sulphur (S)	mg/L	<3.0	6.9	6.6	6.8	7.2	3.0	8703784

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RO5350	RO5351	RO5352		RO5353		
Sampling Date		2017/07/20 10:30	2017/07/19 09:15	2017/07/19 08:35		2017/07/18 15:30		
COC Number		08441883	08441887	08441887		08441887		
	UNITS	KZ-19	KZ-21	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	72.8	148	144	8703416	167	0.50	8703416
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8705715	<0.0000020	0.0000020	8705715
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.0177	0.0145	0.00948	8704490	0.00796	0.00050	8704490
Dissolved Antimony (Sb)	mg/L	0.000033	0.000169	0.000108	8704490	0.000119	0.000020	8704490
Dissolved Arsenic (As)	mg/L	0.000096	0.00135	0.000957	8704490	0.000944	0.000020	8704490
Dissolved Barium (Ba)	mg/L	0.0418	0.0444	0.0501	8704490	0.0596	0.000020	8704490
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8704490	<0.000010	0.000010	8704490
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8704490	<0.0000050	0.0000050	8704490
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8704490	<0.010	0.010	8704490
Dissolved Cadmium (Cd)	mg/L	0.000455	0.0000120	0.0000150	8704490	0.0000110	0.0000050	8704490
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00012	<0.00010	8704490	<0.00010	0.00010	8704490
Dissolved Cobalt (Co)	mg/L	0.0000250	0.0000780	0.0000480	8704490	0.0000560	0.0000050	8704490
Dissolved Copper (Cu)	mg/L	0.00154	0.000946	0.000874	8704490	0.000859	0.000050	8704490
Dissolved Iron (Fe)	mg/L	0.0037	0.165	0.0973	8704490	0.0522	0.0010	8704490
Dissolved Lead (Pb)	mg/L	0.000123	0.0000220	0.0000150	8704490	0.0000360	0.0000050	8704490
Dissolved Lithium (Li)	mg/L	0.00074	0.00223	0.00196	8704490	0.00293	0.00050	8704490
Dissolved Manganese (Mn)	mg/L	0.00105	0.0247	0.0151	8704490	0.0126	0.000050	8704490
Dissolved Molybdenum (Mo)	mg/L	0.000567	0.00102	0.000802	8704490	0.000926 (1)	0.000050	8709431
Dissolved Nickel (Ni)	mg/L	0.000658	0.00276	0.00171	8704490	0.00138	0.000020	8704490
Dissolved Phosphorus (P)	mg/L	0.0022	0.0118	0.0065	8704490	0.0053	0.0020	8704490
Dissolved Selenium (Se)	mg/L	0.000629	0.000571	0.000524	8704490	0.000596	0.000040	8704490
Dissolved Silicon (Si)	mg/L	2.12	4.16	3.54	8704490	3.75	0.050	8704490
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8704490	<0.0000050	0.0000050	8704490
Dissolved Strontium (Sr)	mg/L	0.0760	0.116	0.127	8704490	0.146	0.000050	8704490
Dissolved Thallium (Tl)	mg/L	0.0000060	<0.0000020	<0.0000020	8704490	<0.0000020	0.0000020	8704490
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8704490	<0.00020	0.00020	8704490
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8704490	<0.00050	0.00050	8704490
Dissolved Uranium (U)	mg/L	0.00107	0.00140	0.00123	8704490	0.00162	0.0000020	8704490

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RO5350	RO5351	RO5352		RO5353		
Sampling Date		2017/07/20 10:30	2017/07/19 09:15	2017/07/19 08:35		2017/07/18 15:30		
COC Number		08441883	08441887	08441887		08441887		
	UNITS	KZ-19	KZ-21	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8704490	<0.00020	0.00020	8704490
Dissolved Zinc (Zn)	mg/L	0.0748	0.00268	0.00182	8704490	0.00050	0.00010	8704490
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00013	0.00010	8704490	<0.00010	0.00010	8704490
Dissolved Calcium (Ca)	mg/L	25.3	37.2	38.4	8703784	45.4	0.050	8703784
Dissolved Magnesium (Mg)	mg/L	2.32	13.3	11.6	8703784	13.0	0.050	8703784
Dissolved Potassium (K)	mg/L	1.15	0.603	0.729	8703784	0.895	0.050	8703784
Dissolved Sodium (Na)	mg/L	0.536	0.832	0.866	8703784	1.01	0.050	8703784
Dissolved Sulphur (S)	mg/L	12.0	7.4	8.1	8703784	9.0	3.0	8703784

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RO5354		RO5355		RO5356		
Sampling Date		2017/07/19 14:30		2017/07/19 15:02		2017/07/22 15:40		
COC Number		08441887		08441887		08441887		
	UNITS	KZ-28	QC Batch	KZ-37	QC Batch	TRIP BLANK	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	<0.50	8703416	134	8703416	<0.50	0.50	8703416
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8705715	<0.0000020	8705715	<0.0000020	0.0000020	8705715
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00090	8704490	0.00979	8704490	<0.00050	0.00050	8704490
Dissolved Antimony (Sb)	mg/L	<0.000020	8704490	0.000048	8704490	<0.000020	0.000020	8704490
Dissolved Arsenic (As)	mg/L	<0.000020	8704490	0.000223	8704490	<0.000020	0.000020	8704490
Dissolved Barium (Ba)	mg/L	0.000027	8704490	0.0582	8704490	0.000064 (1)	0.000020	8704490
Dissolved Beryllium (Be)	mg/L	<0.000010	8704490	<0.000010	8704490	<0.000010	0.000010	8704490
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8704490	<0.0000050	8704490	<0.0000050	0.0000050	8704490
Dissolved Boron (B)	mg/L	<0.010	8704490	<0.010	8704490	<0.010	0.010	8704490
Dissolved Cadmium (Cd)	mg/L	<0.0000050	8704490	0.0000600	8704490	<0.0000050	0.0000050	8704490
Dissolved Chromium (Cr)	mg/L	<0.00010	8704490	<0.00010	8704490	<0.00010	0.00010	8704490
Dissolved Cobalt (Co)	mg/L	<0.0000050	8704490	0.0000250	8704490	<0.0000050	0.0000050	8704490
Dissolved Copper (Cu)	mg/L	<0.000050	8704490	0.000791	8704490	<0.000050	0.000050	8704490
Dissolved Iron (Fe)	mg/L	<0.0010	8704490	0.0719	8704490	<0.0010	0.0010	8704490
Dissolved Lead (Pb)	mg/L	<0.0000050	8704490	0.0000740	8704490	<0.0000050	0.0000050	8704490
Dissolved Lithium (Li)	mg/L	<0.00050	8704490	0.00139	8704490	<0.00050	0.00050	8704490
Dissolved Manganese (Mn)	mg/L	<0.000050	8704490	0.0102	8704490	<0.000050	0.000050	8704490
Dissolved Molybdenum (Mo)	mg/L	<0.000050	8704490	0.000506	8704490	<0.000050	0.000050	8704490
Dissolved Nickel (Ni)	mg/L	<0.000020	8704490	0.000456	8704490	<0.000020	0.000020	8704490
Dissolved Phosphorus (P)	mg/L	0.0022	8704490	0.0043	8704490	<0.0020	0.0020	8704490
Dissolved Selenium (Se)	mg/L	<0.000040	8704490	0.000813 (2)	8709431	<0.000040	0.000040	8704490
Dissolved Silicon (Si)	mg/L	<0.050	8704490	3.00	8704490	<0.050	0.050	8704490
Dissolved Silver (Ag)	mg/L	<0.0000050	8704490	<0.0000050	8704490	<0.0000050	0.0000050	8704490
Dissolved Strontium (Sr)	mg/L	<0.000050	8704490	0.143	8704490	<0.000050	0.000050	8704490
Dissolved Thallium (Tl)	mg/L	<0.0000020	8704490	0.0000020	8704490	<0.0000020	0.0000020	8704490
Dissolved Tin (Sn)	mg/L	<0.00020	8704490	<0.00020	8704490	<0.00020	0.00020	8704490
Dissolved Titanium (Ti)	mg/L	<0.00050	8704490	<0.00050	8704490	<0.00050	0.00050	8704490
Dissolved Uranium (U)	mg/L	<0.0000020	8704490	0.000845	8704490	<0.0000020	0.0000020	8704490

RDL = Reportable Detection Limit
(1) Reanalysis yields similar results.
(2) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RO5354		RO5355		RO5356		
Sampling Date		2017/07/19 14:30		2017/07/19 15:02		2017/07/22 15:40		
COC Number		08441887		08441887		08441887		
	UNITS	KZ-28	QC Batch	KZ-37	QC Batch	TRIP BLANK	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	8704490	<0.00020	8704490	<0.00020	0.00020	8704490
Dissolved Zinc (Zn)	mg/L	0.00020	8704490	0.0111	8704490	<0.00010	0.00010	8704490
Dissolved Zirconium (Zr)	mg/L	<0.00010	8704490	<0.00010	8704490	<0.00010	0.00010	8704490
Dissolved Calcium (Ca)	mg/L	<0.050	8703784	43.4	8703784	<0.050	0.050	8703784
Dissolved Magnesium (Mg)	mg/L	<0.050	8703784	6.13	8703784	<0.050	0.050	8703784
Dissolved Potassium (K)	mg/L	<0.050	8703784	0.836	8703784	<0.050	0.050	8703784
Dissolved Sodium (Na)	mg/L	<0.050	8703784	0.789	8703784	<0.050	0.050	8703784
Dissolved Sulphur (S)	mg/L	<3.0	8703784	8.3	8703784	<3.0	3.0	8703784

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RO5342	RO5343	RO5345	RO5346	RO5347		
Sampling Date		2017/07/20 11:00	2017/07/19 17:00	2017/07/20 14:50	2017/07/19 10:32	2017/07/19 11:30		
COC Number		08441883	08441883	08441883	08441883	08441883		
	UNITS	KZ-2	KZ-6	KZ-13	KZ-15	KZ-16	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	71.5	114	55.1	121	106	0.50	8703415
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8705711
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0237	0.0159	0.0332	0.0166	0.00759	0.00050	8704755
Total Antimony (Sb)	mg/L	0.000027	<0.000020	0.000023	0.000031	<0.000020	0.000020	8704755
Total Arsenic (As)	mg/L	0.000094	0.000085	0.000210	0.000390	0.000247	0.000020	8704755
Total Barium (Ba)	mg/L	0.0411	0.0321	0.0790	0.0522	0.0469	0.000020	8704755
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8704755
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8704755
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8704755
Total Cadmium (Cd)	mg/L	0.000478	0.0000161	0.0000255	0.0000381	0.0000200	0.0000050	8704755
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00011	<0.00010	<0.00010	0.00010	8704755
Total Cobalt (Co)	mg/L	0.0000302	0.0000284	0.0000424	0.0000446	0.0000214	0.0000050	8704755
Total Copper (Cu)	mg/L	0.00170	0.000326	0.000824	0.000785	0.000647	0.000050	8704755
Total Iron (Fe)	mg/L	0.0145	0.0478	0.0649	0.0748	0.0161	0.0010	8704755
Total Lead (Pb)	mg/L	0.000199	0.0000246	0.0000326	0.0000843	0.0000225	0.0000050	8704755
Total Lithium (Li)	mg/L	0.00071	<0.00050	0.00097	0.00127	0.00102	0.00050	8704755
Total Manganese (Mn)	mg/L	0.00137	0.00476	0.0102	0.0157	0.00355	0.000050	8704755
Total Molybdenum (Mo)	mg/L	0.000535	0.000305	0.000471	0.000589	0.000325	0.000050	8704755
Total Nickel (Ni)	mg/L	0.000701	0.000276	0.000555	0.000616	0.000335	0.000020	8704755
Total Phosphorus (P)	mg/L	0.0035	0.0047	0.0059	0.0083	0.0117	0.0020	8704755
Total Selenium (Se)	mg/L	0.000669	0.000412	0.000171	0.000605	0.000451	0.000040	8704755
Total Silicon (Si)	mg/L	2.14	2.45	2.97	2.64	2.44	0.050	8704755
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8704755
Total Strontium (Sr)	mg/L	0.0742	0.112	0.0540	0.123	0.111	0.000050	8704755
Total Thallium (Tl)	mg/L	0.0000068	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8704755
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00483	0.00020	8704755
Total Titanium (Ti)	mg/L	0.00109	<0.00050	0.00204	0.00136	<0.00050	0.00050	8704755
Total Uranium (U)	mg/L	0.00114	0.000437	0.000326	0.00109	0.000704	0.0000020	8704755
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8704755

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RO5342	RO5343	RO5345	RO5346	RO5347		
Sampling Date		2017/07/20 11:00	2017/07/19 17:00	2017/07/20 14:50	2017/07/19 10:32	2017/07/19 11:30		
COC Number		08441883	08441883	08441883	08441883	08441883		
	UNITS	KZ-2	KZ-6	KZ-13	KZ-15	KZ-16	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0796	0.00055	0.00335	0.00457	0.00113	0.00010	8704755
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00011	<0.00010	<0.00010	0.00010	8704755
Total Calcium (Ca)	mg/L	24.9	38.1	18.8	38.4	34.3	0.050	8703790
Total Magnesium (Mg)	mg/L	2.24	4.53	1.99	6.19	4.89	0.050	8703790
Total Potassium (K)	mg/L	1.14	0.438	1.17	0.848	0.836	0.050	8703790
Total Sodium (Na)	mg/L	0.494	0.577	0.827	0.760	0.748	0.050	8703790
Total Sulphur (S)	mg/L	12.9	6.0	3.2	7.9	7.1	3.0	8703790

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RO5348	RO5349	RO5350	RO5354	RO5356		
Sampling Date		2017/07/19 11:55	2017/07/19 16:02	2017/07/20 10:30	2017/07/19 14:30	2017/07/22 15:40		
COC Number		08441883	08441883	08441883	08441887	08441887		
	UNITS	KZ-17	KZ-18	KZ-19	KZ-28	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	127	147	71.2	<0.50	<0.50	0.50	8703415
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8705711
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00155	0.0217	0.0275	0.00060	<0.00050	0.00050	8704755
Total Antimony (Sb)	mg/L	0.000023	<0.000020	0.000026	<0.000020	<0.000020	0.000020	8704755
Total Arsenic (As)	mg/L	0.000192	0.000244	0.000112	<0.000020	<0.000020	0.000020	8704755
Total Barium (Ba)	mg/L	0.0515	0.0339	0.0398	0.000025	0.000027	0.000020	8704755
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8704755
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8704755
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8704755
Total Cadmium (Cd)	mg/L	0.0000171	0.0000229	0.000468	<0.0000050	<0.0000050	0.0000050	8704755
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8704755
Total Cobalt (Co)	mg/L	0.0000086	0.0000188	0.0000392	<0.0000050	<0.0000050	0.0000050	8704755
Total Copper (Cu)	mg/L	0.000671	0.000345	0.00174	<0.000050	<0.000050	0.000050	8704755
Total Iron (Fe)	mg/L	0.0029	0.0136	0.0193	0.0013	<0.0010	0.0010	8704755
Total Lead (Pb)	mg/L	<0.0000050	0.0000071	0.000219	0.0000102	<0.0000050	0.0000050	8704755
Total Lithium (Li)	mg/L	0.00226	0.00094	0.00071	<0.00050	<0.00050	0.00050	8704755
Total Manganese (Mn)	mg/L	0.00124	0.00154	0.00142	<0.000050	<0.000050	0.000050	8704755
Total Molybdenum (Mo)	mg/L	0.000587	0.000660	0.000541	<0.000050	<0.000050	0.000050	8704755
Total Nickel (Ni)	mg/L	0.000386	0.000636	0.000756	<0.000020	<0.000020	0.000020	8704755
Total Phosphorus (P)	mg/L	0.0037	0.0119	0.0099	0.0023	<0.0020	0.0020	8704755
Total Selenium (Se)	mg/L	0.000520	0.000550	0.000642	<0.000040	<0.000040	0.000040	8704755
Total Silicon (Si)	mg/L	2.87	2.87	2.06	<0.050	<0.050	0.050	8704755
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8704755
Total Strontium (Sr)	mg/L	0.129	0.128	0.0730	<0.000050	<0.000050	0.000050	8704755
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000058	<0.0000020	<0.0000020	0.0000020	8704755
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8704755
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00059	<0.00050	<0.00050	0.00050	8704755
Total Uranium (U)	mg/L	0.000981	0.00108	0.00113	<0.0000020	<0.0000020	0.0000020	8704755
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8704755

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RO5348	RO5349	RO5350	RO5354	RO5356		
Sampling Date		2017/07/19 11:55	2017/07/19 16:02	2017/07/20 10:30	2017/07/19 14:30	2017/07/22 15:40		
COC Number		08441883	08441883	08441883	08441887	08441887		
	UNITS	KZ-17	KZ-18	KZ-19	KZ-28	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00097	0.00093	0.0779	0.00020	<0.00010	0.00010	8704755
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8704755
Total Calcium (Ca)	mg/L	38.8	38.1	24.8	<0.050	<0.050	0.050	8703790
Total Magnesium (Mg)	mg/L	7.39	12.6	2.25	<0.050	<0.050	0.050	8703790
Total Potassium (K)	mg/L	1.07	0.342	1.13	<0.050	<0.050	0.050	8703790
Total Sodium (Na)	mg/L	0.874	0.676	0.573	<0.050	<0.050	0.050	8703790
Total Sulphur (S)	mg/L	7.0	7.3	12.3	<3.0	<3.0	3.0	8703790

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RO5344	RO5351	RO5352	RO5353	RO5355		
Sampling Date		2017/07/19 15:35	2017/07/19 09:15	2017/07/19 08:35	2017/07/18 15:30	2017/07/19 15:02		
COC Number		08441883	08441887	08441887	08441887	08441887		
	UNITS	KZ-9	KZ-21	KZ-22	KZ-26	KZ-37	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	119	146	141	159	125	0.50	8703415
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8705711
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0662	0.271	0.164	0.425	0.0568	0.0030	8704888
Total Antimony (Sb)	mg/L	0.000058	0.000205	0.000135	0.000194	0.000040	0.000020	8704888
Total Arsenic (As)	mg/L	0.000296	0.00278	0.00175	0.00206	0.000292	0.000020	8704888
Total Barium (Ba)	mg/L	0.0613	0.0529	0.0537	0.0805	0.0568	0.000050	8704888
Total Beryllium (Be)	mg/L	0.000012	0.000014	0.000014	0.000038	<0.000010	0.000010	8704888
Total Bismuth (Bi)	mg/L	<0.000010	<0.000010	<0.000010	0.000011	<0.000010	0.000010	8704888
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8704888
Total Cadmium (Cd)	mg/L	0.0000871	0.0000577	0.0000441	0.0000966	0.0000795	0.0000050	8704888
Total Chromium (Cr)	mg/L	0.00017	0.00092	0.00048	0.00105	0.00056	0.00010	8704888
Total Cobalt (Co)	mg/L	0.000092	0.000429	0.000279	0.000697	0.000080	0.000010	8704888
Total Copper (Cu)	mg/L	0.00123	0.00200	0.00157	0.00349	0.00107	0.00010	8704888
Total Iron (Fe)	mg/L	0.269	1.02	0.637	1.03	0.241	0.0050	8704888
Total Lead (Pb)	mg/L	0.000426	0.000336	0.000232	0.00113	0.000374	0.000020	8704888
Total Lithium (Li)	mg/L	0.00124	0.00223	0.00193	0.00279	0.00123	0.00050	8704888
Total Manganese (Mn)	mg/L	0.0155	0.0835	0.0514	0.0627	0.0147	0.00010	8704888
Total Molybdenum (Mo)	mg/L	0.000409	0.000983	0.000755	0.000707	0.000515	0.000050	8704888
Total Nickel (Ni)	mg/L	0.00059	0.00481	0.00275	0.00406	0.00062	0.00010	8704888
Total Phosphorus (P)	mg/L	0.040	0.069	0.053	0.096	0.037	0.025	8704888
Total Selenium (Se)	mg/L	0.000644	0.000526	0.000503	0.000527	0.000630	0.000040	8704888
Total Silicon (Si)	mg/L	2.76	4.09	3.52	3.84	2.80	0.050	8704888
Total Silver (Ag)	mg/L	<0.000010	<0.000010	<0.000010	0.000013	<0.000010	0.000010	8704888
Total Strontium (Sr)	mg/L	0.120	0.105	0.108	0.135	0.121	0.000050	8704888
Total Thallium (Tl)	mg/L	0.0000037	0.0000036	0.0000031	0.0000049	<0.0000020	0.0000020	8704888
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8704888
Total Titanium (Ti)	mg/L	0.0036	0.0088	0.0059	0.0080	0.0027	0.0020	8704888
Total Uranium (U)	mg/L	0.000733	0.00151	0.00130	0.00163	0.000796	0.0000050	8704888
Total Vanadium (V)	mg/L	0.00027	0.00099	0.00077	0.00156	0.00021	0.00020	8704888

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RO5344	RO5351	RO5352	RO5353	RO5355		
Sampling Date		2017/07/19 15:35	2017/07/19 09:15	2017/07/19 08:35	2017/07/18 15:30	2017/07/19 15:02		
COC Number		08441883	08441887	08441887	08441887	08441887		
	UNITS	KZ-9	KZ-21	KZ-22	KZ-26	KZ-37	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0169	0.0083	0.0063	0.0073	0.0153	0.0010	8704888
Total Zirconium (Zr)	mg/L	<0.00010	0.00022	0.00014	0.00036	<0.00010	0.00010	8704888
Total Calcium (Ca)	mg/L	40.0	36.2	37.9	42.5	40.5	0.25	8703790
Total Magnesium (Mg)	mg/L	4.66	13.5	11.2	12.7	5.88	0.25	8703790
Total Potassium (K)	mg/L	0.91	0.63	0.73	0.94	0.81	0.25	8703790
Total Sodium (Na)	mg/L	0.74	0.80	0.82	0.97	0.75	0.25	8703790
Total Sulphur (S)	mg/L	8.5	8.0	7.9	9.2	8.4	3.0	8703790

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RO5342
Sample ID: KZ-2
Matrix: Water

Collected: 2017/07/20
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8707219	N/A	2017/07/26	Name Redacted
Alkalinity - Water	AT/ALK	8706069	2017/07/25	2017/07/25	
Chloride by Automated Colourimetry	KONE/COL	8705320	N/A	2017/07/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8705974	N/A	2017/07/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8705978	N/A	2017/07/25	
Carbon (DOC)	TECH	8706642	N/A	2017/07/26	
Conductance - water	AT/ALK	8706074	2017/07/25	2017/07/25	
Fluoride	ISE/ISE	8703940	N/A	2017/07/23	
Hardness Total (calculated as CaCO3)	CALC	8703415	N/A	2017/07/25	
Hardness (calculated as CaCO3)	CALC	8703416	N/A	2017/07/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8705715	N/A	2017/07/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8705711	2017/07/25	2017/07/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8703619	N/A	2017/07/26	
Ion Balance	CALC	8703782	N/A	2017/07/26	
Sum of cations, anions	CALC	8703620	N/A	2017/07/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8703784	N/A	2017/07/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8704490	N/A	2017/07/24	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8703790	N/A	2017/07/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8704755	N/A	2017/07/25	
Ammonia-N (Preserved)	KONE/COL	8705016	N/A	2017/07/24	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8703849	N/A	2017/07/22	
Nitrite (N) (low level)	TRAA/COL	8703850	N/A	2017/07/22	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8703668	N/A	2017/07/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/07/22	
pH Water	AT/ALK	8706073	2017/07/25	2017/07/25	
Sulphate by Automated Colourimetry	KONE/COL	8705321	N/A	2017/07/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8703856	2017/07/22	2017/07/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8703855	2017/07/22	2017/07/25	
Total Suspended Solids-Low Level	BAL/BAL	8704483	2017/07/24	2017/07/25	

Maxxam ID: RO5342 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2017/07/20
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8704490	N/A	2017/07/24	Name Redacted
Elements by ICPMS Low Level (total)	ICP/CRCM	8704755	N/A	2017/07/25	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8703856	2017/07/25	2017/07/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RO5343
Sample ID: KZ-6
Matrix: Water

Collected: 2017/07/19
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8707227	N/A	2017/07/26	Name Redacted
Alkalinity - Water	AT/ALK	8706075	2017/07/25	2017/07/25	
Chloride by Automated Colourimetry	KONE/COL	8705320	N/A	2017/07/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8705974	N/A	2017/07/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8705978	N/A	2017/07/25	
Carbon (DOC)	TECH	8706642	N/A	2017/07/26	
Conductance - water	AT/ALK	8706079	2017/07/25	2017/07/25	
Fluoride	ISE/ISE	8703942	N/A	2017/07/23	
Hardness Total (calculated as CaCO3)	CALC	8703415	N/A	2017/07/25	
Hardness (calculated as CaCO3)	CALC	8720133	N/A	2017/08/09	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8705715	N/A	2017/07/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8705711	2017/07/25	2017/07/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8721221	N/A	2017/08/09	
Ion Balance	CALC	8721222	N/A	2017/08/09	
Sum of cations, anions	CALC	8721223	N/A	2017/08/09	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8720134	N/A	2017/08/09	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8715416	N/A	2017/08/03	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8703790	N/A	2017/07/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8704755	N/A	2017/07/25	
Ammonia-N (Preserved)	KONE/COL	8705016	N/A	2017/07/24	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8703851	N/A	2017/07/22	
Nitrite (N) (low level)	TRAA/COL	8703852	N/A	2017/07/22	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8703668	N/A	2017/07/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/07/22	
pH Water	AT/ALK	8706078	2017/07/25	2017/07/25	
Sulphate by Automated Colourimetry	KONE/COL	8705321	N/A	2017/07/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8703856	2017/07/22	2017/07/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8703855	2017/07/22	2017/07/25	
Total Suspended Solids-Low Level	BAL/BAL	8704483	2017/07/24	2017/07/25	

Maxxam ID: RO5343 Dup
Sample ID: KZ-6
Matrix: Water

Collected: 2017/07/19
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8705974	N/A	2017/07/25	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8705978	N/A	2017/07/25	

Maxxam ID: RO5344
Sample ID: KZ-9
Matrix: Water

Collected: 2017/07/19
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8707219	N/A	2017/07/26	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RO5344
Sample ID: KZ-9
Matrix: Water

Collected: 2017/07/19
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8706069	2017/07/25	2017/07/25	Name Redacted
Chloride by Automated Colourimetry	KONE/COL	8705320	N/A	2017/07/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8705974	N/A	2017/07/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8705978	N/A	2017/07/25	
Carbon (DOC)	TECH	8706642	N/A	2017/07/26	
Conductance - water	AT/ALK	8706074	2017/07/25	2017/07/25	
Fluoride	ISE/ISE	8703940	N/A	2017/07/23	
Hardness Total (calculated as CaCO3)	CALC	8703415	N/A	2017/07/26	
Hardness (calculated as CaCO3)	CALC	8703416	N/A	2017/07/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8705715	N/A	2017/07/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8705711	2017/07/25	2017/07/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8703619	N/A	2017/07/26	
Ion Balance	CALC	8703782	N/A	2017/07/26	
Sum of cations, anions	CALC	8703620	N/A	2017/07/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8703784	N/A	2017/07/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8704490	N/A	2017/07/24	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8704888	2017/07/24	2017/07/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8703790	N/A	2017/07/26	
Ammonia-N (Preserved)	KONE/COL	8705016	N/A	2017/07/24	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8703849	N/A	2017/07/22	
Nitrite (N) (low level)	TRAA/COL	8703850	N/A	2017/07/22	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8703668	N/A	2017/07/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/07/22	
pH Water	AT/ALK	8706073	2017/07/25	2017/07/25	
Sulphate by Automated Colourimetry	KONE/COL	8705321	N/A	2017/07/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8703856	2017/07/22	2017/07/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8703855	2017/07/22	2017/07/25	
Total Suspended Solids-Low Level	BAL/BAL	8704483	2017/07/24	2017/07/25	

Maxxam ID: RO5345
Sample ID: KZ-13
Matrix: Water

Collected: 2017/07/20
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8707219	N/A	2017/07/26	Name Redacted
Alkalinity - Water	AT/ALK	8706069	2017/07/25	2017/07/25	
Chloride by Automated Colourimetry	KONE/COL	8705320	N/A	2017/07/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8705974	N/A	2017/07/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8705978	N/A	2017/07/25	
Carbon (DOC)	TECH	8706642	N/A	2017/07/26	
Conductance - water	AT/ALK	8706074	2017/07/25	2017/07/25	
Fluoride	ISE/ISE	8703940	N/A	2017/07/23	
Hardness Total (calculated as CaCO3)	CALC	8703415	N/A	2017/07/25	
Hardness (calculated as CaCO3)	CALC	8703416	N/A	2017/07/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RO5345
Sample ID: KZ-13
Matrix: Water

Collected: 2017/07/20
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8705715	N/A	2017/07/25	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8705711	2017/07/25	2017/07/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8703619	N/A	2017/07/26	
Ion Balance	CALC	8703782	N/A	2017/07/26	
Sum of cations, anions	CALC	8703620	N/A	2017/07/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8703784	N/A	2017/07/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8704490	N/A	2017/07/24	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8703790	N/A	2017/07/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8704755	N/A	2017/07/25	
Ammonia-N (Preserved)	KONE/COL	8705016	N/A	2017/07/24	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8703849	N/A	2017/07/22	
Nitrite (N) (low level)	TRAA/COL	8703850	N/A	2017/07/22	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8703668	N/A	2017/07/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/07/22	
pH Water	AT/ALK	8706073	2017/07/25	2017/07/25	
Sulphate by Automated Colourimetry	KONE/COL	8705321	N/A	2017/07/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8703856	2017/07/22	2017/07/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8703855	2017/07/22	2017/07/25	
Total Suspended Solids-Low Level	BAL/BAL	8704483	2017/07/24	2017/07/25	

Maxxam ID: RO5345 Dup
Sample ID: KZ-13
Matrix: Water

Collected: 2017/07/20
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8703849	N/A	2017/07/22	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8703850	N/A	2017/07/22	

Maxxam ID: RO5346
Sample ID: KZ-15
Matrix: Water

Collected: 2017/07/19
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8707219	N/A	2017/07/26	Name Redacted
Alkalinity - Water	AT/ALK	8706069	2017/07/25	2017/07/25	
Chloride by Automated Colourimetry	KONE/COL	8705320	N/A	2017/07/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8705974	N/A	2017/07/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8705978	N/A	2017/07/25	
Carbon (DOC)	TECH	8706642	N/A	2017/07/26	
Conductance - water	AT/ALK	8706074	2017/07/25	2017/07/25	
Fluoride	ISE/ISE	8703940	N/A	2017/07/23	
Hardness Total (calculated as CaCO3)	CALC	8703415	N/A	2017/07/25	
Hardness (calculated as CaCO3)	CALC	8703416	N/A	2017/07/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8705715	N/A	2017/07/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RO5346
Sample ID: KZ-15
Matrix: Water

Collected: 2017/07/19
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8705711	2017/07/25	2017/07/25	Name Redacted
Ion Balance (as Cations/Anions Ratio)	CALC	8703619	N/A	2017/07/26	
Ion Balance	CALC	8703782	N/A	2017/07/26	
Sum of cations, anions	CALC	8703620	N/A	2017/07/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8703784	N/A	2017/07/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8704490	N/A	2017/07/24	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8703790	N/A	2017/07/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8704755	N/A	2017/07/25	
Ammonia-N (Preserved)	KONE/COL	8705016	N/A	2017/07/24	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8703849	N/A	2017/07/22	
Nitrite (N) (low level)	TRAA/COL	8703850	N/A	2017/07/22	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8703668	N/A	2017/07/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/07/22	
pH Water	AT/ALK	8706073	2017/07/25	2017/07/25	
Sulphate by Automated Colourimetry	KONE/COL	8705321	N/A	2017/07/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8703856	2017/07/22	2017/07/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8703855	2017/07/22	2017/07/25	
Total Suspended Solids-Low Level	BAL/BAL	8704483	2017/07/24	2017/07/25	

Maxxam ID: RO5347
Sample ID: KZ-16
Matrix: Water

Collected: 2017/07/19
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8707227	N/A	2017/07/26	Name Redacted
Alkalinity - Water	AT/ALK	8706069	2017/07/25	2017/07/25	
Chloride by Automated Colourimetry	KONE/COL	8705320	N/A	2017/07/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8705974	N/A	2017/07/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8705978	N/A	2017/07/25	
Carbon (DOC)	TECH	8706642	N/A	2017/07/26	
Conductance - water	AT/ALK	8706074	2017/07/25	2017/07/25	
Fluoride	ISE/ISE	8703942	N/A	2017/07/23	
Hardness Total (calculated as CaCO3)	CALC	8703415	N/A	2017/07/25	
Hardness (calculated as CaCO3)	CALC	8703416	N/A	2017/07/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8705715	N/A	2017/07/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8705711	2017/07/25	2017/07/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8703619	N/A	2017/07/26	
Ion Balance	CALC	8703782	N/A	2017/07/26	
Sum of cations, anions	CALC	8703620	N/A	2017/07/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8703784	N/A	2017/07/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8704490	N/A	2017/07/24	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8703790	N/A	2017/07/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8704755	N/A	2017/07/25	
Ammonia-N (Preserved)	KONE/COL	8705016	N/A	2017/07/24	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RO5347
Sample ID: KZ-16
Matrix: Water

Collected: 2017/07/19
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8703851	N/A	2017/07/22	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8703852	N/A	2017/07/22	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8703668	N/A	2017/07/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/07/22	
pH Water	AT/ALK	8706073	2017/07/25	2017/07/25	
Sulphate by Automated Colourimetry	KONE/COL	8705321	N/A	2017/07/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8703856	2017/07/22	2017/07/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8703855	2017/07/22	2017/07/25	
Total Suspended Solids-Low Level	BAL/BAL	8704483	2017/07/24	2017/07/25	

Maxxam ID: RO5347 Dup
Sample ID: KZ-16
Matrix: Water

Collected: 2017/07/19
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride	ISE/ISE	8703942	N/A	2017/07/23	Name Redacted
Ammonia-N (Preserved)	KONE/COL	8705016	N/A	2017/07/24	

Maxxam ID: RO5348
Sample ID: KZ-17
Matrix: Water

Collected: 2017/07/19
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8707227	N/A	2017/07/26	Name Redacted
Alkalinity - Water	AT/ALK	8706075	2017/07/25	2017/07/26	
Chloride by Automated Colourimetry	KONE/COL	8705322	N/A	2017/07/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8705974	N/A	2017/07/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8705978	N/A	2017/07/25	
Carbon (DOC)	TECH	8706642	N/A	2017/07/26	
Conductance - water	AT/ALK	8706079	2017/07/25	2017/07/26	
Fluoride	ISE/ISE	8703942	N/A	2017/07/23	
Hardness Total (calculated as CaCO3)	CALC	8703415	N/A	2017/07/25	
Hardness (calculated as CaCO3)	CALC	8703416	N/A	2017/07/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8705715	N/A	2017/07/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8705711	2017/07/25	2017/07/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8703619	N/A	2017/07/26	
Ion Balance	CALC	8703782	N/A	2017/07/26	
Sum of cations, anions	CALC	8703620	N/A	2017/07/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8703784	N/A	2017/07/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8704490	N/A	2017/07/24	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8703790	N/A	2017/07/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8704755	N/A	2017/07/25	
Ammonia-N (Preserved)	KONE/COL	8705016	N/A	2017/07/24	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8703851	N/A	2017/07/22	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RO5348
Sample ID: KZ-17
Matrix: Water

Collected: 2017/07/19
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8703852	N/A	2017/07/22	Name Redacted
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8703668	N/A	2017/07/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/07/22	
pH Water	AT/ALK	8706078	2017/07/25	2017/07/26	
Sulphate by Automated Colourimetry	KONE/COL	8707013	N/A	2017/07/25	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8703856	2017/07/22	2017/07/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8703855	2017/07/22	2017/07/25	
Total Suspended Solids-Low Level	BAL/BAL	8704483	2017/07/24	2017/07/25	

Maxxam ID: RO5349
Sample ID: KZ-18
Matrix: Water

Collected: 2017/07/19
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8707227	N/A	2017/07/26	Name Redacted
Alkalinity - Water	AT/ALK	8706069	2017/07/25	2017/07/25	
Chloride by Automated Colourimetry	KONE/COL	8705320	N/A	2017/07/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8705974	N/A	2017/07/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8705978	N/A	2017/07/25	
Carbon (DOC)	TECH	8706642	N/A	2017/07/26	
Conductance - water	AT/ALK	8706074	2017/07/25	2017/07/25	
Fluoride	ISE/ISE	8703942	N/A	2017/07/23	
Hardness Total (calculated as CaCO3)	CALC	8703415	N/A	2017/07/25	
Hardness (calculated as CaCO3)	CALC	8703416	N/A	2017/07/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8705715	N/A	2017/07/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8705711	2017/07/25	2017/07/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8703619	N/A	2017/07/26	
Ion Balance	CALC	8703782	N/A	2017/07/26	
Sum of cations, anions	CALC	8703620	N/A	2017/07/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8703784	N/A	2017/07/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8704490	N/A	2017/07/24	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8703790	N/A	2017/07/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8704755	N/A	2017/07/25	
Ammonia-N (Preserved)	KONE/COL	8705016	N/A	2017/07/24	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8703851	N/A	2017/07/22	
Nitrite (N) (low level)	TRAA/COL	8703852	N/A	2017/07/22	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8703668	N/A	2017/07/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/07/22	
pH Water	AT/ALK	8706073	2017/07/25	2017/07/25	
Sulphate by Automated Colourimetry	KONE/COL	8705321	N/A	2017/07/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8703856	2017/07/22	2017/07/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8703855	2017/07/22	2017/07/25	
Total Suspended Solids-Low Level	BAL/BAL	8704483	2017/07/24	2017/07/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RO5350
Sample ID: KZ-19
Matrix: Water

Collected: 2017/07/20
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8707227	N/A	2017/07/26	Name Redacted
Alkalinity - Water	AT/ALK	8706069	2017/07/25	2017/07/25	
Chloride by Automated Colourimetry	KONE/COL	8705320	N/A	2017/07/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8705974	N/A	2017/07/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8705978	N/A	2017/07/25	
Carbon (DOC)	TECH	8706646	N/A	2017/07/26	
Conductance - water	AT/ALK	8706074	2017/07/25	2017/07/25	
Fluoride	ISE/ISE	8703942	N/A	2017/07/23	
Hardness Total (calculated as CaCO3)	CALC	8703415	N/A	2017/07/25	
Hardness (calculated as CaCO3)	CALC	8703416	N/A	2017/07/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8705715	N/A	2017/07/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8705711	2017/07/25	2017/07/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8703619	N/A	2017/07/26	
Ion Balance	CALC	8703782	N/A	2017/07/26	
Sum of cations, anions	CALC	8703620	N/A	2017/07/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8703784	N/A	2017/07/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8704490	N/A	2017/07/24	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8703790	N/A	2017/07/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8704755	N/A	2017/07/25	
Ammonia-N (Preserved)	KONE/COL	8705016	N/A	2017/07/24	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8703851	N/A	2017/07/22	
Nitrite (N) (low level)	TRAA/COL	8703852	N/A	2017/07/22	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8703668	N/A	2017/07/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/07/22	
pH Water	AT/ALK	8706073	2017/07/25	2017/07/25	
Sulphate by Automated Colourimetry	KONE/COL	8705321	N/A	2017/07/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8703856	2017/07/22	2017/07/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8703855	2017/07/22	2017/07/25	
Total Suspended Solids-Low Level	BAL/BAL	8705661	2017/07/25	2017/07/26	

Maxxam ID: RO5350 Dup
Sample ID: KZ-19
Matrix: Water

Collected: 2017/07/20
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8707227	N/A	2017/07/26	Name Redacted
Carbon (DOC)	TECH	8706646	N/A	2017/07/26	

Maxxam ID: RO5351
Sample ID: KZ-21
Matrix: Water

Collected: 2017/07/19
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8707227	N/A	2017/07/26	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RO5351
Sample ID: KZ-21
Matrix: Water

Collected: 2017/07/19
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Water	AT/ALK	8706075	2017/07/25	2017/07/26	Name Redacted
Chloride by Automated Colourimetry	KONE/COL	8705322	N/A	2017/07/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8705974	N/A	2017/07/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8705978	N/A	2017/07/25	
Carbon (DOC)	TECH	8706646	N/A	2017/07/26	
Conductance - water	AT/ALK	8706079	2017/07/25	2017/07/26	
Fluoride	ISE/ISE	8703942	N/A	2017/07/23	
Hardness Total (calculated as CaCO3)	CALC	8703415	N/A	2017/07/26	
Hardness (calculated as CaCO3)	CALC	8703416	N/A	2017/07/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8705715	N/A	2017/07/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8705711	2017/07/25	2017/07/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8703619	N/A	2017/07/26	
Ion Balance	CALC	8703782	N/A	2017/07/26	
Sum of cations, anions	CALC	8703620	N/A	2017/07/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8703784	N/A	2017/07/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8704490	N/A	2017/07/24	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8704888	2017/07/24	2017/07/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8703790	N/A	2017/07/26	
Ammonia-N (Preserved)	KONE/COL	8705016	N/A	2017/07/24	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8703851	N/A	2017/07/22	
Nitrite (N) (low level)	TRAA/COL	8703852	N/A	2017/07/22	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8703668	N/A	2017/07/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/07/22	
pH Water	AT/ALK	8706078	2017/07/25	2017/07/26	
Sulphate by Automated Colourimetry	KONE/COL	8705323	N/A	2017/07/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8703856	2017/07/22	2017/07/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8703855	2017/07/22	2017/07/25	
Total Suspended Solids-Low Level	BAL/BAL	8705661	2017/07/25	2017/07/26	

Maxxam ID: RO5352
Sample ID: KZ-22
Matrix: Water

Collected: 2017/07/19
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8707227	N/A	2017/07/26	Name Redacted
Alkalinity - Water	AT/ALK	8706075	2017/07/25	2017/07/26	
Chloride by Automated Colourimetry	KONE/COL	8705322	N/A	2017/07/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8705974	N/A	2017/07/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8705978	N/A	2017/07/25	
Carbon (DOC)	TECH	8706646	N/A	2017/07/26	
Conductance - water	AT/ALK	8706079	2017/07/25	2017/07/26	
Fluoride	ISE/ISE	8703942	N/A	2017/07/23	
Hardness Total (calculated as CaCO3)	CALC	8703415	N/A	2017/07/26	
Hardness (calculated as CaCO3)	CALC	8703416	N/A	2017/07/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RO5352
Sample ID: KZ-22
Matrix: Water

Collected: 2017/07/19
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8705715	N/A	2017/07/25	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8705711	2017/07/25	2017/07/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8703619	N/A	2017/07/26	
Ion Balance	CALC	8703782	N/A	2017/07/26	
Sum of cations, anions	CALC	8703620	N/A	2017/07/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8703784	N/A	2017/07/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8704490	N/A	2017/07/24	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8704888	2017/07/24	2017/07/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8703790	N/A	2017/07/26	
Ammonia-N (Preserved)	KONE/COL	8705016	N/A	2017/07/24	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8703851	N/A	2017/07/22	
Nitrite (N) (low level)	TRAA/COL	8703852	N/A	2017/07/22	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8703668	N/A	2017/07/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/07/22	
pH Water	AT/ALK	8706078	2017/07/25	2017/07/26	
Sulphate by Automated Colourimetry	KONE/COL	8705323	N/A	2017/07/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8703856	2017/07/22	2017/07/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8703855	2017/07/22	2017/07/25	
Total Suspended Solids-Low Level	BAL/BAL	8705661	2017/07/25	2017/07/26	

Maxxam ID: RO5353
Sample ID: KZ-26
Matrix: Water

Collected: 2017/07/18
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8707227	N/A	2017/07/26	Name Redacted
Alkalinity - Water	AT/ALK	8706069	2017/07/25	2017/07/25	
Chloride by Automated Colourimetry	KONE/COL	8705320	N/A	2017/07/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8705974	N/A	2017/07/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8705978	N/A	2017/07/25	
Carbon (DOC)	TECH	8706646	N/A	2017/07/26	
Conductance - water	AT/ALK	8706074	2017/07/25	2017/07/25	
Fluoride	ISE/ISE	8703942	N/A	2017/07/23	
Hardness Total (calculated as CaCO3)	CALC	8703415	N/A	2017/07/26	
Hardness (calculated as CaCO3)	CALC	8703416	N/A	2017/07/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8705715	N/A	2017/07/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8705711	2017/07/25	2017/07/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8703619	N/A	2017/07/26	
Ion Balance	CALC	8703782	N/A	2017/07/26	
Sum of cations, anions	CALC	8703620	N/A	2017/07/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8703784	N/A	2017/07/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8704490	N/A	2017/07/24	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8704888	2017/07/24	2017/07/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8703790	N/A	2017/07/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RO5353
Sample ID: KZ-26
Matrix: Water

Collected: 2017/07/18
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8705016	N/A	2017/07/24	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8703851	N/A	2017/07/22	
Nitrite (N) (low level)	TRAA/COL	8703852	N/A	2017/07/22	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8703668	N/A	2017/07/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/07/22	
pH Water	AT/ALK	8706073	2017/07/25	2017/07/25	
Sulphate by Automated Colourimetry	KONE/COL	8705321	N/A	2017/07/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8703856	2017/07/22	2017/07/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8703855	2017/07/22	2017/07/25	
Total Suspended Solids-Low Level	BAL/BAL	8705661	2017/07/25	2017/07/26	

Maxxam ID: RO5354
Sample ID: KZ-28
Matrix: Water

Collected: 2017/07/19
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8707227	N/A	2017/07/26	Name Redacted
Alkalinity - Water	AT/ALK	8706069	2017/07/25	2017/07/25	
Chloride by Automated Colourimetry	KONE/COL	8705320	N/A	2017/07/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8705974	N/A	2017/07/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8705978	N/A	2017/07/25	
Carbon (DOC)	TECH	8706646	N/A	2017/07/26	
Conductance - water	AT/ALK	8706074	2017/07/25	2017/07/25	
Fluoride	ISE/ISE	8703942	N/A	2017/07/23	
Hardness Total (calculated as CaCO3)	CALC	8703415	N/A	2017/07/25	
Hardness (calculated as CaCO3)	CALC	8703416	N/A	2017/07/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8705715	N/A	2017/07/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8705711	2017/07/25	2017/07/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8703619	N/A	2017/07/26	
Ion Balance	CALC	8703782	N/A	2017/07/26	
Sum of cations, anions	CALC	8703620	N/A	2017/07/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8703784	N/A	2017/07/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8704490	N/A	2017/07/24	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8703790	N/A	2017/07/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8704755	N/A	2017/07/25	
Ammonia-N (Preserved)	KONE/COL	8709579	N/A	2017/07/28	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8703851	N/A	2017/07/22	
Nitrite (N) (low level)	TRAA/COL	8703852	N/A	2017/07/22	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8703668	N/A	2017/07/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/07/22	
pH Water	AT/ALK	8706073	2017/07/25	2017/07/25	
Sulphate by Automated Colourimetry	KONE/COL	8705321	N/A	2017/07/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8703856	2017/07/22	2017/07/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8703855	2017/07/22	2017/07/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RO5354 **Collected:** 2017/07/19
Sample ID: KZ-28 **Shipped:**
Matrix: Water **Received:** 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Suspended Solids-Low Level	BAL/BAL	8705661	2017/07/25	2017/07/26	Name Redacted

Maxxam ID: RO5354 Dup **Collected:** 2017/07/19
Sample ID: KZ-28 **Shipped:**
Matrix: Water **Received:** 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N (Preserved)	KONE/COL	8709579	N/A	2017/07/28	Name Redacted

Maxxam ID: RO5355 **Collected:** 2017/07/19
Sample ID: KZ-37 **Shipped:**
Matrix: Water **Received:** 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8707227	N/A	2017/07/26	Name Redacted
Alkalinity - Water	AT/ALK	8706069	2017/07/25	2017/07/25	
Chloride by Automated Colourimetry	KONE/COL	8705320	N/A	2017/07/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8705974	N/A	2017/07/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8705978	N/A	2017/07/25	
Carbon (DOC)	TECH	8706646	N/A	2017/07/26	
Conductance - water	AT/ALK	8706074	2017/07/25	2017/07/25	
Fluoride	ISE/ISE	8703942	N/A	2017/07/23	
Hardness Total (calculated as CaCO3)	CALC	8703415	N/A	2017/07/26	
Hardness (calculated as CaCO3)	CALC	8703416	N/A	2017/07/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8705715	N/A	2017/07/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8705711	2017/07/25	2017/07/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8703619	N/A	2017/07/26	
Ion Balance	CALC	8703782	N/A	2017/07/26	
Sum of cations, anions	CALC	8703620	N/A	2017/07/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8703784	N/A	2017/07/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8704490	N/A	2017/07/24	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8704888	2017/07/24	2017/07/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8703790	N/A	2017/07/26	
Ammonia-N (Preserved)	KONE/COL	8705016	N/A	2017/07/24	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8703851	N/A	2017/07/22	
Nitrite (N) (low level)	TRAA/COL	8703852	N/A	2017/07/22	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8703668	N/A	2017/07/25	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/07/22	
pH Water	AT/ALK	8706073	2017/07/25	2017/07/25	
Sulphate by Automated Colourimetry	KONE/COL	8705321	N/A	2017/07/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8703856	2017/07/22	2017/07/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8703855	2017/07/22	2017/07/25	
Total Suspended Solids-Low Level	BAL/BAL	8705661	2017/07/25	2017/07/26	

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RO5355 Dup
Sample ID: KZ-37
Matrix: Water

Collected: 2017/07/19
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Digested LL (total)	ICP/CRCM	8704888	2017/07/24	2017/07/25	Name

Maxxam ID: RO5356
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/07/22
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8707219	N/A	2017/07/26	Name Redacted
Alkalinity - Water	AT/ALK	8706043	2017/07/25	2017/07/25	
Chloride by Automated Colourimetry	KONE/COL	8705320	N/A	2017/07/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8705974	N/A	2017/07/25	
Cyanide WAD (weak acid dissociable)	TECH/COL	8705978	N/A	2017/07/25	
Carbon (DOC)	TECH	8706646	N/A	2017/07/26	
Conductance - water	AT/ALK	8706049	2017/07/25	2017/07/25	
Fluoride	ISE/ISE	8703940	N/A	2017/07/23	
Hardness Total (calculated as CaCO3)	CALC	8703415	N/A	2017/07/25	
Hardness (calculated as CaCO3)	CALC	8703416	N/A	2017/07/25	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8705715	N/A	2017/07/25	
Mercury (Total-LowLevel) by CVAF	CV/AF	8705711	2017/07/25	2017/07/25	
Ion Balance (as Cations/Anions Ratio)	CALC	8703619	N/A	2017/07/26	
Ion Balance	CALC	8703782	N/A	2017/07/26	
Sum of cations, anions	CALC	8703620	N/A	2017/07/25	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8703784	N/A	2017/07/25	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8704490	N/A	2017/07/25	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8703790	N/A	2017/07/25	
Elements by ICPMS Low Level (total)	ICP/CRCM	8704755	N/A	2017/07/25	
Ammonia-N (Preserved)	KONE/COL	8705016	N/A	2017/07/24	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8703851	N/A	2017/07/22	
Nitrite (N) (low level)	TRAA/COL	8703852	N/A	2017/07/22	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8703668	N/A	2017/07/25	
pH Water	AT/ALK	8706046	2017/07/25	2017/07/25	
Sulphate by Automated Colourimetry	KONE/COL	8705321	N/A	2017/07/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8703856	2017/07/22	2017/07/25	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8703855	2017/07/22	2017/07/25	
Total Suspended Solids-Low Level	BAL/BAL	8705661	2017/07/25	2017/07/26	

Maxxam ID: RO5356 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/07/22
Shipped:
Received: 2017/07/21

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8704490	N/A	2017/07/25	Name Redacted
Elements by ICPMS Low Level (total)	ICP/CRCM	8704755	N/A	2017/07/25	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	9.3°C
Package 2	6.0°C
Package 3	8.3°C
Package 4	9.7°C
Package 5	8.7°C

Revised Report V3: Includes additional comments for sample KZ-6 Dissolved Metals rework results.
Revised Report V2: Updated sample date for KZ-26 as per Chain of Custody. Dissolved Metals results for Sample KZ-6 revised, results reported are from the 2nd vial submitted.

Sample RO5344 [KZ-9] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RO5351 [KZ-21] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RO5352 [KZ-22] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RO5353 [KZ-26] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RO5354 [KZ-28] : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

Sample RO5355 [KZ-37] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RO5356 [TRIP BLANK] : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

RESULTS OF CHEMICAL ANALYSES OF WATER Comments

Sample RO5343 [KZ-6] Sum of cations, anions: This rework was done from the second Falcon tube.
Sample RO5343 [KZ-6] Ion Balance (as Cations/Anions Ratio): This rework was done from the second Falcon tube.
Sample RO5343 [KZ-6] Ion Balance: This rework was done from the second Falcon tube.

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER) Comments

Sample RO5343 [KZ-6] Hardness (calculated as CaCO3): This rework was done from the second Falcon tube.
Sample RO5343 [KZ-6] Elements by ICPMS Low Level (dissolved): This rework was done from the second Falcon tube.
Sample RO5343 [KZ-6] Na, K, Ca, Mg, S by CRC ICPMS (diss.): This rework was done from the second Falcon tube.

LL TOTAL METALS (DIGESTED) WITH CV HG Comments

Method Blank Elements by ICPMS Digested LL (total): Phosphorus blank outside acceptance criteria, detection limit adjusted accordingly.

Sample RO5353, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample RO5355, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8703849	Nitrate plus Nitrite (N)	2017/07/22	102	80 - 120	105	80 - 120	<0.0020	mg/L	2.2	25
8703850	Nitrite (N)	2017/07/22	99	80 - 120	101	80 - 120	<0.0020	mg/L	NC	25
8703851	Nitrate plus Nitrite (N)	2017/07/22			105	80 - 120	<0.0020	mg/L		
8703852	Nitrite (N)	2017/07/22			101	80 - 120	<0.0020	mg/L		
8703855	Total Phosphorus (P)	2017/07/25	93	80 - 120	102	80 - 120	<0.0020	mg/L	1.3	20
8703856	Dissolved Phosphorus (P)	2017/07/25	107	80 - 120	104	80 - 120	<0.0020	mg/L	NC	20
8703940	Fluoride (F)	2017/07/23	95	80 - 120	100	80 - 120	<0.010	mg/L	0	20
8703942	Fluoride (F)	2017/07/23	100	80 - 120	100	80 - 120	<0.010	mg/L	2.2	20
8704483	Total Suspended Solids	2017/07/25			100	80 - 120	<1.0	mg/L		
8704490	Dissolved Aluminum (Al)	2017/07/25	113	80 - 120	108	80 - 120	<0.00050	mg/L	NC	20
8704490	Dissolved Antimony (Sb)	2017/07/25	98	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8704490	Dissolved Arsenic (As)	2017/07/25	102	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8704490	Dissolved Barium (Ba)	2017/07/25	NC	80 - 120	102	80 - 120	<0.000020	mg/L	1.6	20
8704490	Dissolved Beryllium (Be)	2017/07/25	112	80 - 120	105	80 - 120	<0.000010	mg/L	NC	20
8704490	Dissolved Bismuth (Bi)	2017/07/25	99	80 - 120	95	80 - 120	<0.0000050	mg/L	NC	20
8704490	Dissolved Boron (B)	2017/07/25	109	80 - 120	105	80 - 120	<0.010	mg/L	NC	20
8704490	Dissolved Cadmium (Cd)	2017/07/25	99	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8704490	Dissolved Chromium (Cr)	2017/07/25	89	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
8704490	Dissolved Cobalt (Co)	2017/07/25	89	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8704490	Dissolved Copper (Cu)	2017/07/25	86	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8704490	Dissolved Iron (Fe)	2017/07/25	101	80 - 120	99	80 - 120	<0.0010	mg/L	NC	20
8704490	Dissolved Lead (Pb)	2017/07/25	105	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8704490	Dissolved Lithium (Li)	2017/07/25	108	80 - 120	109	80 - 120	<0.00050	mg/L	NC	20
8704490	Dissolved Manganese (Mn)	2017/07/25	93	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8704490	Dissolved Molybdenum (Mo)	2017/07/25	103	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8704490	Dissolved Nickel (Ni)	2017/07/25	88	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8704490	Dissolved Phosphorus (P)	2017/07/25					<0.0020	mg/L	NC	20
8704490	Dissolved Selenium (Se)	2017/07/25	101	80 - 120	101	80 - 120	<0.000040	mg/L	NC	20
8704490	Dissolved Silicon (Si)	2017/07/25					<0.050	mg/L	NC	20
8704490	Dissolved Silver (Ag)	2017/07/25	103	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8704490	Dissolved Strontium (Sr)	2017/07/25	NC	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8704490	Dissolved Thallium (Tl)	2017/07/25	99	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	20
8704490	Dissolved Tin (Sn)	2017/07/25	100	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
8704490	Dissolved Titanium (Ti)	2017/07/25	84	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8704490	Dissolved Uranium (U)	2017/07/25	107	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8704490	Dissolved Vanadium (V)	2017/07/25	90	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
8704490	Dissolved Zinc (Zn)	2017/07/25	NC	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
8704490	Dissolved Zirconium (Zr)	2017/07/25					<0.00010	mg/L	NC	20
8704755	Total Aluminum (Al)	2017/07/25	100	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
8704755	Total Antimony (Sb)	2017/07/25	96	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8704755	Total Arsenic (As)	2017/07/25	99	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8704755	Total Barium (Ba)	2017/07/25	NC	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8704755	Total Beryllium (Be)	2017/07/25	96	80 - 120	97	80 - 120	<0.000010	mg/L	NC	20
8704755	Total Bismuth (Bi)	2017/07/25	99	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8704755	Total Boron (B)	2017/07/25	97	80 - 120	92	80 - 120	<0.010	mg/L	NC	20
8704755	Total Cadmium (Cd)	2017/07/25	101	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8704755	Total Chromium (Cr)	2017/07/25	100	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8704755	Total Cobalt (Co)	2017/07/25	99	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8704755	Total Copper (Cu)	2017/07/25	97	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8704755	Total Iron (Fe)	2017/07/25	97	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
8704755	Total Lead (Pb)	2017/07/25	100	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8704755	Total Lithium (Li)	2017/07/25	96	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8704755	Total Manganese (Mn)	2017/07/25	92	80 - 120	94	80 - 120	<0.000050	mg/L	NC	20
8704755	Total Molybdenum (Mo)	2017/07/25	97	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8704755	Total Nickel (Ni)	2017/07/25	98	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8704755	Total Phosphorus (P)	2017/07/25					<0.0020	mg/L	3.4	20
8704755	Total Selenium (Se)	2017/07/25	102	80 - 120	111	80 - 120	<0.000040	mg/L	NC	20
8704755	Total Silicon (Si)	2017/07/25					<0.050	mg/L	NC	20
8704755	Total Silver (Ag)	2017/07/25	105	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8704755	Total Strontium (Sr)	2017/07/25	NC	80 - 120	95	80 - 120	<0.000050	mg/L	NC	20
8704755	Total Thallium (Tl)	2017/07/25	101	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8704755	Total Tin (Sn)	2017/07/25	92	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8704755	Total Titanium (Ti)	2017/07/25	87	80 - 120	92	80 - 120	<0.00050	mg/L	NC	20
8704755	Total Uranium (U)	2017/07/25	99	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8704755	Total Vanadium (V)	2017/07/25	98	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8704755	Total Zinc (Zn)	2017/07/25	NC	80 - 120	106	80 - 120	<0.00010	mg/L	NC	20
8704755	Total Zirconium (Zr)	2017/07/25					<0.00010	mg/L	NC	20
8704888	Total Aluminum (Al)	2017/07/25	116	80 - 120	104	80 - 120	<0.0030	mg/L	9.9	20
8704888	Total Antimony (Sb)	2017/07/25	100	80 - 120	95	80 - 120	<0.000020	mg/L	16	20
8704888	Total Arsenic (As)	2017/07/25	89	80 - 120	99	80 - 120	<0.000020	mg/L	2.3	20
8704888	Total Barium (Ba)	2017/07/25	NC	80 - 120	96	80 - 120	<0.000050	mg/L	0.42	20
8704888	Total Beryllium (Be)	2017/07/25	96	80 - 120	97	80 - 120	<0.000010	mg/L	NC	20
8704888	Total Bismuth (Bi)	2017/07/25	91	80 - 120	97	80 - 120	<0.000010	mg/L	NC	20
8704888	Total Boron (B)	2017/07/25	98	80 - 120	93	80 - 120	<0.010	mg/L	NC	20
8704888	Total Cadmium (Cd)	2017/07/25	95	80 - 120	100	80 - 120	<0.0000050	mg/L	2.4	20
8704888	Total Chromium (Cr)	2017/07/25	100	80 - 120	100	80 - 120	<0.00010	mg/L	8.1	20
8704888	Total Cobalt (Co)	2017/07/25	98	80 - 120	100	80 - 120	<0.000010	mg/L	5.4	20
8704888	Total Copper (Cu)	2017/07/25	96	80 - 120	100	80 - 120	<0.00010	mg/L	5.4	20
8704888	Total Iron (Fe)	2017/07/25	NC	80 - 120	105	80 - 120	<0.0050	mg/L	0.43	20
8704888	Total Lead (Pb)	2017/07/25	99	80 - 120	100	80 - 120	<0.000020	mg/L	3.7	20
8704888	Total Lithium (Li)	2017/07/25	95	80 - 120	98	80 - 120	<0.00050	mg/L	3.3	20
8704888	Total Manganese (Mn)	2017/07/25	NC	80 - 120	99	80 - 120	<0.00010	mg/L	0.59	20
8704888	Total Molybdenum (Mo)	2017/07/25	90	80 - 120	97	80 - 120	<0.000050	mg/L	2.3	20
8704888	Total Nickel (Ni)	2017/07/25	100	80 - 120	100	80 - 120	<0.00010	mg/L	1.7	20
8704888	Total Phosphorus (P)	2017/07/25					<0.025	mg/L	8.0	20
8704888	Total Selenium (Se)	2017/07/25	90	80 - 120	99	80 - 120	<0.000040	mg/L	7.1	20
8704888	Total Silicon (Si)	2017/07/25					<0.050	mg/L	0.56	20
8704888	Total Silver (Ag)	2017/07/25	103	80 - 120	101	80 - 120	<0.000010	mg/L	NC	20
8704888	Total Strontium (Sr)	2017/07/25	NC	80 - 120	97	80 - 120	<0.000050	mg/L	0.22	20
8704888	Total Thallium (Tl)	2017/07/25	95	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8704888	Total Tin (Sn)	2017/07/25	99	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8704888	Total Titanium (Ti)	2017/07/25	96	80 - 120	89	80 - 120	<0.0020	mg/L	0.81	20
8704888	Total Uranium (U)	2017/07/25	100	80 - 120	99	80 - 120	<0.0000050	mg/L	2.1	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8704888	Total Vanadium (V)	2017/07/25	100	80 - 120	98	80 - 120	<0.00020	mg/L	5.7	20
8704888	Total Zinc (Zn)	2017/07/25	NC	80 - 120	102	80 - 120	<0.0010	mg/L	4.4	20
8704888	Total Zirconium (Zr)	2017/07/25					<0.00010	mg/L	NC	20
8705016	Total Ammonia (N)	2017/07/24	107	80 - 120	104	80 - 120	<0.0050	mg/L	3.7	20
8705320	Dissolved Chloride (Cl)	2017/07/24	94	80 - 120	98	80 - 120	<0.50	mg/L	4.5	20
8705321	Dissolved Sulphate (SO4)	2017/07/24	NC	80 - 120	98	80 - 120	<0.50	mg/L	1.2	20
8705322	Dissolved Chloride (Cl)	2017/07/24	95	80 - 120	98	80 - 120	<0.50	mg/L	5.0	20
8705323	Dissolved Sulphate (SO4)	2017/07/24	NC	80 - 120	98	80 - 120	<0.50	mg/L	1.4	20
8705661	Total Suspended Solids	2017/07/26			103	80 - 120	<1.0	mg/L		
8705711	Total Mercury (Hg)	2017/07/25	84	80 - 120	98	80 - 120	<0.0000020	mg/L	4.3	20
8705715	Dissolved Mercury (Hg)	2017/07/25	82	80 - 120	99	80 - 120	<0.0000020	mg/L	1.8	20
8705974	Strong Acid Dissoc. Cyanide (CN)	2017/07/25	107	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8705978	Weak Acid Dissoc. Cyanide (CN)	2017/07/25	107	80 - 120	103	80 - 120	<0.00050	mg/L	4.0	20
8706043	Alkalinity (PP as CaCO3)	2017/07/25					<0.50	mg/L	NC	20
8706043	Alkalinity (Total as CaCO3)	2017/07/25	NC	80 - 120	99	80 - 120	<0.50	mg/L	1.4	20
8706043	Bicarbonate (HCO3)	2017/07/25					<0.50	mg/L	1.4	20
8706043	Carbonate (CO3)	2017/07/25					<0.50	mg/L	NC	20
8706043	Hydroxide (OH)	2017/07/25					<0.50	mg/L	NC	20
8706046	pH	2017/07/25			102	97 - 103			0	20
8706049	Conductivity	2017/07/25			101	80 - 120	<1.0	uS/cm	1.6	20
8706069	Alkalinity (PP as CaCO3)	2017/07/25					<0.50	mg/L	NC	20
8706069	Alkalinity (Total as CaCO3)	2017/07/25	101	80 - 120	96	80 - 120	<0.50	mg/L	0.24	20
8706069	Bicarbonate (HCO3)	2017/07/25					<0.50	mg/L	0.24	20
8706069	Carbonate (CO3)	2017/07/25					<0.50	mg/L	NC	20
8706069	Hydroxide (OH)	2017/07/25					<0.50	mg/L	NC	20
8706073	pH	2017/07/25			102	97 - 103			0	20
8706074	Conductivity	2017/07/25			101	80 - 120	<1.0	uS/cm	1.5	20
8706075	Alkalinity (PP as CaCO3)	2017/07/25					<0.50	mg/L		
8706075	Alkalinity (Total as CaCO3)	2017/07/25			96	80 - 120	<0.50	mg/L		
8706075	Bicarbonate (HCO3)	2017/07/25					<0.50	mg/L		
8706075	Carbonate (CO3)	2017/07/25					<0.50	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8706075	Hydroxide (OH)	2017/07/25					<0.50	mg/L		
8706078	pH	2017/07/25			102	97 - 103				
8706079	Conductivity	2017/07/25			101	80 - 120	<1.0	uS/cm		
8706642	Dissolved Organic Carbon (C)	2017/07/26	NC	80 - 120	107	80 - 120	<0.50	mg/L	5.7	20
8706646	Dissolved Organic Carbon (C)	2017/07/26	108	80 - 120	106	80 - 120	<0.50	mg/L	0.26	20
8707013	Dissolved Sulphate (SO4)	2017/07/25	NC	80 - 120	102	80 - 120	<0.50	mg/L	4.9	20
8707219	Acidity (pH 4.5)	2017/07/26					<0.50	mg/L	NC	20
8707219	Acidity (pH 8.3)	2017/07/26			94	80 - 120	<0.50	mg/L	NC	20
8707227	Acidity (pH 4.5)	2017/07/26					<0.50	mg/L	NC	20
8707227	Acidity (pH 8.3)	2017/07/26			96	80 - 120	<0.50	mg/L	NC	20
8709431	Dissolved Molybdenum (Mo)	2017/07/28			102	80 - 120	<0.000050	mg/L		
8709431	Dissolved Selenium (Se)	2017/07/28			105	80 - 120	<0.000040	mg/L		
8709579	Total Ammonia (N)	2017/07/28	103	80 - 120	99	80 - 120	<0.0050	mg/L	NC	20
8715416	Dissolved Aluminum (Al)	2017/08/03	101	80 - 120	109	80 - 120	<0.00050	mg/L	0.25	20
8715416	Dissolved Antimony (Sb)	2017/08/03	94	80 - 120	101	80 - 120	<0.000020	mg/L	4.0	20
8715416	Dissolved Arsenic (As)	2017/08/03	98	80 - 120	99	80 - 120	<0.000020	mg/L	6.8	20
8715416	Dissolved Barium (Ba)	2017/08/03	NC	80 - 120	102	80 - 120	<0.000020	mg/L	0.090	20
8715416	Dissolved Beryllium (Be)	2017/08/03	97	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8715416	Dissolved Bismuth (Bi)	2017/08/03	93	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8715416	Dissolved Boron (B)	2017/08/03	93	80 - 120	101	80 - 120	<0.010	mg/L	1.5	20
8715416	Dissolved Cadmium (Cd)	2017/08/03	93	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8715416	Dissolved Chromium (Cr)	2017/08/03	92	80 - 120	99	80 - 120	<0.00010	mg/L	1.7	20
8715416	Dissolved Cobalt (Co)	2017/08/03	91	80 - 120	99	80 - 120	<0.0000050	mg/L	0.85	20
8715416	Dissolved Copper (Cu)	2017/08/03	89	80 - 120	99	80 - 120	<0.000050	mg/L	1.5	20
8715416	Dissolved Iron (Fe)	2017/08/03	97	80 - 120	104	80 - 120	<0.0010	mg/L	6.2	20
8715416	Dissolved Lead (Pb)	2017/08/03	98	80 - 120	100	80 - 120	<0.0000050	mg/L	3.1	20
8715416	Dissolved Lithium (Li)	2017/08/03	98	80 - 120	97	80 - 120	<0.00050	mg/L	0.31	20
8715416	Dissolved Manganese (Mn)	2017/08/03	NC	80 - 120	100	80 - 120	<0.000050	mg/L	0.43	20
8715416	Dissolved Molybdenum (Mo)	2017/08/03	NC	80 - 120	97	80 - 120	<0.000050	mg/L	1.9	20
8715416	Dissolved Nickel (Ni)	2017/08/03	91	80 - 120	103	80 - 120	<0.000020	mg/L	0.95	20
8715416	Dissolved Phosphorus (P)	2017/08/03					<0.0020	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8715416	Dissolved Selenium (Se)	2017/08/03	96	80 - 120	102	80 - 120	<0.000040	mg/L	2.6	20
8715416	Dissolved Silicon (Si)	2017/08/03					<0.050	mg/L	1.9	20
8715416	Dissolved Silver (Ag)	2017/08/03	97	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8715416	Dissolved Strontium (Sr)	2017/08/03	NC	80 - 120	98	80 - 120	<0.000050	mg/L	1.6	20
8715416	Dissolved Thallium (Tl)	2017/08/03	95	80 - 120	98	80 - 120	<0.0000020	mg/L	0	20
8715416	Dissolved Tin (Sn)	2017/08/03	94	80 - 120	101	80 - 120	<0.00020	mg/L	3.2	20
8715416	Dissolved Titanium (Ti)	2017/08/03	102	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8715416	Dissolved Uranium (U)	2017/08/03	100	80 - 120	100	80 - 120	<0.0000020	mg/L	3.8	20
8715416	Dissolved Vanadium (V)	2017/08/03	96	80 - 120	98	80 - 120	<0.00020	mg/L	0	20
8715416	Dissolved Zinc (Zn)	2017/08/03	96	80 - 120	99	80 - 120	<0.00010	mg/L	7.0	20
8715416	Dissolved Zirconium (Zr)	2017/08/03					<0.00010	mg/L	NC	20

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B760842
Report Date: 2017/08/10

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Name Redacted Scientific Services Manager

Signature Redacted

cientific Specialist, Inorganics

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY

COC #: 08441883

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		20-Jul-20	11:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3	KZ-6		19-Jul-17	17:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
4	KZ-9		19-Jul-17	15:35	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5	KZ-13		20-Jul-17	14:50	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
6	KZ-15		19-Jul-17	10:32	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
7	KZ-16		19-Jul-17	11:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
8	KZ-17		19-Jul-19	11:55	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
9	KZ-18		19-Jul-17	16:02	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
10	KZ-19		20-Jul-17	10:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	

LABORATORY USE ONLY

CUSTODY SEAL (Y / N) Present	Intact	COOLER TEMPERATURES
✓	✓	1, 5, 7
✓	✓	6, 6, 6
✓	✓	7, 7, 7

COOLING MEDIA PRESENT (Y / N)

COMMENTS

RECEIVED IN WHITEHORSE

BY: Signature Redacted @ 1345

TEMP: 9 10 9 / 4 5 9 / 9 8 8 / 9 10 10 / 8 9 9

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	21/07/2017	13:00	Signature Redacted	2017/07/21	15:40

B760842_COC

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTOD

COC 08441887

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature	Date Required:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL (Y) / N Present	Intact	COOLER TEMPERATURES
✓	✓	7,5,7
✓	✓	6,6,6
✓	✓	7,7,7

COOLING MEDIA PRESENT (Y) / N

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-21		19-Jul-17	9:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
2	KZ-22		19-Jul-17	8:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3	KZ-26		18-Jul-17	15:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
4	KZ-28		19-Jul-17	14:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	KZ-37		19-Jul-17	15:02	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6	Trip Blank		n/a	n/a	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
7																			
8																			
9																			
10																			

COMMENTS

RECEIVED IN WHITEHORSE
BY: Signature Redacted @1345
2017-07-21
TEMP: 9 10 9
4 5 9
~~9~~ SL ~~8~~ SL ~~8~~ SL
9 8 8
9 10 10
8 9 9

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	21/07/2017	13:00	Signature Redacted	2017/07/22	15:40

B760842_COC

Maxxam Job #: B748588
Report Date: 2017/06/26

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-10
Site Location: KUDZ ZE KAYAH
Sampler Initials: JI

VALIDATION SIGNATURE PAGE

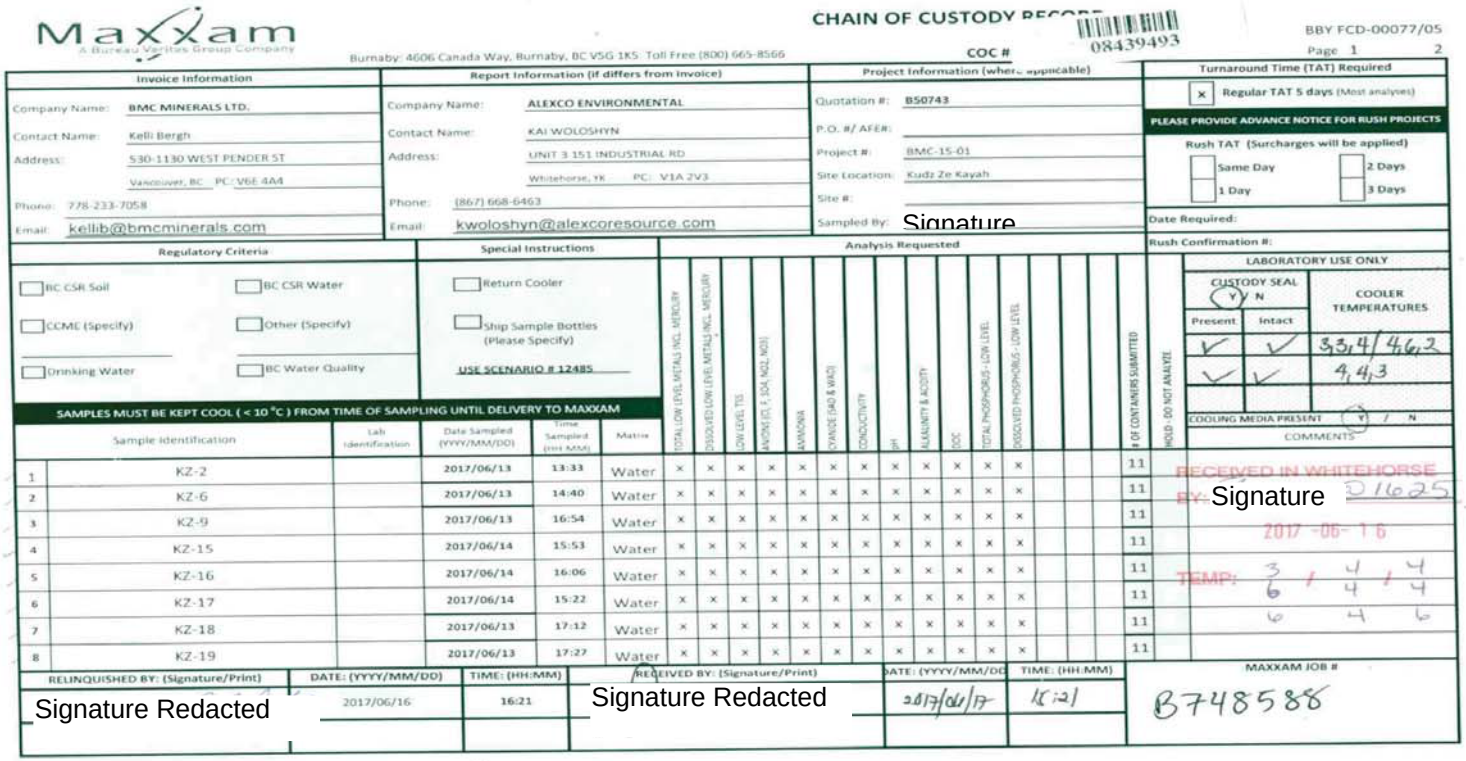
The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Name Redacted

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386



Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5 Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

08439493

BBY FCD-00077/05

Page 1 2

COC #

Invoice Information

Company Name: BMC MINERALS LTD.
Contact Name: Kelli Bergh
Address: 530-1130 WEST PENDER ST
Vancouver, BC PC: V6E 4A4
Phone: 778-233-7058
Email: kellib@bmcminerals.com

Report Information (if differs from invoice)

Company Name: ALEXCO ENVIRONMENTAL
Contact Name: KAI WOLOSHYN
Address: UNIT 3 151 INDUSTRIAL RD
Whitehorse, YK PC: V1A 2V3
Phone: (867) 668-6463
Email: kwoloshyn@alexcoresource.com

Project Information (where applicable)

Quotation #: B50743
P.O. #/ AFE#:
Project #: BMC-15-01
Site Location: Kudz Ze Kayah
Site #:
Sampled By: Signature

Turnaround Time (TAT) Required

[x] Regular TAT 5 days (Most analyses)

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Rush TAT (Surcharges will be applied)

[ ] Same Day [ ] 2 Days
[ ] 1 Day [ ] 3 Days

Date Required:

Rush Confirmation #:

Regulatory Criteria

[ ] BC CSR Soil [ ] BC CSR Water
[ ] CCME (Specify) [ ] Other (Specify)
[ ] Drinking Water [ ] BC Water Quality

Special Instructions

[ ] Return Cooler
[ ] Ship Sample Bottles (Please Specify)
USE SCENARIO # 12485

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (CL, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (WAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		2017/06/13	13:33	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
2	KZ-6		2017/06/13	14:40	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3	KZ-9		2017/06/13	16:54	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
4	KZ-15		2017/06/14	15:53	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5	KZ-16		2017/06/14	16:06	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
6	KZ-17		2017/06/14	15:22	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
7	KZ-18		2017/06/13	17:12	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
8	KZ-19		2017/06/13	17:27	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

LABORATORY USE ONLY

CUSTODY SEAL Y / N

Present	Intact	COOLER TEMPERATURES
✓	✓	3,3,4 / 4,6,2
✓	✓	4,4,3

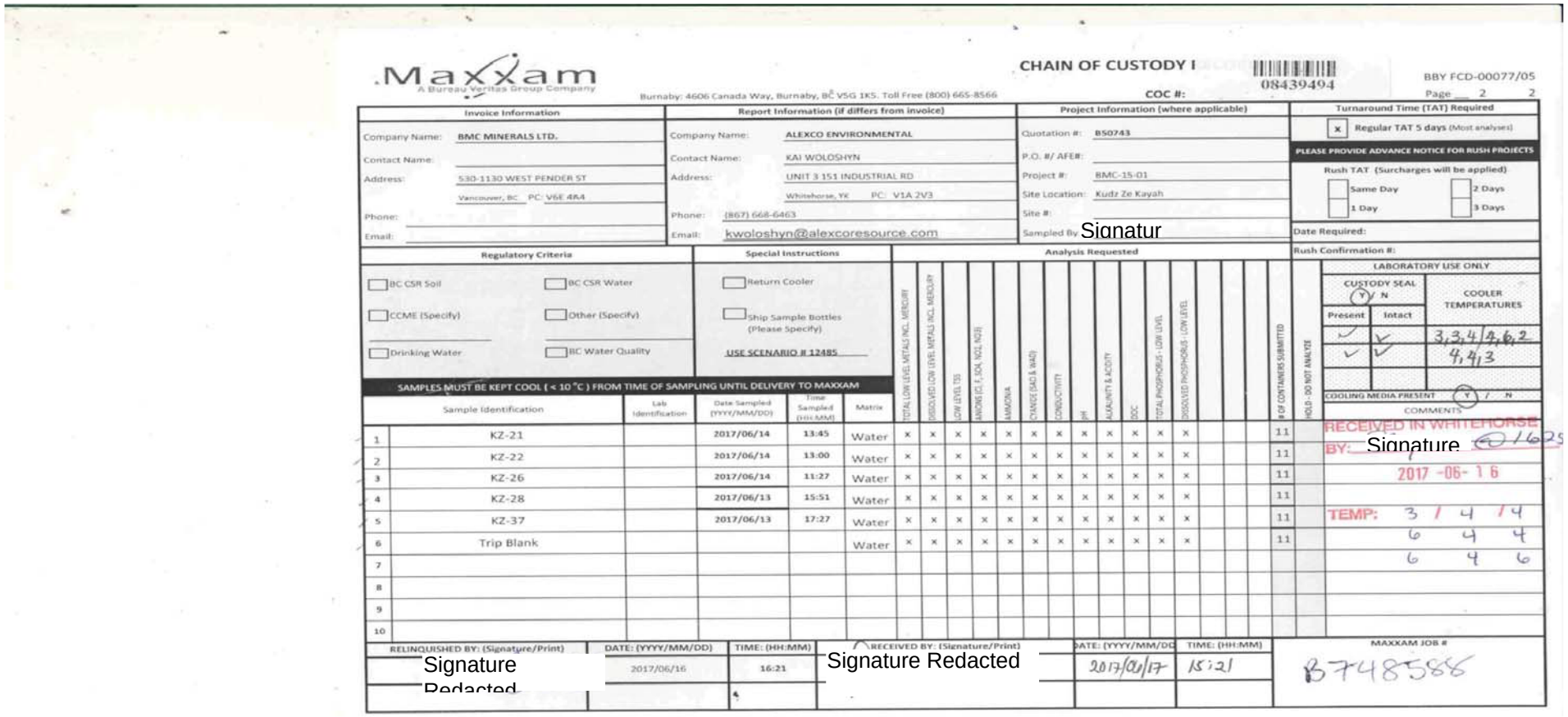
COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Signature D1625
2017 -06- 16
TEMP: 3 / 4 / 4
6 4 6

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	2017/06/16	16:21	Signature Redacted	2017/06/17	15:21

MAXXAM JOB #
B748588



Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY I

COC #: 08439494

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signatur	Date Required:
						Rush Confirmation #:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-21		2017/06/14	13:45	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
2	KZ-22		2017/06/14	13:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3	KZ-26		2017/06/14	11:27	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
4	KZ-28		2017/06/13	15:51	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5	KZ-37		2017/06/13	17:27	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
6	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
7																						
8																						
9																						
10																						

LABORATORY USE ONLY

CUSTODY SEAL (Y) / N Present	Intact	COOLER TEMPERATURES
✓	✓	3,3,4/4,6,2
✓	✓	4,4,3

COOLING MEDIA PRESENT (Y) / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Signature @ 1625
2017 -06- 16
TEMP: 3 / 4 / 4
6 4 4
6 4 6

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2017/06/16	16:21	Signature Redacted	2017/06/17	15:21	B748588

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08442419, 08442420

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/08/22
Report #: R2432353
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B768165
Received: 2017/08/11, 14:20

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	15	N/A	2017/08/14	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Low Level	15	2017/08/15	2017/08/15	BBY6SOP-00026	SM 22 2320 B m
Chloride - Low Level	15	N/A	2017/08/14	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	15	N/A	2017/08/14	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	15	N/A	2017/08/14	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	15	N/A	2017/08/15	BBY6SOP-00003	SM 22 5310 C m
Conductance - Low Level	15	2017/08/15	2017/08/15	BBY6SOP-00026	SM 22 2510 B m
Fluoride - Low Level	15	N/A	2017/08/15	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	15	N/A	2017/08/17	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	15	N/A	2017/08/17	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	11	N/A	2017/08/15	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Dissolved-LowLevel) by CVAF	4	N/A	2017/08/16	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	15	2017/08/15	2017/08/15	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance (as Cations/Anions Ratio)	3	N/A	2017/08/17	BBY WI-00033	Auto Calc
Ion Balance (as Cations/Anions Ratio)	12	N/A	2017/08/18	BBY WI-00033	Auto Calc
Ion Balance	3	N/A	2017/08/17	BBY WI-00033	SM 22 1030E
Ion Balance	12	N/A	2017/08/18	BBY WI-00033	SM 22 1030E
Sum of cations, anions	3	N/A	2017/08/17	Calc	
Sum of cations, anions	12	N/A	2017/08/18	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	15	N/A	2017/08/17	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	4	N/A	2017/08/15	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	11	N/A	2017/08/16	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	1	2017/08/15	2017/08/16	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	15	N/A	2017/08/17	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	14	N/A	2017/08/15	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N Low Level (Preserved)	14	N/A	2017/08/16	BBY6SOP-00009	EPA 350.1 m
Ammonia-N Low Level (Preserved)	1	N/A	2017/08/17	BBY6SOP-00009	EPA 350.1 m
Nitrate+Nitrite (N) (low level)	15	N/A	2017/08/12	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	15	N/A	2017/08/12	BBY6SOP-00010	SM 22 4500-NO3- I m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08442419, 08442420

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/08/22
Report #: R2432353
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B768165
Received: 2017/08/11, 14:20

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrogen - Nitrate (as N) Low Level Calc	15	N/A	2017/08/15	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	13	N/A	2017/08/15	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	1	N/A	2017/08/16	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	15	2017/08/15	2017/08/15	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate - Low Level	15	N/A	2017/08/14	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	5	2017/08/12	2017/08/15	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	10	2017/08/15	2017/08/15	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	4	2017/08/12	2017/08/15	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	11	2017/08/15	2017/08/15	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	14	2017/08/14	2017/08/15	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	1	2017/08/15	2017/08/16	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08442419, 08442420

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/08/22
Report #: R2432353
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B768165
Received: 2017/08/11, 14:20

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RS4910		RS4911		RS4912		RS4913		
Sampling Date		2017/08/10 16:15		2017/08/10 14:45		2017/08/10 12:20		2017/08/09 09:35		
COC Number		08442419		08442419		08442419		08442419		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Calculated Parameters										
Anion Sum	meq/L	2.1	8724690	3.0	8724690	3.4	8724690	1.2	N/A	8724690
Cation Sum	meq/L	2.0	8724690	2.8	8724690	3.3	8724690	1.2	N/A	8724690
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.96	8724689	0.95	8724689	0.98	8724689	0.99	0.010	8724689
Ion Balance (% Difference)	%	1.9	8724750	2.8	8724750	0.98	8724750	0.65	N/A	8724750
Nitrate (N)	mg/L	0.0605	8724753	0.0246	8724753	0.0874	8724753	0.0186	0.0020	8724753
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00050	8725668	0.00057	8725668	0.00066	8725668	0.00081	0.00050	8725668
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8725674	0.00054	8725674	0.00053	8725674	0.00065	0.00050	8725674
Fluoride (F)	mg/L	0.039	8728071	0.059	8728062	0.063	8728071	0.040	0.010	8728071
Dissolved Organic Carbon (C)	mg/L	0.95	8727348	2.20	8727348	2.30	8727348	5.28	0.50	8727348
Acidity (pH 4.5)	mg/L	<1.0	8727327	<1.0	8727321	<1.0	8727327	<1.0	1.0	8727327
Alkalinity (Total as CaCO3)	mg/L	54.3	8726918	127	8726918	136	8726918	52.3	0.50	8726918
Acidity (pH 8.3)	mg/L	<1.0	8727327	<1.0	8727321	<1.0	8727327	<1.0	1.0	8727327
Alkalinity (PP as CaCO3)	mg/L	<0.50	8726918	<0.50	8726918	<0.50	8726918	<0.50	0.50	8726918
Bicarbonate (HCO3)	mg/L	66.3	8726918	154	8726918	166	8726918	63.8	0.50	8726918
Carbonate (CO3)	mg/L	<0.50	8726918	<0.50	8726918	<0.50	8726918	<0.50	0.50	8726918
Hydroxide (OH)	mg/L	<0.50	8726918	<0.50	8726918	<0.50	8726918	<0.50	0.50	8726918
Anions										
Dissolved Sulphate (SO4)	mg/L	47.6	8727229	21.5	8727226	31.2	8727229	9.08	0.50	8727229
Dissolved Chloride (Cl)	mg/L	<0.50	8727228	<0.50	8727225	<0.50	8727228	<0.50	0.50	8727228
Nutrients										
Dissolved Phosphorus (P)	mg/L	<0.0020	8727450	0.0033	8727450	0.0031	8727450	0.0120	0.0020	8727450
Total Ammonia (N)	mg/L	0.0070	8728461	0.010	8728461	0.011	8728461	0.0070	0.0050	8728461
Nitrate plus Nitrite (N)	mg/L	0.0605	8724783	0.0246	8724783	0.0874	8724783	0.0186	0.0020	8724785
Nitrite (N)	mg/L	<0.0020	8724784	<0.0020	8724784	<0.0020	8724784	<0.0020	0.0020	8724786
Total Phosphorus (P)	mg/L	<0.0020	8727929	0.0028	8727394	0.0032	8727929	0.0076	0.0020	8727968
Physical Properties										
Conductivity	uS/cm	210	8726922	273	8726922	313	8726922	118	1.0	8726922
pH	pH	7.96	8726923	8.27	8726923	8.27	8726923	7.91		8726923

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RS4910		RS4911		RS4912		RS4913		
Sampling Date		2017/08/10 16:15		2017/08/10 14:45		2017/08/10 12:20		2017/08/09 09:35		
COC Number		08442419		08442419		08442419		08442419		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Physical Properties										
Total Suspended Solids	mg/L	<1.0	8725401	<1.0	8725401	4.5	8725401	1.5	1.0	8725401
RDL = Reportable Detection Limit										

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RS4914		RS4915		RS4916		
Sampling Date		2017/08/10 08:32		2017/08/10 09:20		2017/08/10 10:10		
COC Number		08442419		08442419		08442419		
	UNITS	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	3.4	8724690	3.1	8724690	2.8	N/A	8724690
Cation Sum	meq/L	3.3	8724690	3.0	8724690	2.7	N/A	8724690
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.98	8724689	0.97	8724689	0.96	0.010	8724689
Ion Balance (% Difference)	%	1.1	8724750	1.5	8724750	1.9	N/A	8724750
Nitrate (N)	mg/L	0.0815	8724753	0.0909	8724753	0.101	0.0020	8724753
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00057	8725668	0.00050	8725668	0.00059	0.00050	8725668
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00060	8725674	<0.00050	8725674	<0.00050	0.00050	8725674
Fluoride (F)	mg/L	0.065	8728071	0.052	8728062	0.075	0.010	8728071
Dissolved Organic Carbon (C)	mg/L	2.02	8727354	2.33	8727348	1.57	0.50	8727348
Acidity (pH 4.5)	mg/L	<1.0	8727327	<1.0	8727321	<1.0	1.0	8727327
Alkalinity (Total as CaCO3)	mg/L	139	8726918	126	8726886	118	0.50	8726918
Acidity (pH 8.3)	mg/L	<1.0	8727327	<1.0	8727321	<1.0	1.0	8727327
Alkalinity (PP as CaCO3)	mg/L	0.65	8726918	<0.50	8726886	<0.50	0.50	8726918
Bicarbonate (HCO3)	mg/L	168	8726918	154	8726886	143	0.50	8726918
Carbonate (CO3)	mg/L	0.78	8726918	<0.50	8726886	<0.50	0.50	8726918
Hydroxide (OH)	mg/L	<0.50	8726918	<0.50	8726886	<0.50	0.50	8726918
Anions								
Dissolved Sulphate (SO4)	mg/L	27.9	8727229	26.0	8727226	22.9	0.50	8727229
Dissolved Chloride (Cl)	mg/L	<0.50	8727228	<0.50	8727225	<0.50	0.50	8727228
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0038	8727450	0.0023	8727435	0.0046	0.0020	8727450
Total Ammonia (N)	mg/L	0.010	8728461	0.0080	8728461	0.032	0.0050	8728461
Nitrate plus Nitrite (N)	mg/L	0.0815	8724785	0.0909	8724783	0.101	0.0020	8724785
Nitrite (N)	mg/L	<0.0020	8724786	<0.0020	8724784	<0.0020	0.0020	8724786
Total Phosphorus (P)	mg/L	0.0043	8727968	0.0039	8727394	0.0055	0.0020	8727929
Physical Properties								
Conductivity	uS/cm	310	8726922	276	8726890	263	1.0	8726922
pH	pH	8.31	8726923	8.22	8726891	8.18		8726923

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RS4914		RS4915		RS4916		
Sampling Date		2017/08/10 08:32		2017/08/10 09:20		2017/08/10 10:10		
COC Number		08442419		08442419		08442419		
	UNITS	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	1.6	8725401	<1.0	8725401	<1.0	1.0	8725401
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RS4917		RS4918		RS4919		RS4920		
Sampling Date		2017/08/10 12:50		2017/08/10 14:00		2017/08/09 14:45		2017/08/09 13:30		
COC Number		08442419		08442419		08442420		08442420		
	UNITS	KZ-18	QC Batch	KZ-19	QC Batch	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Calculated Parameters										
Anion Sum	meq/L	3.6	8724690	3.0	8724690	4.2	8724690	3.8	N/A	8724690
Cation Sum	meq/L	3.5	8724690	2.9	8724690	4.2	8724690	3.8	N/A	8724690
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.97	8724689	0.98	8724689	0.99	8724689	0.99	0.010	8724689
Ion Balance (% Difference)	%	1.5	8724750	0.79	8724750	0.50	8724750	0.43	N/A	8724750
Nitrate (N)	mg/L	0.0395	8724753	0.0227	8724753	<0.0020	8724753	0.0241	0.0020	8724753
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00060	8725668	0.00070	8725668	0.00083	8725668	0.00071	0.00050	8725668
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8725674	0.00053	8725674	0.00054	8725674	0.00071	0.00050	8725674
Fluoride (F)	mg/L	0.051	8728071	0.059	8728062	0.120	8728071	0.089	0.010	8728062
Dissolved Organic Carbon (C)	mg/L	2.18	8727348	2.29	8727348	6.60	8727348	4.60	0.50	8727348
Acidity (pH 4.5)	mg/L	<1.0	8727327	<1.0	8727327	<1.0	8727327	<1.0	1.0	8727321
Alkalinity (Total as CaCO3)	mg/L	149	8726918	126	8726918	174	8726918	157	0.50	8726886
Acidity (pH 8.3)	mg/L	<1.0	8727327	<1.0	8727327	<1.0	8727327	<1.0	1.0	8727321
Alkalinity (PP as CaCO3)	mg/L	0.79	8726918	<0.50	8726918	2.15	8726918	1.52	0.50	8726886
Bicarbonate (HCO3)	mg/L	180	8726918	154	8726918	206	8726918	188	0.50	8726886
Carbonate (CO3)	mg/L	0.95	8726918	<0.50	8726918	2.58	8726918	1.82	0.50	8726886
Hydroxide (OH)	mg/L	<0.50	8726918	<0.50	8726918	<0.50	8726918	<0.50	0.50	8726886
Anions										
Dissolved Sulphate (SO4)	mg/L	28.5	8727229	21.1	8727226	36.4	8727229	32.6	0.50	8727226
Dissolved Chloride (Cl)	mg/L	<0.50	8727228	<0.50	8727225	0.56	8727228	<0.50	0.50	8727225
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0098	8727450	0.0030	8727450	0.0098	8727450	0.0105	0.0020	8727435
Total Ammonia (N)	mg/L	0.023	8728461	0.010	8728461	0.023	8728461	0.018	0.0050	8728461
Nitrate plus Nitrite (N)	mg/L	0.0395	8724783	0.0227	8724783	<0.0020	8724783	0.0241	0.0020	8724783
Nitrite (N)	mg/L	<0.0020	8724784	<0.0020	8724784	<0.0020	8724784	<0.0020	0.0020	8724784
Total Phosphorus (P)	mg/L	0.0087	8727929	0.0105	8727929	0.0130	8727929	0.0102	0.0020	8727394
Physical Properties										
Conductivity	uS/cm	324	8726922	274	8726922	382	8726922	347	1.0	8726890
pH	pH	8.32	8726923	8.29	8726923	8.34	8726923	8.32		8726891

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RS4917		RS4918		RS4919		RS4920		
Sampling Date		2017/08/10 12:50		2017/08/10 14:00		2017/08/09 14:45		2017/08/09 13:30		
COC Number		08442419		08442419		08442420		08442420		
	UNITS	KZ-18	QC Batch	KZ-19	QC Batch	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Physical Properties										
Total Suspended Solids	mg/L	<1.0	8725401	<1.0	8725401	3.6	8725401	1.7	1.0	8725401
RDL = Reportable Detection Limit										

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RS4921		RS4922		RS4923		
Sampling Date		2017/08/09 11:35		2017/08/09 12:30		2017/08/10 11:35		
COC Number		08442420		08442420		08442420		
	UNITS	KZ-26	QC Batch	KZ-28	QC Batch	KZ-37	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	3.9	8724690	0.015	8724690	3.4	N/A	8724690
Cation Sum	meq/L	3.8	8724690	0.0012	8724690	3.3	N/A	8724690
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.97	8724689	0.081	8724689	0.98	0.010	8724689
Ion Balance (% Difference)	%	1.6	8724750	85	8724750	1.2	N/A	8724750
Nitrate (N)	mg/L	0.0265	8724753	<0.0020	8724753	0.0776	0.0020	8724753
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00065	8725668	0.00053	8725668	0.00068	0.00050	8725668
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00071	8725674	<0.00050	8725674	<0.00050	0.00050	8725674
Fluoride (F)	mg/L	0.089	8728062	<0.010	8728071	0.059	0.010	8728071
Dissolved Organic Carbon (C)	mg/L	4.89	8727348	<0.50	8727348	2.40	0.50	8727351
Acidity (pH 4.5)	mg/L	<1.0	8727321	<1.0	8727327	<1.0	1.0	8727327
Alkalinity (Total as CaCO3)	mg/L	162	8726886	0.74	8726918	138	0.50	8726918
Acidity (pH 8.3)	mg/L	<1.0	8727321	<1.0	8727327	<1.0	1.0	8727327
Alkalinity (PP as CaCO3)	mg/L	1.55	8726886	<0.50	8726918	1.63	0.50	8726918
Bicarbonate (HCO3)	mg/L	194	8726886	0.90	8726918	164	0.50	8726918
Carbonate (CO3)	mg/L	1.86	8726886	<0.50	8726918	1.96	0.50	8726918
Hydroxide (OH)	mg/L	<0.50	8726886	<0.50	8726918	<0.50	0.50	8726918
Anions								
Dissolved Sulphate (SO4)	mg/L	32.3	8727226	<0.50	8727229	30.8	0.50	8727229
Dissolved Chloride (Cl)	mg/L	<0.50	8727225	<0.50	8727228	<0.50	0.50	8727228
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0173	8727450	<0.0020	8727450	0.0054	0.0020	8727450
Total Ammonia (N)	mg/L	0.011	8728461	<0.0050	8728461	0.011	0.0050	8728461
Nitrate plus Nitrite (N)	mg/L	0.0265	8724783	<0.0020	8724785	0.0776	0.0020	8724785
Nitrite (N)	mg/L	<0.0020	8724784	<0.0020	8724786	<0.0020	0.0020	8724786
Total Phosphorus (P)	mg/L	0.0165	8727394	0.0022	8727968	0.0058	0.0020	8727968
Physical Properties								
Conductivity	uS/cm	353	8726890	1.4	8726922	316	1.0	8726922
pH	pH	8.33	8726891	5.98	8726923	8.31		8726923

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RS4921		RS4922		RS4923		
Sampling Date		2017/08/09 11:35		2017/08/09 12:30		2017/08/10 11:35		
COC Number		08442420		08442420		08442420		
	UNITS	KZ-26	QC Batch	KZ-28	QC Batch	KZ-37	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	18.6	8726862	<1.0	8725401	3.0	1.0	8725401
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RS4924		
Sampling Date		2017/08/11 14:20		
COC Number		08442420		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Anion Sum	meq/L	0.00050	N/A	8724690
Cation Sum	meq/L	0.0018	N/A	8724690
Ion Balance	N/A	NC	0.010	8724689
Ion Balance (% Difference)	%	57	N/A	8724750
Nitrate (N)	mg/L	<0.0020	0.0020	8724753
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00059	0.00050	8725668
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8725674
Fluoride (F)	mg/L	0.010	0.010	8728071
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8727348
Acidity (pH 4.5)	mg/L	<1.0	1.0	8727327
Alkalinity (Total as CaCO3)	mg/L	<0.50	0.50	8726886
Acidity (pH 8.3)	mg/L	<1.0	1.0	8727327
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8726886
Bicarbonate (HCO3)	mg/L	<0.50	0.50	8726886
Carbonate (CO3)	mg/L	<0.50	0.50	8726886
Hydroxide (OH)	mg/L	<0.50	0.50	8726886
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8727229
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8727228
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8727450
Total Ammonia (N)	mg/L	<0.0050	0.0050	8731699
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	8724783
Nitrite (N)	mg/L	<0.0020	0.0020	8724784
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8727929
Physical Properties				
Conductivity	uS/cm	1.2	1.0	8726890
pH	pH	5.75		8726891

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RS4924		
Sampling Date		2017/08/11 14:20		
COC Number		08442420		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8725401
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RS4910	RS4911	RS4912		RS4913		
Sampling Date		2017/08/10 16:15	2017/08/10 14:45	2017/08/10 12:20		2017/08/09 09:35		
COC Number		08442419	08442419	08442419		08442419		
	UNITS	KZ-2	KZ-6	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	96.6	139	162	8724733	57.5	0.50	8724733
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8726426	<0.0000020	0.0000020	8726426
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00774	0.00503	0.00385	8725587	0.0175	0.00050	8725587
Dissolved Antimony (Sb)	mg/L	0.000076	0.000036	0.000059	8725587	0.000054	0.000020	8725587
Dissolved Arsenic (As)	mg/L	0.000081	0.000080	0.000213	8725587	0.000202	0.000020	8725587
Dissolved Barium (Ba)	mg/L	0.0553	0.0401	0.0801	8725587	0.0866	0.000020	8725587
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8725587	<0.000010	0.000010	8725587
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8725587	<0.0000050	0.0000050	8725587
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8725587	<0.010	0.010	8725587
Dissolved Cadmium (Cd)	mg/L	0.000269	0.0000118	0.0000753	8725587	0.0000235	0.0000050	8725587
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8725587	0.00147 (1)	0.00010	8733824
Dissolved Cobalt (Co)	mg/L	0.0000084	0.0000093	0.0000406	8725587	0.0000253	0.0000050	8725587
Dissolved Copper (Cu)	mg/L	0.000818	0.000184	0.000536	8725587	0.000725	0.000050	8725587
Dissolved Iron (Fe)	mg/L	0.0014	0.0170	0.141	8725587	0.0495	0.0010	8725587
Dissolved Lead (Pb)	mg/L	0.0000223	<0.0000050	0.0000132	8725587	0.0000154	0.0000050	8725587
Dissolved Lithium (Li)	mg/L	0.00093	0.00054	0.00156	8725587	0.00085	0.00050	8725587
Dissolved Manganese (Mn)	mg/L	0.000096	0.00184	0.0283	8725587	0.0110	0.000050	8725587
Dissolved Molybdenum (Mo)	mg/L	0.000587	0.000407	0.000618	8725587	0.000594 (1)	0.000050	8725587
Dissolved Nickel (Ni)	mg/L	0.000416	0.000170	0.000347	8725587	0.000701	0.000020	8725587
Dissolved Phosphorus (P)	mg/L	0.0035	0.0045	0.0038	8725587	0.0047	0.0020	8725587
Dissolved Selenium (Se)	mg/L	0.00115	0.000601	0.00110	8725587	0.000132	0.000040	8725587
Dissolved Silicon (Si)	mg/L	2.35	2.43	2.85	8725587	2.82	0.050	8725587
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8725587	<0.0000050	0.0000050	8725587
Dissolved Strontium (Sr)	mg/L	0.104	0.139	0.172	8725587	0.0576	0.000050	8725587
Dissolved Thallium (Tl)	mg/L	0.0000059	<0.0000020	<0.0000020	8725587	0.0000020	0.0000020	8725587
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8725587	<0.00020	0.00020	8725587
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8725587	<0.00050	0.00050	8725587
Dissolved Uranium (U)	mg/L	0.00176	0.000631	0.00111	8725587	0.000321	0.0000020	8725587

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RS4910	RS4911	RS4912		RS4913		
Sampling Date		2017/08/10 16:15	2017/08/10 14:45	2017/08/10 12:20		2017/08/09 09:35		
COC Number		08442419	08442419	08442419		08442419		
	UNITS	KZ-2	KZ-6	KZ-9	QC Batch	KZ-13	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8725587	<0.00020	0.00020	8725587
Dissolved Zinc (Zn)	mg/L	0.0317	0.00039	0.0137	8725587	0.00365	0.00010	8725587
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8725587	0.00012	0.00010	8725587
Dissolved Calcium (Ca)	mg/L	33.1	46.5	54.9	8724650	19.7	0.050	8724650
Dissolved Magnesium (Mg)	mg/L	3.41	5.49	5.95	8724650	2.05	0.050	8724650
Dissolved Potassium (K)	mg/L	1.71	0.628	1.22	8724650	1.20	0.050	8724650
Dissolved Sodium (Na)	mg/L	0.705	0.683	0.960	8724650	0.839	0.050	8724650
Dissolved Sulphur (S)	mg/L	16.0	6.9	11.0	8724650	3.2	3.0	8724650

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RS4914	RS4915	RS4916	RS4917		
Sampling Date		2017/08/10 08:32	2017/08/10 09:20	2017/08/10 10:10	2017/08/10 12:50		
COC Number		08442419	08442419	08442419	08442419		
	UNITS	KZ-15	KZ-16	KZ-17	KZ-18	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	161	146	133	172	0.50	8724733
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8726426
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00430	0.00434	0.00188	0.0120	0.00050	8725587
Dissolved Antimony (Sb)	mg/L	0.000052	0.000044	0.000049	0.000034	0.000020	8725587
Dissolved Arsenic (As)	mg/L	0.000424	0.000276	0.000216	0.000227	0.000020	8725587
Dissolved Barium (Ba)	mg/L	0.0647	0.0614	0.0538	0.0395	0.000020	8725587
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8725587
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8725587
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8725587
Dissolved Cadmium (Cd)	mg/L	0.0000305	0.0000196	0.0000143	0.0000177	0.0000050	8725587
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00012	0.00010	8725587
Dissolved Cobalt (Co)	mg/L	0.0000208	0.0000152	0.0000067	0.0000054	0.0000050	8725587
Dissolved Copper (Cu)	mg/L	0.000469	0.000413	0.000580	0.000145	0.000050	8725587
Dissolved Iron (Fe)	mg/L	0.0292	0.0066	0.0023	0.0042	0.0010	8725587
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8725587
Dissolved Lithium (Li)	mg/L	0.00157	0.00138	0.00210	0.00091	0.00050	8725587
Dissolved Manganese (Mn)	mg/L	0.0144	0.00294	0.000223	0.00154	0.000050	8725587
Dissolved Molybdenum (Mo)	mg/L	0.000811	0.000412	0.000626	0.000725	0.000050	8725587
Dissolved Nickel (Ni)	mg/L	0.000424	0.000340	0.000415	0.000386	0.000020	8725587
Dissolved Phosphorus (P)	mg/L	0.0069	0.0076	0.0044	0.0106	0.0020	8725587
Dissolved Selenium (Se)	mg/L	0.00108	0.000801	0.000692	0.000900	0.000040	8725587
Dissolved Silicon (Si)	mg/L	2.82	2.80	2.96	2.79	0.050	8725587
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8725587
Dissolved Strontium (Sr)	mg/L	0.158	0.147	0.138	0.152	0.000050	8725587
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8725587
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8725587
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8725587
Dissolved Uranium (U)	mg/L	0.00169	0.00128	0.00109	0.00129	0.0000020	8725587
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8725587

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RS4914	RS4915	RS4916	RS4917		
Sampling Date		2017/08/10 08:32	2017/08/10 09:20	2017/08/10 10:10	2017/08/10 12:50		
COC Number		08442419	08442419	08442419	08442419		
	UNITS	KZ-15	KZ-16	KZ-17	KZ-18	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00348	0.00115 (1)	0.00068	0.00095 (1)	0.00010	8725587
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8725587
Dissolved Calcium (Ca)	mg/L	50.4	46.8	41.5	45.5	0.050	8724650
Dissolved Magnesium (Mg)	mg/L	8.58	7.07	7.19	14.1	0.050	8724650
Dissolved Potassium (K)	mg/L	1.00	0.966	1.12	0.363	0.050	8724650
Dissolved Sodium (Na)	mg/L	0.952	0.954	0.910	0.735	0.050	8724650
Dissolved Sulphur (S)	mg/L	9.2	8.2	7.6	9.1	3.0	8724650

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RS4918		RS4919	RS4920		
Sampling Date		2017/08/10 14:00		2017/08/09 14:45	2017/08/09 13:30		
COC Number		08442419		08442420	08442420		
	UNITS	KZ-19	QC Batch	KZ-21	KZ-22	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	144	8724733	206	186	0.50	8724733
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	8726426	<0.0000020	<0.0000020	0.0000020	8726426
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00632	8725587	0.00628	0.00424	0.00050	8725587
Dissolved Antimony (Sb)	mg/L	0.000037	8725587	0.000129	0.000082	0.000020	8725587
Dissolved Arsenic (As)	mg/L	0.000092	8725587	0.00185	0.00111	0.000020	8725587
Dissolved Barium (Ba)	mg/L	0.0561	8725587	0.0588	0.0644	0.000020	8725587
Dissolved Beryllium (Be)	mg/L	<0.000010	8725587	<0.000010	<0.000010	0.000010	8725587
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8725587	<0.0000050	<0.0000050	0.0000050	8725587
Dissolved Boron (B)	mg/L	<0.010	8725587	<0.010	<0.010	0.010	8725587
Dissolved Cadmium (Cd)	mg/L	0.0000129	8725587	0.0000078	0.0000152	0.0000050	8725587
Dissolved Chromium (Cr)	mg/L	<0.00010	8725587	<0.00010	<0.00010	0.00010	8725587
Dissolved Cobalt (Co)	mg/L	0.0000148	8725587	0.0000737	0.0000410	0.0000050	8725587
Dissolved Copper (Cu)	mg/L	0.000347 (1)	8725587	0.000542	0.000534	0.000050	8725587
Dissolved Iron (Fe)	mg/L	0.0323	8725587	0.200	0.0961	0.0010	8725587
Dissolved Lead (Pb)	mg/L	0.0000732 (1)	8733824	0.0000051	<0.0000050	0.0000050	8725587
Dissolved Lithium (Li)	mg/L	0.00056	8725587	0.00308	0.00253	0.00050	8725587
Dissolved Manganese (Mn)	mg/L	0.00195	8725587	0.0462	0.0232	0.000050	8725587
Dissolved Molybdenum (Mo)	mg/L	0.000427	8725587	0.00143	0.00105	0.000050	8725587
Dissolved Nickel (Ni)	mg/L	0.000218	8725587	0.00239	0.00127	0.000020	8725587
Dissolved Phosphorus (P)	mg/L	0.0044	8725587	0.0101	0.0061	0.0020	8725587
Dissolved Selenium (Se)	mg/L	0.000572	8725587	0.000910	0.000906	0.000040	8725587
Dissolved Silicon (Si)	mg/L	2.51	8725587	4.18	3.47	0.050	8725587
Dissolved Silver (Ag)	mg/L	<0.0000050	8725587	<0.0000050	<0.0000050	0.0000050	8725587
Dissolved Strontium (Sr)	mg/L	0.143	8725587	0.161	0.163	0.000050	8725587
Dissolved Thallium (Tl)	mg/L	<0.0000020	8725587	<0.0000020	<0.0000020	0.0000020	8725587
Dissolved Tin (Sn)	mg/L	<0.00020	8725587	<0.00020	<0.00020	0.00020	8725587
Dissolved Titanium (Ti)	mg/L	<0.00050	8725587	<0.00050	<0.00050	0.00050	8725587
Dissolved Uranium (U)	mg/L	0.000655	8725587	0.00233	0.00198	0.0000020	8725587

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RS4918		RS4919	RS4920		
Sampling Date		2017/08/10 14:00		2017/08/09 14:45	2017/08/09 13:30		
COC Number		08442419		08442420	08442420		
	UNITS	KZ-19	QC Batch	KZ-21	KZ-22	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	8725587	<0.00020	<0.00020	0.00020	8725587
Dissolved Zinc (Zn)	mg/L	0.00369 (1)	8725587	0.00088	0.00133	0.00010	8725587
Dissolved Zirconium (Zr)	mg/L	<0.00010	8725587	0.00011	<0.00010	0.00010	8725587
Dissolved Calcium (Ca)	mg/L	48.2	8724650	52.7	52.1	0.050	8724650
Dissolved Magnesium (Mg)	mg/L	5.72	8724650	18.1	13.7	0.050	8724650
Dissolved Potassium (K)	mg/L	0.650	8724650	1.23	1.11	0.050	8724650
Dissolved Sodium (Na)	mg/L	0.703	8724650	1.07	1.03	0.050	8724650
Dissolved Sulphur (S)	mg/L	7.0	8724650	12.4	11.5	3.0	8724650

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RS4921	RS4922	RS4923	RS4924		
Sampling Date		2017/08/09 11:35	2017/08/09 12:30	2017/08/10 11:35	2017/08/11 14:20		
COC Number		08442420	08442420	08442420	08442420		
	UNITS	KZ-26	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	186	<0.50	162	<0.50	0.50	8724733
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8727791
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00492	0.00106	0.00663	<0.00050	0.00050	8725587
Dissolved Antimony (Sb)	mg/L	0.000111	0.000021	0.000063	<0.000020	0.000020	8725587
Dissolved Arsenic (As)	mg/L	0.000946	<0.000020	0.000211	<0.000020	0.000020	8725587
Dissolved Barium (Ba)	mg/L	0.0630	<0.000020	0.0702	<0.000020	0.000020	8725587
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8725587
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8725587
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8725587
Dissolved Cadmium (Cd)	mg/L	0.0000118	<0.0000050	0.0000617	<0.0000050	0.0000050	8725587
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8725587
Dissolved Cobalt (Co)	mg/L	0.0000399	<0.0000050	0.0000326	<0.0000050	0.0000050	8725587
Dissolved Copper (Cu)	mg/L	0.000677	<0.000050	0.000450	<0.000050	0.000050	8725587
Dissolved Iron (Fe)	mg/L	0.0577	<0.0010	0.103	<0.0010	0.0010	8725587
Dissolved Lead (Pb)	mg/L	0.0000178	<0.0000050	0.0000111	<0.0000050	0.0000050	8725587
Dissolved Lithium (Li)	mg/L	0.00288	<0.00050	0.00142	<0.00050	0.00050	8725587
Dissolved Manganese (Mn)	mg/L	0.0155	<0.000050	0.0223	<0.000050	0.000050	8725587
Dissolved Molybdenum (Mo)	mg/L	0.00102	<0.000050	0.000624	<0.000050	0.000050	8725587
Dissolved Nickel (Ni)	mg/L	0.00129	<0.000020	0.000384	<0.000020	0.000020	8725587
Dissolved Phosphorus (P)	mg/L	0.0069	0.0021	0.0069	<0.0020	0.0020	8725587
Dissolved Selenium (Se)	mg/L	0.000869	<0.000040	0.00104	<0.000040	0.000040	8725587
Dissolved Silicon (Si)	mg/L	3.64	<0.050	2.84	<0.050	0.050	8725587
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8725587
Dissolved Strontium (Sr)	mg/L	0.164	<0.000050	0.165	<0.000050	0.000050	8725587
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8725587
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8725587
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8725587
Dissolved Uranium (U)	mg/L	0.00189	<0.0000020	0.00116	<0.0000020	0.0000020	8725587
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8725587

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RS4921	RS4922	RS4923	RS4924		
Sampling Date		2017/08/09 11:35	2017/08/09 12:30	2017/08/10 11:35	2017/08/11 14:20		
COC Number		08442420	08442420	08442420	08442420		
	UNITS	KZ-26	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00068	<0.00010	0.0112	<0.00010	0.00010	8725587
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8725587
Dissolved Calcium (Ca)	mg/L	51.8	<0.050	52.2	<0.050	0.050	8724650
Dissolved Magnesium (Mg)	mg/L	13.8	<0.050	7.81	<0.050	0.050	8724650
Dissolved Potassium (K)	mg/L	1.08	<0.050	1.01	<0.050	0.050	8724650
Dissolved Sodium (Na)	mg/L	1.07	<0.050	0.915	<0.050	0.050	8724650
Dissolved Sulphur (S)	mg/L	10.8	<3.0	10.2	<3.0	3.0	8724650
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RS4910	RS4911	RS4912	RS4913	RS4914		
Sampling Date		2017/08/10 16:15	2017/08/10 14:45	2017/08/10 12:20	2017/08/09 09:35	2017/08/10 08:32		
COC Number		08442419	08442419	08442419	08442419	08442419		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	96.1	141	162	56.2	159	0.50	8724564
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8726591
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00849	0.0104	0.0443	0.0363	0.0140	0.00050	8726280
Total Antimony (Sb)	mg/L	0.000038	0.000029	0.000061	0.000040	0.000051	0.000020	8726280
Total Arsenic (As)	mg/L	0.000094	0.000120	0.000294	0.000227	0.000511	0.000020	8726280
Total Barium (Ba)	mg/L	0.0552	0.0407	0.0805	0.0867	0.0672	0.000020	8726280
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8726280
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8726280
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8726280
Total Cadmium (Cd)	mg/L	0.000279	0.0000174	0.000102	0.0000326	0.0000399	0.0000050	8726280
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00012	0.00014	<0.00010	0.00010	8726280
Total Cobalt (Co)	mg/L	0.0000104	0.0000188	0.0000852	0.0000386	0.0000460	0.0000050	8726280
Total Copper (Cu)	mg/L	0.000828	0.000233	0.000793	0.000746	0.000520	0.000050	8726280
Total Iron (Fe)	mg/L	0.0066	0.0579	0.296	0.0887	0.0765	0.0010	8726280
Total Lead (Pb)	mg/L	0.0000443	0.0000160	0.000201	0.0000445	0.0000502	0.0000050	8726280
Total Lithium (Li)	mg/L	0.00097	0.00056	0.00159	0.00088	0.00156	0.00050	8726280
Total Manganese (Mn)	mg/L	0.000282	0.00457	0.0319	0.0182	0.0196	0.000050	8726280
Total Molybdenum (Mo)	mg/L	0.000595	0.000434	0.000615	0.000486	0.000825	0.000050	8726280
Total Nickel (Ni)	mg/L	0.000413	0.000211	0.000464	0.000580	0.000533	0.000020	8726280
Total Phosphorus (P)	mg/L	0.0057	0.0073	0.0127	0.0062	0.0061	0.0020	8726280
Total Selenium (Se)	mg/L	0.00120	0.000641	0.00112	0.000183	0.00112	0.000040	8726280
Total Silicon (Si)	mg/L	2.42	2.57	2.97	2.84	2.91	0.050	8726280
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8726280
Total Strontium (Sr)	mg/L	0.104	0.140	0.170	0.0565	0.158	0.000050	8726280
Total Thallium (Tl)	mg/L	0.0000055	<0.0000020	0.0000030	<0.0000020	<0.0000020	0.0000020	8726280
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8726280
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00338	0.00162	0.00084	0.00050	8726280
Total Uranium (U)	mg/L	0.00177	0.000647	0.00112	0.000327	0.00170	0.0000020	8726280
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00020	0.00022	<0.00020	0.00020	8726280

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RS4910	RS4911	RS4912	RS4913	RS4914		
Sampling Date		2017/08/10 16:15	2017/08/10 14:45	2017/08/10 12:20	2017/08/09 09:35	2017/08/10 08:32		
COC Number		08442419	08442419	08442419	08442419	08442419		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0326	0.00055	0.0176	0.00424	0.00449	0.00010	8726280
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00012	<0.00010	0.00010	8726280
Total Calcium (Ca)	mg/L	32.7	47.3	55.2	19.2	49.9	0.050	8724735
Total Magnesium (Mg)	mg/L	3.51	5.63	5.95	2.01	8.46	0.050	8724735
Total Potassium (K)	mg/L	1.69	0.637	1.21	1.16	0.982	0.050	8724735
Total Sodium (Na)	mg/L	0.715	0.694	0.943	0.807	0.939	0.050	8724735
Total Sulphur (S)	mg/L	17.1	7.2	11.0	3.3	9.4	3.0	8724735

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RS4915	RS4916	RS4917	RS4918	RS4919		
Sampling Date		2017/08/10 09:20	2017/08/10 10:10	2017/08/10 12:50	2017/08/10 14:00	2017/08/09 14:45		
COC Number		08442419	08442419	08442419	08442419	08442420		
	UNITS	KZ-16	KZ-17	KZ-18	KZ-19	KZ-21	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	145	134	170	142	203	0.50	8724564
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8726591
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00435	0.00187	0.0124	0.00880	0.0300	0.00050	8726280
Total Antimony (Sb)	mg/L	0.000034	0.000047	0.000032	0.000024	0.000140	0.000020	8726280
Total Arsenic (As)	mg/L	0.000280	0.000208	0.000232	0.000090	0.00230	0.000020	8726280
Total Barium (Ba)	mg/L	0.0615	0.0530	0.0396	0.0407	0.0602	0.000020	8726280
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8726280
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8726280
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8726280
Total Cadmium (Cd)	mg/L	0.0000207	0.0000170	0.0000183	0.0000151	0.0000156	0.0000050	8726280
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00017	0.00010	8726280
Total Cobalt (Co)	mg/L	0.0000190	0.0000086	0.0000076	0.0000158	0.000125	0.0000050	8726280
Total Copper (Cu)	mg/L	0.000447	0.000560	0.000156	0.000229	0.000665	0.000050	8726280
Total Iron (Fe)	mg/L	0.0089	0.0027	0.0043	0.0359	0.380	0.0010	8726280
Total Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000089	0.0000554	0.0000050	8726280
Total Lithium (Li)	mg/L	0.00137	0.00219	0.00092	0.00055	0.00302	0.00050	8726280
Total Manganese (Mn)	mg/L	0.00350	0.000290	0.00165	0.00398	0.0625	0.000050	8726280
Total Molybdenum (Mo)	mg/L	0.000419	0.000653	0.000730	0.000423	0.00140	0.000050	8726280
Total Nickel (Ni)	mg/L	0.000309	0.000355	0.000367	0.000223	0.00274	0.000020	8726280
Total Phosphorus (P)	mg/L	0.0038	0.0038	0.0111	0.0044	0.0157	0.0020	8726280
Total Selenium (Se)	mg/L	0.000837	0.000700	0.000900	0.000566	0.000848	0.000040	8726280
Total Silicon (Si)	mg/L	2.83	3.06	2.83	2.56	4.30	0.050	8726280
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8726280
Total Strontium (Sr)	mg/L	0.147	0.136	0.150	0.139	0.157	0.000050	8726280
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8726280
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8726280
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00157	0.00050	8726280
Total Uranium (U)	mg/L	0.00127	0.00107	0.00130	0.000652	0.00235	0.0000020	8726280
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00025	0.00020	8726280

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RS4915	RS4916	RS4917	RS4918	RS4919		
Sampling Date		2017/08/10 09:20	2017/08/10 10:10	2017/08/10 12:50	2017/08/10 14:00	2017/08/09 14:45		
COC Number		08442419	08442419	08442419	08442419	08442420		
	UNITS	KZ-16	KZ-17	KZ-18	KZ-19	KZ-21	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00062	0.00076	0.00060	0.00046	0.00210	0.00010	8726280
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00012	0.00010	8726280
Total Calcium (Ca)	mg/L	46.6	41.5	44.9	47.7	51.9	0.050	8724735
Total Magnesium (Mg)	mg/L	6.95	7.41	14.1	5.58	17.9	0.050	8724735
Total Potassium (K)	mg/L	0.949	1.10	0.354	0.633	1.20	0.050	8724735
Total Sodium (Na)	mg/L	0.929	0.907	0.748	0.704	1.06	0.050	8724735
Total Sulphur (S)	mg/L	8.5	7.8	9.4	7.2	12.8	3.0	8724735

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RS4920	RS4922	RS4923		RS4924		
Sampling Date		2017/08/09 13:30	2017/08/09 12:30	2017/08/10 11:35		2017/08/11 14:20		
COC Number		08442420	08442420	08442420		08442420		
	UNITS	KZ-22	KZ-28	KZ-37	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	185	<0.50	156	8724564	<0.50	0.50	8724564
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8726591	<0.0000020	0.0000020	8726591
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0182	0.00173	0.0308	8726280	<0.00050	0.00050	8726280
Total Antimony (Sb)	mg/L	0.000084	<0.000020	0.000062	8726280	<0.000020	0.000020	8726280
Total Arsenic (As)	mg/L	0.00132	<0.000020	0.000270	8726280	<0.000020	0.000020	8726280
Total Barium (Ba)	mg/L	0.0637	0.000021	0.0688	8726280	<0.000020	0.000020	8726280
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8726280	<0.000010	0.000010	8726280
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8726280	<0.0000050	0.0000050	8726280
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	8726280	<0.010	0.010	8726280
Total Cadmium (Cd)	mg/L	0.0000209	<0.0000050	0.0000780	8726280	<0.0000050	0.0000050	8726280
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00012	8726280	<0.00010	0.00010	8726280
Total Cobalt (Co)	mg/L	0.0000765	<0.0000050	0.0000634	8726280	<0.0000050	0.0000050	8726280
Total Copper (Cu)	mg/L	0.000600	<0.000050	0.000608	8726280	<0.000050	0.000050	8726280
Total Iron (Fe)	mg/L	0.191	<0.0010	0.200	8726280	<0.0010	0.0010	8726280
Total Lead (Pb)	mg/L	0.0000345	<0.0000050	0.000116	8726280	<0.0000050	0.0000050	8726280
Total Lithium (Li)	mg/L	0.00252	<0.00050	0.00143	8726280	<0.00050	0.00050	8726280
Total Manganese (Mn)	mg/L	0.0323	<0.000050	0.0252	8726280	<0.000050	0.000050	8726280
Total Molybdenum (Mo)	mg/L	0.00104	<0.000050	0.000631	8726280	<0.000050	0.000050	8726280
Total Nickel (Ni)	mg/L	0.00143	<0.000020	0.000402	8726280	<0.000020	0.000020	8726280
Total Phosphorus (P)	mg/L	0.0096	0.0023	0.0139	8726280	<0.0020	0.0020	8726280
Total Selenium (Se)	mg/L	0.000936	<0.000040	0.00105	8726280	<0.000040	0.000040	8726280
Total Silicon (Si)	mg/L	3.58	<0.050	2.84	8726280	<0.050	0.050	8726280
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8726280	<0.0000050	0.0000050	8726280
Total Strontium (Sr)	mg/L	0.160	<0.000050	0.162	8726280	<0.000050	0.000050	8726280
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8726280	<0.0000020	0.0000020	8726280
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8726280	<0.00020	0.00020	8726280
Total Titanium (Ti)	mg/L	0.00108	<0.00050	0.00186	8726280	<0.00050	0.00050	8726280
Total Uranium (U)	mg/L	0.00199	<0.0000020	0.00114	8726280	<0.0000020	0.0000020	8726280
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00021	8726280	<0.00020	0.00020	8726280

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RS4920	RS4922	RS4923		RS4924		
Sampling Date		2017/08/09 13:30	2017/08/09 12:30	2017/08/10 11:35		2017/08/11 14:20		
COC Number		08442420	08442420	08442420		08442420		
	UNITS	KZ-22	KZ-28	KZ-37	QC Batch	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00223	<0.00010	0.0129	8726280	<0.00010	0.00010	8731395
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8726280	<0.00010	0.00010	8726280
Total Calcium (Ca)	mg/L	51.6	<0.050	50.0	8724735	<0.050	0.050	8724735
Total Magnesium (Mg)	mg/L	13.7	<0.050	7.65	8724735	<0.050	0.050	8724735
Total Potassium (K)	mg/L	1.10	<0.050	0.976	8724735	<0.050	0.050	8724735
Total Sodium (Na)	mg/L	1.04	<0.050	0.910	8724735	<0.050	0.050	8724735
Total Sulphur (S)	mg/L	11.4	<3.0	10.3	8724735	<3.0	3.0	8724735

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RS4921		
Sampling Date		2017/08/09 11:35		
COC Number		08442420		
	UNITS	KZ-26	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	182	0.50	8724564
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8726591
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.115	0.0030	8726779
Total Antimony (Sb)	mg/L	0.000126	0.000020	8726779
Total Arsenic (As)	mg/L	0.00135	0.000020	8726779
Total Barium (Ba)	mg/L	0.0693	0.000050	8726779
Total Beryllium (Be)	mg/L	0.000011	0.000010	8726779
Total Bismuth (Bi)	mg/L	<0.000010	0.000010	8726779
Total Boron (B)	mg/L	<0.010	0.010	8726779
Total Cadmium (Cd)	mg/L	0.0000377	0.0000050	8726779
Total Chromium (Cr)	mg/L	0.00030	0.00010	8726779
Total Cobalt (Co)	mg/L	0.000214	0.000010	8726779
Total Copper (Cu)	mg/L	0.00129	0.00010	8726779
Total Iron (Fe)	mg/L	0.353	0.0050	8726779
Total Lead (Pb)	mg/L	0.000306	0.000020	8726779
Total Lithium (Li)	mg/L	0.00293	0.00050	8726779
Total Manganese (Mn)	mg/L	0.0354	0.00010	8726779
Total Molybdenum (Mo)	mg/L	0.000967	0.000050	8726779
Total Nickel (Ni)	mg/L	0.00200	0.00010	8726779
Total Phosphorus (P)	mg/L	0.047	0.025	8726779
Total Selenium (Se)	mg/L	0.000818	0.000040	8726779
Total Silicon (Si)	mg/L	3.70	0.050	8726779
Total Silver (Ag)	mg/L	<0.000010	0.000010	8726779
Total Strontium (Sr)	mg/L	0.163	0.000050	8726779
Total Thallium (Tl)	mg/L	0.0000028	0.0000020	8726779
Total Tin (Sn)	mg/L	<0.00020	0.00020	8726779
Total Titanium (Ti)	mg/L	0.0037	0.0020	8726779
Total Uranium (U)	mg/L	0.00189	0.0000050	8726779
Total Vanadium (V)	mg/L	0.00053	0.00020	8726779
RDL = Reportable Detection Limit				

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RS4921		
Sampling Date		2017/08/09 11:35		
COC Number		08442420		
	UNITS	KZ-26	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0032	0.0010	8726779
Total Zirconium (Zr)	mg/L	0.00025	0.00010	8726779
Total Calcium (Ca)	mg/L	50.2	0.25	8724735
Total Magnesium (Mg)	mg/L	13.8	0.25	8724735
Total Potassium (K)	mg/L	1.06	0.25	8724735
Total Sodium (Na)	mg/L	1.06	0.25	8724735
Total Sulphur (S)	mg/L	10.6	3.0	8724735
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RS4910
Sample ID: KZ-2
Matrix: Water

Collected: 2017/08/10
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8727327	N/A	2017/08/14	Name Redacted
Alkalinity - Low Level	AT/ALK	8726918	2017/08/15	2017/08/15	
Chloride - Low Level	KONE/COL	8727228	N/A	2017/08/14	
Cyanide SAD (strong acid dissociable)	TECH/COL	8725668	N/A	2017/08/14	
Cyanide WAD (weak acid dissociable)	TECH/COL	8725674	N/A	2017/08/14	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8727348	N/A	2017/08/15	
Conductance - Low Level	AT/ALK	8726922	2017/08/15	2017/08/15	
Fluoride - Low Level	ISE/ISE	8728071	N/A	2017/08/15	
Hardness Total (calculated as CaCO3)	CALC	8724564	N/A	2017/08/17	
Hardness (calculated as CaCO3)	CALC	8724733	N/A	2017/08/17	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8726426	N/A	2017/08/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8726591	2017/08/15	2017/08/15	
Ion Balance (as Cations/Anions Ratio)	CALC	8724689	N/A	2017/08/18	
Ion Balance	CALC	8724750	N/A	2017/08/18	
Sum of cations, anions	CALC	8724690	N/A	2017/08/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8724650	N/A	2017/08/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8725587	N/A	2017/08/15	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8724735	N/A	2017/08/17	
Elements by ICPMS Low Level (total)	ICP/CRCM	8726280	N/A	2017/08/15	
Ammonia-N Low Level (Preserved)	KONE/COL	8728461	N/A	2017/08/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8724783	N/A	2017/08/12	
Nitrite (N) (low level)	TRAA/COL	8724784	N/A	2017/08/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8724753	N/A	2017/08/15	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/08/12	
pH Water	AT/ALK	8726923	2017/08/15	2017/08/15	
Sulphate - Low Level	KONE/COL	8727229	N/A	2017/08/14	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8727450	2017/08/15	2017/08/15	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8727929	2017/08/15	2017/08/15	
Total Suspended Solids-Low Level	BAL/BAL	8725401	2017/08/14	2017/08/15	

Maxxam ID: RS4910 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2017/08/10
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride - Low Level	KONE/COL	8727228	N/A	2017/08/14	Name Redacted
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8725587	N/A	2017/08/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8726280	N/A	2017/08/15	
Sulphate - Low Level	KONE/COL	8727229	N/A	2017/08/14	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RS4911
Sample ID: KZ-6
Matrix: Water

Collected: 2017/08/10
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8727321	N/A	2017/08/14	Name Redacted
Alkalinity - Low Level	AT/ALK	8726918	2017/08/15	2017/08/15	
Chloride - Low Level	KONE/COL	8727225	N/A	2017/08/14	
Cyanide SAD (strong acid dissociable)	TECH/COL	8725668	N/A	2017/08/14	
Cyanide WAD (weak acid dissociable)	TECH/COL	8725674	N/A	2017/08/14	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8727348	N/A	2017/08/15	
Conductance - Low Level	AT/ALK	8726922	2017/08/15	2017/08/15	
Fluoride - Low Level	ISE/ISE	8728062	N/A	2017/08/15	
Hardness Total (calculated as CaCO3)	CALC	8724564	N/A	2017/08/17	
Hardness (calculated as CaCO3)	CALC	8724733	N/A	2017/08/17	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8726426	N/A	2017/08/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8726591	2017/08/15	2017/08/15	
Ion Balance (as Cations/Anions Ratio)	CALC	8724689	N/A	2017/08/18	
Ion Balance	CALC	8724750	N/A	2017/08/18	
Sum of cations, anions	CALC	8724690	N/A	2017/08/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8724650	N/A	2017/08/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8725587	N/A	2017/08/15	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8724735	N/A	2017/08/17	
Elements by ICPMS Low Level (total)	ICP/CRCM	8726280	N/A	2017/08/15	
Ammonia-N Low Level (Preserved)	KONE/COL	8728461	N/A	2017/08/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8724783	N/A	2017/08/12	
Nitrite (N) (low level)	TRAA/COL	8724784	N/A	2017/08/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8724753	N/A	2017/08/15	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/08/12	
pH Water	AT/ALK	8726923	2017/08/15	2017/08/15	
Sulphate - Low Level	KONE/COL	8727226	N/A	2017/08/14	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8727450	2017/08/15	2017/08/15	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8727394	2017/08/15	2017/08/15	
Total Suspended Solids-Low Level	BAL/BAL	8725401	2017/08/14	2017/08/15	

Maxxam ID: RS4912
Sample ID: KZ-9
Matrix: Water

Collected: 2017/08/10
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8727327	N/A	2017/08/14	Name Redacted
Alkalinity - Low Level	AT/ALK	8726918	2017/08/15	2017/08/15	
Chloride - Low Level	KONE/COL	8727228	N/A	2017/08/14	
Cyanide SAD (strong acid dissociable)	TECH/COL	8725668	N/A	2017/08/14	
Cyanide WAD (weak acid dissociable)	TECH/COL	8725674	N/A	2017/08/14	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8727348	N/A	2017/08/15	
Conductance - Low Level	AT/ALK	8726922	2017/08/15	2017/08/15	
Fluoride - Low Level	ISE/ISE	8728071	N/A	2017/08/15	
Hardness Total (calculated as CaCO3)	CALC	8724564	N/A	2017/08/17	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RS4912
Sample ID: KZ-9
Matrix: Water

Collected: 2017/08/10
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8724733	N/A	2017/08/17	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8726426	N/A	2017/08/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8726591	2017/08/15	2017/08/15	
Ion Balance (as Cations/Anions Ratio)	CALC	8724689	N/A	2017/08/18	
Ion Balance	CALC	8724750	N/A	2017/08/18	
Sum of cations, anions	CALC	8724690	N/A	2017/08/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8724650	N/A	2017/08/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8725587	N/A	2017/08/15	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8724735	N/A	2017/08/17	
Elements by ICPMS Low Level (total)	ICP/CRCM	8726280	N/A	2017/08/15	
Ammonia-N Low Level (Preserved)	KONE/COL	8728461	N/A	2017/08/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8724783	N/A	2017/08/12	
Nitrite (N) (low level)	TRAA/COL	8724784	N/A	2017/08/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8724753	N/A	2017/08/15	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/08/12	
pH Water	AT/ALK	8726923	2017/08/15	2017/08/15	
Sulphate - Low Level	KONE/COL	8727229	N/A	2017/08/14	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8727450	2017/08/15	2017/08/15	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8727929	2017/08/15	2017/08/15	
Total Suspended Solids-Low Level	BAL/BAL	8725401	2017/08/14	2017/08/15	

Maxxam ID: RS4913
Sample ID: KZ-13
Matrix: Water

Collected: 2017/08/09
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8727327	N/A	2017/08/14	Name Redacted
Alkalinity - Low Level	AT/ALK	8726918	2017/08/15	2017/08/15	
Chloride - Low Level	KONE/COL	8727228	N/A	2017/08/14	
Cyanide SAD (strong acid dissociable)	TECH/COL	8725668	N/A	2017/08/14	
Cyanide WAD (weak acid dissociable)	TECH/COL	8725674	N/A	2017/08/14	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8727348	N/A	2017/08/15	
Conductance - Low Level	AT/ALK	8726922	2017/08/15	2017/08/15	
Fluoride - Low Level	ISE/ISE	8728071	N/A	2017/08/15	
Hardness Total (calculated as CaCO3)	CALC	8724564	N/A	2017/08/17	
Hardness (calculated as CaCO3)	CALC	8724733	N/A	2017/08/17	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8726426	N/A	2017/08/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8726591	2017/08/15	2017/08/15	
Ion Balance (as Cations/Anions Ratio)	CALC	8724689	N/A	2017/08/18	
Ion Balance	CALC	8724750	N/A	2017/08/18	
Sum of cations, anions	CALC	8724690	N/A	2017/08/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8724650	N/A	2017/08/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8725587	N/A	2017/08/16	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8724735	N/A	2017/08/17	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RS4913
Sample ID: KZ-13
Matrix: Water

Collected: 2017/08/09
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8726280	N/A	2017/08/15	Name Redacted
Ammonia-N Low Level (Preserved)	KONE/COL	8728461	N/A	2017/08/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8724785	N/A	2017/08/12	
Nitrite (N) (low level)	TRAA/COL	8724786	N/A	2017/08/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8724753	N/A	2017/08/15	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/08/12	
pH Water	AT/ALK	8726923	2017/08/15	2017/08/15	
Sulphate - Low Level	KONE/COL	8727229	N/A	2017/08/14	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8727450	2017/08/12	2017/08/15	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8727968	2017/08/12	2017/08/15	
Total Suspended Solids-Low Level	BAL/BAL	8725401	2017/08/14	2017/08/15	

Maxxam ID: RS4914
Sample ID: KZ-15
Matrix: Water

Collected: 2017/08/10
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8727327	N/A	2017/08/14	Name Redacted
Alkalinity - Low Level	AT/ALK	8726918	2017/08/15	2017/08/15	
Chloride - Low Level	KONE/COL	8727228	N/A	2017/08/14	
Cyanide SAD (strong acid dissociable)	TECH/COL	8725668	N/A	2017/08/14	
Cyanide WAD (weak acid dissociable)	TECH/COL	8725674	N/A	2017/08/14	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8727354	N/A	2017/08/15	
Conductance - Low Level	AT/ALK	8726922	2017/08/15	2017/08/15	
Fluoride - Low Level	ISE/ISE	8728071	N/A	2017/08/15	
Hardness Total (calculated as CaCO3)	CALC	8724564	N/A	2017/08/17	
Hardness (calculated as CaCO3)	CALC	8724733	N/A	2017/08/17	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8726426	N/A	2017/08/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8726591	2017/08/15	2017/08/15	
Ion Balance (as Cations/Anions Ratio)	CALC	8724689	N/A	2017/08/18	
Ion Balance	CALC	8724750	N/A	2017/08/18	
Sum of cations, anions	CALC	8724690	N/A	2017/08/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8724650	N/A	2017/08/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8725587	N/A	2017/08/16	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8724735	N/A	2017/08/17	
Elements by ICPMS Low Level (total)	ICP/CRCM	8726280	N/A	2017/08/15	
Ammonia-N Low Level (Preserved)	KONE/COL	8728461	N/A	2017/08/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8724785	N/A	2017/08/12	
Nitrite (N) (low level)	TRAA/COL	8724786	N/A	2017/08/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8724753	N/A	2017/08/15	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/08/12	
pH Water	AT/ALK	8726923	2017/08/15	2017/08/15	
Sulphate - Low Level	KONE/COL	8727229	N/A	2017/08/14	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8727450	2017/08/15	2017/08/15	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RS4914
Sample ID: KZ-15
Matrix: Water

Collected: 2017/08/10
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - Low Level Unpreserved	KONE/COL	8727968	2017/08/15	2017/08/15	Name Redacted
Total Suspended Solids-Low Level	BAL/BAL	8725401	2017/08/14	2017/08/15	

Maxxam ID: RS4915
Sample ID: KZ-16
Matrix: Water

Collected: 2017/08/10
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8727321	N/A	2017/08/14	Name Redacted
Alkalinity - Low Level	AT/ALK	8726886	2017/08/15	2017/08/15	
Chloride - Low Level	KONE/COL	8727225	N/A	2017/08/14	
Cyanide SAD (strong acid dissociable)	TECH/COL	8725668	N/A	2017/08/14	
Cyanide WAD (weak acid dissociable)	TECH/COL	8725674	N/A	2017/08/14	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8727348	N/A	2017/08/15	
Conductance - Low Level	AT/ALK	8726890	2017/08/15	2017/08/15	
Fluoride - Low Level	ISE/ISE	8728062	N/A	2017/08/15	
Hardness Total (calculated as CaCO3)	CALC	8724564	N/A	2017/08/17	
Hardness (calculated as CaCO3)	CALC	8724733	N/A	2017/08/17	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8726426	N/A	2017/08/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8726591	2017/08/15	2017/08/15	
Ion Balance (as Cations/Anions Ratio)	CALC	8724689	N/A	2017/08/18	
Ion Balance	CALC	8724750	N/A	2017/08/18	
Sum of cations, anions	CALC	8724690	N/A	2017/08/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8724650	N/A	2017/08/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8725587	N/A	2017/08/16	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8724735	N/A	2017/08/17	
Elements by ICPMS Low Level (total)	ICP/CRCM	8726280	N/A	2017/08/15	
Ammonia-N Low Level (Preserved)	KONE/COL	8728461	N/A	2017/08/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8724783	N/A	2017/08/12	
Nitrite (N) (low level)	TRAA/COL	8724784	N/A	2017/08/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8724753	N/A	2017/08/15	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/08/12	
pH Water	AT/ALK	8726891	2017/08/15	2017/08/15	
Sulphate - Low Level	KONE/COL	8727226	N/A	2017/08/14	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8727435	2017/08/15	2017/08/15	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8727394	2017/08/15	2017/08/15	
Total Suspended Solids-Low Level	BAL/BAL	8725401	2017/08/14	2017/08/15	

Maxxam ID: RS4916
Sample ID: KZ-17
Matrix: Water

Collected: 2017/08/10
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8727327	N/A	2017/08/14	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RS4916
Sample ID: KZ-17
Matrix: Water

Collected: 2017/08/10
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Low Level	AT/ALK	8726918	2017/08/15	2017/08/15	Name Redacted
Chloride - Low Level	KONE/COL	8727228	N/A	2017/08/14	
Cyanide SAD (strong acid dissociable)	TECH/COL	8725668	N/A	2017/08/14	
Cyanide WAD (weak acid dissociable)	TECH/COL	8725674	N/A	2017/08/14	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8727348	N/A	2017/08/15	
Conductance - Low Level	AT/ALK	8726922	2017/08/15	2017/08/15	
Fluoride - Low Level	ISE/ISE	8728071	N/A	2017/08/15	
Hardness Total (calculated as CaCO3)	CALC	8724564	N/A	2017/08/17	
Hardness (calculated as CaCO3)	CALC	8724733	N/A	2017/08/17	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8726426	N/A	2017/08/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8726591	2017/08/15	2017/08/15	
Ion Balance (as Cations/Anions Ratio)	CALC	8724689	N/A	2017/08/18	
Ion Balance	CALC	8724750	N/A	2017/08/18	
Sum of cations, anions	CALC	8724690	N/A	2017/08/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8724650	N/A	2017/08/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8725587	N/A	2017/08/16	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8724735	N/A	2017/08/17	
Elements by ICPMS Low Level (total)	ICP/CRCM	8726280	N/A	2017/08/15	
Ammonia-N Low Level (Preserved)	KONE/COL	8728461	N/A	2017/08/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8724785	N/A	2017/08/12	
Nitrite (N) (low level)	TRAA/COL	8724786	N/A	2017/08/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8724753	N/A	2017/08/15	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/08/12	
pH Water	AT/ALK	8726923	2017/08/15	2017/08/15	
Sulphate - Low Level	KONE/COL	8727229	N/A	2017/08/14	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8727450	2017/08/15	2017/08/15	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8727929	2017/08/15	2017/08/15	
Total Suspended Solids-Low Level	BAL/BAL	8725401	2017/08/14	2017/08/15	

Maxxam ID: RS4917
Sample ID: KZ-18
Matrix: Water

Collected: 2017/08/10
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8727327	N/A	2017/08/14	Name Redacted
Alkalinity - Low Level	AT/ALK	8726918	2017/08/15	2017/08/15	
Chloride - Low Level	KONE/COL	8727228	N/A	2017/08/14	
Cyanide SAD (strong acid dissociable)	TECH/COL	8725668	N/A	2017/08/14	
Cyanide WAD (weak acid dissociable)	TECH/COL	8725674	N/A	2017/08/14	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8727348	N/A	2017/08/15	
Conductance - Low Level	AT/ALK	8726922	2017/08/15	2017/08/15	
Fluoride - Low Level	ISE/ISE	8728071	N/A	2017/08/15	
Hardness Total (calculated as CaCO3)	CALC	8724564	N/A	2017/08/17	
Hardness (calculated as CaCO3)	CALC	8724733	N/A	2017/08/17	

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RS4917
Sample ID: KZ-18
Matrix: Water

Collected: 2017/08/10
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8726426	N/A	2017/08/15	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8726591	2017/08/15	2017/08/15	
Ion Balance (as Cations/Anions Ratio)	CALC	8724689	N/A	2017/08/18	
Ion Balance	CALC	8724750	N/A	2017/08/18	
Sum of cations, anions	CALC	8724690	N/A	2017/08/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8724650	N/A	2017/08/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8725587	N/A	2017/08/16	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8724735	N/A	2017/08/17	
Elements by ICPMS Low Level (total)	ICP/CRCM	8726280	N/A	2017/08/15	
Ammonia-N Low Level (Preserved)	KONE/COL	8728461	N/A	2017/08/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8724783	N/A	2017/08/12	
Nitrite (N) (low level)	TRAA/COL	8724784	N/A	2017/08/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8724753	N/A	2017/08/15	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/08/12	
pH Water	AT/ALK	8726923	2017/08/15	2017/08/15	
Sulphate - Low Level	KONE/COL	8727229	N/A	2017/08/14	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8727450	2017/08/15	2017/08/15	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8727929	2017/08/15	2017/08/15	
Total Suspended Solids-Low Level	BAL/BAL	8725401	2017/08/14	2017/08/15	

Maxxam ID: RS4918
Sample ID: KZ-19
Matrix: Water

Collected: 2017/08/10
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8727327	N/A	2017/08/14	Name Redacted
Alkalinity - Low Level	AT/ALK	8726918	2017/08/15	2017/08/15	
Chloride - Low Level	KONE/COL	8727225	N/A	2017/08/14	
Cyanide SAD (strong acid dissociable)	TECH/COL	8725668	N/A	2017/08/14	
Cyanide WAD (weak acid dissociable)	TECH/COL	8725674	N/A	2017/08/14	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8727348	N/A	2017/08/15	
Conductance - Low Level	AT/ALK	8726922	2017/08/15	2017/08/15	
Fluoride - Low Level	ISE/ISE	8728062	N/A	2017/08/15	
Hardness Total (calculated as CaCO3)	CALC	8724564	N/A	2017/08/17	
Hardness (calculated as CaCO3)	CALC	8724733	N/A	2017/08/17	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8726426	N/A	2017/08/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8726591	2017/08/15	2017/08/15	
Ion Balance (as Cations/Anions Ratio)	CALC	8724689	N/A	2017/08/18	
Ion Balance	CALC	8724750	N/A	2017/08/18	
Sum of cations, anions	CALC	8724690	N/A	2017/08/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8724650	N/A	2017/08/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8725587	N/A	2017/08/16	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8724735	N/A	2017/08/17	
Elements by ICPMS Low Level (total)	ICP/CRCM	8726280	N/A	2017/08/15	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RS4918
Sample ID: KZ-19
Matrix: Water

Collected: 2017/08/10
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N Low Level (Preserved)	KONE/COL	8728461	N/A	2017/08/16	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8724783	N/A	2017/08/12	
Nitrite (N) (low level)	TRAA/COL	8724784	N/A	2017/08/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8724753	N/A	2017/08/15	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/08/12	
pH Water	AT/ALK	8726923	2017/08/15	2017/08/15	
Sulphate - Low Level	KONE/COL	8727226	N/A	2017/08/14	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8727450	2017/08/15	2017/08/15	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8727929	2017/08/15	2017/08/15	
Total Suspended Solids-Low Level	BAL/BAL	8725401	2017/08/14	2017/08/15	

Maxxam ID: RS4919
Sample ID: KZ-21
Matrix: Water

Collected: 2017/08/09
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8727327	N/A	2017/08/14	Name Redacted
Alkalinity - Low Level	AT/ALK	8726918	2017/08/15	2017/08/15	
Chloride - Low Level	KONE/COL	8727228	N/A	2017/08/14	
Cyanide SAD (strong acid dissociable)	TECH/COL	8725668	N/A	2017/08/14	
Cyanide WAD (weak acid dissociable)	TECH/COL	8725674	N/A	2017/08/14	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8727348	N/A	2017/08/15	
Conductance - Low Level	AT/ALK	8726922	2017/08/15	2017/08/15	
Fluoride - Low Level	ISE/ISE	8728071	N/A	2017/08/15	
Hardness Total (calculated as CaCO3)	CALC	8724564	N/A	2017/08/17	
Hardness (calculated as CaCO3)	CALC	8724733	N/A	2017/08/17	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8726426	N/A	2017/08/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8726591	2017/08/15	2017/08/15	
Ion Balance (as Cations/Anions Ratio)	CALC	8724689	N/A	2017/08/18	
Ion Balance	CALC	8724750	N/A	2017/08/18	
Sum of cations, anions	CALC	8724690	N/A	2017/08/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8724650	N/A	2017/08/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8725587	N/A	2017/08/16	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8724735	N/A	2017/08/17	
Elements by ICPMS Low Level (total)	ICP/CRCM	8726280	N/A	2017/08/15	
Ammonia-N Low Level (Preserved)	KONE/COL	8728461	N/A	2017/08/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8724783	N/A	2017/08/12	
Nitrite (N) (low level)	TRAA/COL	8724784	N/A	2017/08/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8724753	N/A	2017/08/15	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/08/12	
pH Water	AT/ALK	8726923	2017/08/15	2017/08/15	
Sulphate - Low Level	KONE/COL	8727229	N/A	2017/08/14	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8727450	2017/08/12	2017/08/15	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8727929	2017/08/15	2017/08/15	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RS4919
Sample ID: KZ-21
Matrix: Water

Collected: 2017/08/09
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Suspended Solids-Low Level	BAL/BAL	8725401	2017/08/14	2017/08/15	Name Redacted

Maxxam ID: RS4919 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2017/08/09
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N Low Level (Preserved)	KONE/COL	8728461	N/A	2017/08/16	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8724783	N/A	2017/08/12	
Nitrite (N) (low level)	TRAA/COL	8724784	N/A	2017/08/12	

Maxxam ID: RS4920
Sample ID: KZ-22
Matrix: Water

Collected: 2017/08/09
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8727321	N/A	2017/08/14	Name Redacted
Alkalinity - Low Level	AT/ALK	8726886	2017/08/15	2017/08/15	
Chloride - Low Level	KONE/COL	8727225	N/A	2017/08/14	
Cyanide SAD (strong acid dissociable)	TECH/COL	8725668	N/A	2017/08/14	
Cyanide WAD (weak acid dissociable)	TECH/COL	8725674	N/A	2017/08/14	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8727348	N/A	2017/08/15	
Conductance - Low Level	AT/ALK	8726890	2017/08/15	2017/08/15	
Fluoride - Low Level	ISE/ISE	8728062	N/A	2017/08/15	
Hardness Total (calculated as CaCO3)	CALC	8724564	N/A	2017/08/17	
Hardness (calculated as CaCO3)	CALC	8724733	N/A	2017/08/17	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8726426	N/A	2017/08/15	
Mercury (Total-LowLevel) by CVAF	CV/AF	8726591	2017/08/15	2017/08/15	
Ion Balance (as Cations/Anions Ratio)	CALC	8724689	N/A	2017/08/18	
Ion Balance	CALC	8724750	N/A	2017/08/18	
Sum of cations, anions	CALC	8724690	N/A	2017/08/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8724650	N/A	2017/08/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8725587	N/A	2017/08/16	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8724735	N/A	2017/08/17	
Elements by ICPMS Low Level (total)	ICP/CRCM	8726280	N/A	2017/08/15	
Ammonia-N Low Level (Preserved)	KONE/COL	8728461	N/A	2017/08/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8724783	N/A	2017/08/12	
Nitrite (N) (low level)	TRAA/COL	8724784	N/A	2017/08/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8724753	N/A	2017/08/15	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/08/12	
pH Water	AT/ALK	8726891	2017/08/15	2017/08/15	
Sulphate - Low Level	KONE/COL	8727226	N/A	2017/08/14	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8727435	2017/08/12	2017/08/15	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8727394	2017/08/12	2017/08/15	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RS4920 **Collected:** 2017/08/09
Sample ID: KZ-22 **Shipped:**
Matrix: Water **Received:** 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Suspended Solids-Low Level	BAL/BAL	8725401	2017/08/14	2017/08/15	Name Redacted

Maxxam ID: RS4920 Dup **Collected:** 2017/08/09
Sample ID: KZ-22 **Shipped:**
Matrix: Water **Received:** 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - Low Level Unpreserved	KONE/COL	8727394	2017/08/15	2017/08/15	Name Redacted

Maxxam ID: RS4921 **Collected:** 2017/08/09
Sample ID: KZ-26 **Shipped:**
Matrix: Water **Received:** 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8727321	N/A	2017/08/14	Name Redacted
Alkalinity - Low Level	AT/ALK	8726886	2017/08/15	2017/08/15	
Chloride - Low Level	KONE/COL	8727225	N/A	2017/08/14	
Cyanide SAD (strong acid dissociable)	TECH/COL	8725668	N/A	2017/08/14	
Cyanide WAD (weak acid dissociable)	TECH/COL	8725674	N/A	2017/08/14	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8727348	N/A	2017/08/15	
Conductance - Low Level	AT/ALK	8726890	2017/08/15	2017/08/15	
Fluoride - Low Level	ISE/ISE	8728062	N/A	2017/08/15	
Hardness Total (calculated as CaCO3)	CALC	8724564	N/A	2017/08/17	
Hardness (calculated as CaCO3)	CALC	8724733	N/A	2017/08/17	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8727791	N/A	2017/08/16	
Mercury (Total-LowLevel) by CVAF	CV/AF	8726591	2017/08/15	2017/08/15	
Ion Balance (as Cations/Anions Ratio)	CALC	8724689	N/A	2017/08/17	
Ion Balance	CALC	8724750	N/A	2017/08/17	
Sum of cations, anions	CALC	8724690	N/A	2017/08/17	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8724650	N/A	2017/08/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8725587	N/A	2017/08/16	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8726779	2017/08/15	2017/08/16	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8724735	N/A	2017/08/17	
Ammonia-N Low Level (Preserved)	KONE/COL	8728461	N/A	2017/08/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8724783	N/A	2017/08/12	
Nitrite (N) (low level)	TRAA/COL	8724784	N/A	2017/08/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8724753	N/A	2017/08/15	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/08/12	
pH Water	AT/ALK	8726891	2017/08/15	2017/08/15	
Sulphate - Low Level	KONE/COL	8727226	N/A	2017/08/14	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8727450	2017/08/12	2017/08/15	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8727394	2017/08/12	2017/08/15	
Total Suspended Solids-Low Level	BAL/BAL	8726862	2017/08/15	2017/08/16	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RS4922
Sample ID: KZ-28
Matrix: Water

Collected: 2017/08/09
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8727327	N/A	2017/08/14	Name Redacted
Alkalinity - Low Level	AT/ALK	8726918	2017/08/15	2017/08/15	
Chloride - Low Level	KONE/COL	8727228	N/A	2017/08/14	
Cyanide SAD (strong acid dissociable)	TECH/COL	8725668	N/A	2017/08/14	
Cyanide WAD (weak acid dissociable)	TECH/COL	8725674	N/A	2017/08/14	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8727348	N/A	2017/08/15	
Conductance - Low Level	AT/ALK	8726922	2017/08/15	2017/08/15	
Fluoride - Low Level	ISE/ISE	8728071	N/A	2017/08/15	
Hardness Total (calculated as CaCO3)	CALC	8724564	N/A	2017/08/17	
Hardness (calculated as CaCO3)	CALC	8724733	N/A	2017/08/17	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8727791	N/A	2017/08/16	
Mercury (Total-LowLevel) by CVAF	CV/AF	8726591	2017/08/15	2017/08/15	
Ion Balance (as Cations/Anions Ratio)	CALC	8724689	N/A	2017/08/17	
Ion Balance	CALC	8724750	N/A	2017/08/17	
Sum of cations, anions	CALC	8724690	N/A	2017/08/17	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8724650	N/A	2017/08/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8725587	N/A	2017/08/16	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8724735	N/A	2017/08/17	
Elements by ICPMS Low Level (total)	ICP/CRCM	8726280	N/A	2017/08/15	
Ammonia-N Low Level (Preserved)	KONE/COL	8728461	N/A	2017/08/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8724785	N/A	2017/08/12	
Nitrite (N) (low level)	TRAA/COL	8724786	N/A	2017/08/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8724753	N/A	2017/08/15	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/08/12	
pH Water	AT/ALK	8726923	2017/08/15	2017/08/15	
Sulphate - Low Level	KONE/COL	8727229	N/A	2017/08/14	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8727450	2017/08/12	2017/08/15	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8727968	2017/08/12	2017/08/15	
Total Suspended Solids-Low Level	BAL/BAL	8725401	2017/08/14	2017/08/15	

Maxxam ID: RS4923
Sample ID: KZ-37
Matrix: Water

Collected: 2017/08/10
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8727327	N/A	2017/08/14	Name Redacted
Alkalinity - Low Level	AT/ALK	8726918	2017/08/15	2017/08/15	
Chloride - Low Level	KONE/COL	8727228	N/A	2017/08/14	
Cyanide SAD (strong acid dissociable)	TECH/COL	8725668	N/A	2017/08/14	
Cyanide WAD (weak acid dissociable)	TECH/COL	8725674	N/A	2017/08/14	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8727351	N/A	2017/08/15	
Conductance - Low Level	AT/ALK	8726922	2017/08/15	2017/08/15	
Fluoride - Low Level	ISE/ISE	8728071	N/A	2017/08/15	
Hardness Total (calculated as CaCO3)	CALC	8724564	N/A	2017/08/17	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RS4923
Sample ID: KZ-37
Matrix: Water

Collected: 2017/08/10
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8724733	N/A	2017/08/17	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8727791	N/A	2017/08/16	
Mercury (Total-LowLevel) by CVAF	CV/AF	8726591	2017/08/15	2017/08/15	
Ion Balance (as Cations/Anions Ratio)	CALC	8724689	N/A	2017/08/18	
Ion Balance	CALC	8724750	N/A	2017/08/18	
Sum of cations, anions	CALC	8724690	N/A	2017/08/18	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8724650	N/A	2017/08/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8725587	N/A	2017/08/16	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8724735	N/A	2017/08/17	
Elements by ICPMS Low Level (total)	ICP/CRCM	8726280	N/A	2017/08/15	
Ammonia-N Low Level (Preserved)	KONE/COL	8728461	N/A	2017/08/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8724785	N/A	2017/08/12	
Nitrite (N) (low level)	TRAA/COL	8724786	N/A	2017/08/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8724753	N/A	2017/08/15	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/08/12	
pH Water	AT/ALK	8726923	2017/08/15	2017/08/15	
Sulphate - Low Level	KONE/COL	8727229	N/A	2017/08/14	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8727450	2017/08/15	2017/08/15	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8727968	2017/08/15	2017/08/15	
Total Suspended Solids-Low Level	BAL/BAL	8725401	2017/08/14	2017/08/15	

Maxxam ID: RS4923 Dup
Sample ID: KZ-37
Matrix: Water

Collected: 2017/08/10
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8727351	N/A	2017/08/15	Name Redacted

Maxxam ID: RS4924
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/08/11
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8727327	N/A	2017/08/14	Name Redacted
Alkalinity - Low Level	AT/ALK	8726886	2017/08/15	2017/08/15	
Chloride - Low Level	KONE/COL	8727228	N/A	2017/08/14	
Cyanide SAD (strong acid dissociable)	TECH/COL	8725668	N/A	2017/08/14	
Cyanide WAD (weak acid dissociable)	TECH/COL	8725674	N/A	2017/08/14	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8727348	N/A	2017/08/15	
Conductance - Low Level	AT/ALK	8726890	2017/08/15	2017/08/15	
Fluoride - Low Level	ISE/ISE	8728071	N/A	2017/08/15	
Hardness Total (calculated as CaCO3)	CALC	8724564	N/A	2017/08/17	
Hardness (calculated as CaCO3)	CALC	8724733	N/A	2017/08/17	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8727791	N/A	2017/08/16	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RS4924
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/08/11
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8726591	2017/08/15	2017/08/15	Name Redacted
Ion Balance (as Cations/Anions Ratio)	CALC	8724689	N/A	2017/08/17	
Ion Balance	CALC	8724750	N/A	2017/08/17	
Sum of cations, anions	CALC	8724690	N/A	2017/08/17	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8724650	N/A	2017/08/17	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8725587	N/A	2017/08/15	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8724735	N/A	2017/08/17	
Elements by ICPMS Low Level (total)	ICP/CRCM	8726280	N/A	2017/08/15	
Ammonia-N Low Level (Preserved)	KONE/COL	8731699	N/A	2017/08/17	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8724783	N/A	2017/08/12	
Nitrite (N) (low level)	TRAA/COL	8724784	N/A	2017/08/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8724753	N/A	2017/08/15	
pH Water	AT/ALK	8726891	2017/08/15	2017/08/15	
Sulphate - Low Level	KONE/COL	8727229	N/A	2017/08/14	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8727450	2017/08/15	2017/08/15	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8727929	2017/08/15	2017/08/15	
Total Suspended Solids-Low Level	BAL/BAL	8725401	2017/08/14	2017/08/15	

Maxxam ID: RS4924 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/08/11
Shipped:
Received: 2017/08/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride - Low Level	ISE/ISE	8728071	N/A	2017/08/15	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8727791	N/A	2017/08/16	
Mercury (Total-LowLevel) by CVAF	CV/AF	8726591	2017/08/15	2017/08/15	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.3°C
Package 2	6.0°C
Package 3	6.0°C
Package 4	6.3°C

Sample RS4921 [KZ-26] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RS4924 [TRIP BLANK] : Ion Balance: NC = Not Calculable due to low ion sum [< 0.4 meq/L].

LL TOTAL METALS (DIGESTED) WITH CV HG Comments

Method Blank Elements by ICPMS Digested LL (total): Method blank exceeds acceptance limits for Sb- 2X RDL acceptable for low level metals determination.Phosphorus blank outside acceptance criteria, detection limit adjusted accordingly

Sample RS4913, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample RS4918, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample RS4924, Elements by ICPMS Low Level (total): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8724783	Nitrate plus Nitrite (N)	2017/08/12	103	80 - 120	105	80 - 120	<0.0020	mg/L	NC	25
8724784	Nitrite (N)	2017/08/12	99	80 - 120	101	80 - 120	<0.0020	mg/L	NC	25
8724785	Nitrate plus Nitrite (N)	2017/08/12	106	80 - 120	100	80 - 120	<0.0020	mg/L	1.0	25
8724786	Nitrite (N)	2017/08/12	101	80 - 120	93	80 - 120	<0.0020	mg/L	2.6	25
8725401	Total Suspended Solids	2017/08/15			99	80 - 120	<1.0	mg/L		
8725587	Dissolved Aluminum (Al)	2017/08/15	102	80 - 120	107	80 - 120	<0.00050	mg/L	5.7	20
8725587	Dissolved Antimony (Sb)	2017/08/15	96	80 - 120	101	80 - 120	<0.000020	mg/L	7.5	20
8725587	Dissolved Arsenic (As)	2017/08/15	102	80 - 120	100	80 - 120	<0.000020	mg/L	6.4	20
8725587	Dissolved Barium (Ba)	2017/08/15	NC	80 - 120	99	80 - 120	<0.000020	mg/L	1.4	20
8725587	Dissolved Beryllium (Be)	2017/08/15	96	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8725587	Dissolved Bismuth (Bi)	2017/08/15	98	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8725587	Dissolved Boron (B)	2017/08/15	101	80 - 120	104	80 - 120	<0.010	mg/L	NC	20
8725587	Dissolved Cadmium (Cd)	2017/08/15	100	80 - 120	102	80 - 120	<0.0000050	mg/L	0.82	20
8725587	Dissolved Chromium (Cr)	2017/08/15	99	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8725587	Dissolved Cobalt (Co)	2017/08/15	94	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8725587	Dissolved Copper (Cu)	2017/08/15	94	80 - 120	102	80 - 120	<0.000050	mg/L	0.69	20
8725587	Dissolved Iron (Fe)	2017/08/15	101	80 - 120	104	80 - 120	<0.0010	mg/L	4.3	20
8725587	Dissolved Lead (Pb)	2017/08/15	97	80 - 120	99	80 - 120	<0.0000050	mg/L	13	20
8725587	Dissolved Lithium (Li)	2017/08/15	94	80 - 120	96	80 - 120	<0.00050	mg/L	0.15	20
8725587	Dissolved Manganese (Mn)	2017/08/15	94	80 - 120	97	80 - 120	<0.000050	mg/L	2.6	20
8725587	Dissolved Molybdenum (Mo)	2017/08/15	99	80 - 120	104	80 - 120	<0.000050	mg/L	0.74	20
8725587	Dissolved Nickel (Ni)	2017/08/15	98	80 - 120	104	80 - 120	<0.000020	mg/L	13	20
8725587	Dissolved Phosphorus (P)	2017/08/15					<0.0020	mg/L	2.3	20
8725587	Dissolved Selenium (Se)	2017/08/15	102	80 - 120	101	80 - 120	<0.000040	mg/L	1.5	20
8725587	Dissolved Silicon (Si)	2017/08/15					<0.050	mg/L	1.3	20
8725587	Dissolved Silver (Ag)	2017/08/15	104	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8725587	Dissolved Strontium (Sr)	2017/08/15	NC	80 - 120	98	80 - 120	<0.000050	mg/L	0.49	20
8725587	Dissolved Thallium (Tl)	2017/08/15	99	80 - 120	99	80 - 120	<0.0000020	mg/L	5.2	20
8725587	Dissolved Tin (Sn)	2017/08/15	96	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8725587	Dissolved Titanium (Ti)	2017/08/15	102	80 - 120	107	80 - 120	<0.00050	mg/L	NC	20
8725587	Dissolved Uranium (U)	2017/08/15	96	80 - 120	95	80 - 120	<0.0000020	mg/L	0.89	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8725587	Dissolved Vanadium (V)	2017/08/15	99	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8725587	Dissolved Zinc (Zn)	2017/08/15	NC	80 - 120	101	80 - 120	<0.00010	mg/L	3.3	20
8725587	Dissolved Zirconium (Zr)	2017/08/15					<0.00010	mg/L	NC	20
8725668	Strong Acid Dissoc. Cyanide (CN)	2017/08/14	76 (1)	80 - 120	99	80 - 120	<0.00050	mg/L	2.3	20
8725674	Weak Acid Dissoc. Cyanide (CN)	2017/08/14	91	80 - 120	101	80 - 120	<0.00050	mg/L	0.74	20
8726280	Total Aluminum (Al)	2017/08/15	106	80 - 120	105	80 - 120	<0.00050	mg/L	0.73	20
8726280	Total Antimony (Sb)	2017/08/15	102	80 - 120	97	80 - 120	<0.000020	mg/L	9.1	20
8726280	Total Arsenic (As)	2017/08/15	105	80 - 120	100	80 - 120	<0.000020	mg/L	4.3	20
8726280	Total Barium (Ba)	2017/08/15	NC	80 - 120	98	80 - 120	<0.000020	mg/L	0.54	20
8726280	Total Beryllium (Be)	2017/08/15	100	80 - 120	96	80 - 120	<0.000010	mg/L	NC	20
8726280	Total Bismuth (Bi)	2017/08/15	101	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8726280	Total Boron (B)	2017/08/15	105	80 - 120	98	80 - 120	<0.010	mg/L	NC	20
8726280	Total Cadmium (Cd)	2017/08/15	102	80 - 120	101	80 - 120	<0.0000050	mg/L	1.5	20
8726280	Total Chromium (Cr)	2017/08/15	101	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8726280	Total Cobalt (Co)	2017/08/15	98	80 - 120	98	80 - 120	<0.0000050	mg/L	3.8	20
8726280	Total Copper (Cu)	2017/08/15	100	80 - 120	100	80 - 120	<0.000050	mg/L	2.3	20
8726280	Total Iron (Fe)	2017/08/15	104	80 - 120	104	80 - 120	<0.0010	mg/L	1.3	20
8726280	Total Lead (Pb)	2017/08/15	101	80 - 120	99	80 - 120	<0.0000050	mg/L	4.2	20
8726280	Total Lithium (Li)	2017/08/15	97	80 - 120	95	80 - 120	<0.00050	mg/L	0.093	20
8726280	Total Manganese (Mn)	2017/08/15	98	80 - 120	98	80 - 120	<0.000050	mg/L	3.8	20
8726280	Total Molybdenum (Mo)	2017/08/15	107	80 - 120	105	80 - 120	<0.000050	mg/L	2.7	20
8726280	Total Nickel (Ni)	2017/08/15	102	80 - 120	103	80 - 120	<0.000020	mg/L	1.9	20
8726280	Total Phosphorus (P)	2017/08/15					<0.0020	mg/L	3.3	20
8726280	Total Selenium (Se)	2017/08/15	105	80 - 120	101	80 - 120	<0.000040	mg/L	1.0	20
8726280	Total Silicon (Si)	2017/08/15					<0.050	mg/L	1.2	20
8726280	Total Silver (Ag)	2017/08/15	107	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8726280	Total Strontium (Sr)	2017/08/15	NC	80 - 120	98	80 - 120	<0.000050	mg/L	0.59	20
8726280	Total Thallium (Tl)	2017/08/15	104	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8726280	Total Tin (Sn)	2017/08/15	100	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
8726280	Total Titanium (Ti)	2017/08/15	106	80 - 120	107	80 - 120	<0.00050	mg/L	NC	20
8726280	Total Uranium (U)	2017/08/15	100	80 - 120	96	80 - 120	<0.0000020	mg/L	0.36	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8726280	Total Vanadium (V)	2017/08/15	103	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
8726280	Total Zinc (Zn)	2017/08/15	NC	80 - 120	103	80 - 120	<0.00010	mg/L	0.40	20
8726280	Total Zirconium (Zr)	2017/08/15					<0.00010	mg/L	NC	20
8726426	Dissolved Mercury (Hg)	2017/08/15	98	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8726591	Total Mercury (Hg)	2017/08/15	92	80 - 120	92	80 - 120	<0.0000020	mg/L	NC	20
8726779	Total Aluminum (Al)	2017/08/16	NC	80 - 120	107	80 - 120	<0.0030	mg/L	0.31	20
8726779	Total Antimony (Sb)	2017/08/16	102	80 - 120	105	80 - 120	0.000036, RDL=0.000020	mg/L	1.0	20
8726779	Total Arsenic (As)	2017/08/16	105	80 - 120	101	80 - 120	<0.000020	mg/L	1.7	20
8726779	Total Barium (Ba)	2017/08/16	NC	80 - 120	103	80 - 120	<0.000050	mg/L	2.4	20
8726779	Total Beryllium (Be)	2017/08/16	99	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8726779	Total Bismuth (Bi)	2017/08/16	92	80 - 120	101	80 - 120	<0.000010	mg/L	NC	20
8726779	Total Boron (B)	2017/08/16	106	80 - 120	113	80 - 120	<0.010	mg/L	4.2	20
8726779	Total Cadmium (Cd)	2017/08/16	100	80 - 120	105	80 - 120	<0.0000050	mg/L	4.7	20
8726779	Total Chromium (Cr)	2017/08/16	96	80 - 120	101	80 - 120	<0.00010	mg/L	0.76	20
8726779	Total Cobalt (Co)	2017/08/16	91	80 - 120	98	80 - 120	<0.000010	mg/L	4.1	20
8726779	Total Copper (Cu)	2017/08/16	88	80 - 120	100	80 - 120	<0.00010	mg/L	3.7	20
8726779	Total Iron (Fe)	2017/08/16	NC	80 - 120	108	80 - 120	<0.0050	mg/L	0.69	20
8726779	Total Lead (Pb)	2017/08/16	98	80 - 120	101	80 - 120	<0.000020	mg/L	1.2	20
8726779	Total Lithium (Li)	2017/08/16	98	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8726779	Total Manganese (Mn)	2017/08/16	89	80 - 120	102	80 - 120	<0.00010	mg/L	1.8	20
8726779	Total Molybdenum (Mo)	2017/08/16	NC	80 - 120	115	80 - 120	<0.000050	mg/L	2.3	20
8726779	Total Nickel (Ni)	2017/08/16	91	80 - 120	101	80 - 120	<0.00010	mg/L	15	20
8726779	Total Phosphorus (P)	2017/08/16					<0.025	mg/L	13	20
8726779	Total Selenium (Se)	2017/08/16	NC	80 - 120	103	80 - 120	<0.000040	mg/L	3.6	20
8726779	Total Silicon (Si)	2017/08/16					<0.050	mg/L	0.40	20
8726779	Total Silver (Ag)	2017/08/16	99	80 - 120	102	80 - 120	<0.000010	mg/L	NC	20
8726779	Total Strontium (Sr)	2017/08/16	NC	80 - 120	110	80 - 120	<0.000050	mg/L	2.3	20
8726779	Total Thallium (Tl)	2017/08/16	99	80 - 120	101	80 - 120	<0.0000020	mg/L	14	20
8726779	Total Tin (Sn)	2017/08/16	94	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8726779	Total Titanium (Ti)	2017/08/16	98	80 - 120	110	80 - 120	<0.0020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8726779	Total Uranium (U)	2017/08/16	100	80 - 120	96	80 - 120	<0.0000050	mg/L	2.1	20
8726779	Total Vanadium (V)	2017/08/16	98	80 - 120	102	80 - 120	<0.00020	mg/L	0.35	20
8726779	Total Zinc (Zn)	2017/08/16	91	80 - 120	103	80 - 120	<0.0010	mg/L	3.7	20
8726779	Total Zirconium (Zr)	2017/08/16					<0.00010	mg/L	0.054	20
8726862	Total Suspended Solids	2017/08/16			103	80 - 120	<1.0	mg/L		
8726886	Alkalinity (PP as CaCO3)	2017/08/15					<0.50	mg/L	NC	20
8726886	Alkalinity (Total as CaCO3)	2017/08/15	NC	80 - 120	97	80 - 120	<0.50	mg/L	0.36	20
8726886	Bicarbonate (HCO3)	2017/08/15					<0.50	mg/L	0.36	20
8726886	Carbonate (CO3)	2017/08/15					<0.50	mg/L	NC	20
8726886	Hydroxide (OH)	2017/08/15					<0.50	mg/L	NC	20
8726890	Conductivity	2017/08/15			99	80 - 120	<1.0	uS/cm	0.76	20
8726891	pH	2017/08/15			101	97 - 103			0.26	20
8726918	Alkalinity (PP as CaCO3)	2017/08/15					<0.50	mg/L	NC	20
8726918	Alkalinity (Total as CaCO3)	2017/08/15	NC	80 - 120	99	80 - 120	<0.50	mg/L	0.75	20
8726918	Bicarbonate (HCO3)	2017/08/15					<0.50	mg/L	0.75	20
8726918	Carbonate (CO3)	2017/08/15					<0.50	mg/L	NC	20
8726918	Hydroxide (OH)	2017/08/15					<0.50	mg/L	NC	20
8726922	Conductivity	2017/08/15			99	80 - 120	<1.0	uS/cm	0.11	20
8726923	pH	2017/08/15			101	97 - 103			0.26	20
8727225	Dissolved Chloride (Cl)	2017/08/14			98	80 - 120	<0.50	mg/L		
8727226	Dissolved Sulphate (SO4)	2017/08/14			100	80 - 120	<0.50	mg/L		
8727228	Dissolved Chloride (Cl)	2017/08/14	108	80 - 120	99	80 - 120	<0.50	mg/L	NC	20
8727229	Dissolved Sulphate (SO4)	2017/08/14	NC	80 - 120	98	80 - 120	<0.50	mg/L	1.0	20
8727321	Acidity (pH 4.5)	2017/08/14					<1.0	mg/L	NC	20
8727321	Acidity (pH 8.3)	2017/08/14			101	80 - 120	<1.0	mg/L	NC	20
8727327	Acidity (pH 4.5)	2017/08/14					<1.0	mg/L		
8727327	Acidity (pH 8.3)	2017/08/14			102	80 - 120	<1.0	mg/L		
8727348	Dissolved Organic Carbon (C)	2017/08/15	99	80 - 120	108	80 - 120	<0.50	mg/L	NC	20
8727351	Dissolved Organic Carbon (C)	2017/08/15	111	80 - 120	109	80 - 120	<0.50	mg/L	9.6	20
8727354	Dissolved Organic Carbon (C)	2017/08/15	103	80 - 120	112	80 - 120	<0.50	mg/L		
8727394	Total Phosphorus (P)	2017/08/15	105	80 - 120	100	80 - 120	<0.0020	mg/L	0.41	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8727435	Dissolved Phosphorus (P)	2017/08/15	103	80 - 120	100	80 - 120	<0.0020	mg/L	1.7	20
8727450	Dissolved Phosphorus (P)	2017/08/15	82	80 - 120	97	80 - 120	<0.0020	mg/L	5.4	20
8727791	Dissolved Mercury (Hg)	2017/08/16	100	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8727929	Total Phosphorus (P)	2017/08/15			105	80 - 120	<0.0020	mg/L		
8727968	Total Phosphorus (P)	2017/08/15			101	80 - 120	<0.0020	mg/L		
8728062	Fluoride (F)	2017/08/15	98	80 - 120	100	80 - 120	0.012, RDL=0.010	mg/L	NC	20
8728071	Fluoride (F)	2017/08/15	96	80 - 120	100	80 - 120	<0.010	mg/L	NC	20
8728461	Total Ammonia (N)	2017/08/16	100	80 - 120	92	80 - 120	<0.0050	mg/L	19	20
8731395	Total Zinc (Zn)	2017/08/20	NC	80 - 120	102	80 - 120	<0.00010	mg/L	4.7	20
8731699	Total Ammonia (N)	2017/08/17			106	80 - 120	<0.0050	mg/L		
8733824	Dissolved Chromium (Cr)	2017/08/21			102	80 - 120	<0.00010	mg/L		
8733824	Dissolved Lead (Pb)	2017/08/21			101	80 - 120	<0.0000050	mg/L		

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B768165
Report Date: 2017/08/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Name Redacted QP, Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTOD

08442419

BBY FCD-00077/05

COC #:

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Name Redacted	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

Rush Confirmation #:

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		10-Aug-17	16:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3	KZ-6		10-Aug-17	14:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
4	KZ-9		10-Aug-17	12:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	KZ-13		09-Aug-17	9:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6	KZ-15		10-Aug-17	8:32	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
7	KZ-16		10-Aug-17	9:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
8	KZ-17		10-Aug-17	10:10	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
9	KZ-18		10-Aug-17	12:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
10	KZ-19		10-Aug-17	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	

LABORATORY USE ONLY

CUSTODY SEAL (Y / N) Present	Intact	COOLER TEMPERATURES
✓	✓	7, 5, 7
		1, 6, 7
		4, 5, 5

COOLING MEDIA PRESENT (Y / N)

COMMENTS

RECEIVED IN WHITEHORSE
BY: Signature Redacted 1480
2017 -08- 11
8 6 5
TEMP: 5 / 6 / 7
8 5 7

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	11/08/2017	14:30	Signature Redacted	2017/08/2	15:20

B768165_COC

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY

COC #: 08442420

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:	Signature Redacted	[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:
						Rush Confirmation #:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-21		09-Aug-17	14:45	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
2	KZ-22		09-Aug-17	13:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3	KZ-26		09-Aug-17	11:35	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
4	KZ-28		09-Aug-17	12:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5	KZ-37		10-Aug-17	11:35	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
6	Trip Blank		n/a	n/a	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
7																						
8																						
9																						
10																						

LABORATORY USE ONLY

CUSTODY SEAL (Y) / N		COOLER TEMPERATURES
Present	Intact	
/	/	7, 5, 7
		5, 6, 7
		4, 5, 5

COOLING MEDIA PRESENT (Y) / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Signature Redacted @1420
2017 -08- 11
3 6 5
TEMP: 5 / 6 / 7
6 5 7
5 7 7

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Catherine Henry Signature Redacted	11/08/2017	14:30	Signature Redacted	2017/08/12	13:20	B768165

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08444210, 08444211

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/09/27
Report #: R2451128
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B780106
Received: 2017/09/15, 15:00

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	15	2017/09/20	2017/09/19	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Low Level	15	2017/09/19	2017/09/20	BBY6SOP-00026	SM 22 2320 B m
Chloride - Low Level	15	N/A	2017/09/18	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	13	N/A	2017/09/19	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide SAD (strong acid dissociable)	2	N/A	2017/09/20	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	13	N/A	2017/09/19	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	2	N/A	2017/09/20	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	15	N/A	2017/09/20	BBY6SOP-00003	SM 22 5310 C m
Conductance - Low Level	15	2017/09/19	2017/09/20	BBY6SOP-00026	SM 22 2510 B m
Fluoride - Low Level	15	N/A	2017/09/19	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3)	14	N/A	2017/09/19	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3)	1	N/A	2017/09/20	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	15	N/A	2017/09/20	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	15	N/A	2017/09/19	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	6	2017/09/18	2017/09/18	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	9	2017/09/19	2017/09/19	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance (as Cations/Anions Ratio)	15	N/A	2017/09/20	BBY WI-00033	Auto Calc
Ion Balance	15	N/A	2017/09/20	BBY WI-00033	SM 22 1030E
Sum of cations, anions	14	N/A	2017/09/19	Calc	
Sum of cations, anions	1	N/A	2017/09/20	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	15	N/A	2017/09/20	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	15	N/A	2017/09/19	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Digested LL (total)	1	2017/09/20	2017/09/20	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	14	N/A	2017/09/19	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2017/09/20	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	14	N/A	2017/09/19	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N Low Level (Preserved)	15	N/A	2017/09/20	BBY6SOP-00009	EPA 350.1 m
Nitrate+Nitrite (N) (low level)	15	N/A	2017/09/16	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	15	N/A	2017/09/16	BBY6SOP-00010	SM 22 4500-NO3- I m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08444210, 08444211

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/09/27
Report #: R2451128
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B780106
Received: 2017/09/15, 15:00

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Nitrogen - Nitrate (as N) Low Level Calc	15	N/A	2017/09/19	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	13	N/A	2017/09/19	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	1	N/A	2017/09/20	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (2)	15	2017/09/19	2017/09/20	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate - Low Level	15	N/A	2017/09/18	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	15	2017/09/16	2017/09/19	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	7	2017/09/16	2017/09/19	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	8	2017/09/19	2017/09/19	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	5	2017/09/18	2017/09/18	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	10	2017/09/19	2017/09/19	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08444210, 08444211

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/09/27
Report #: R2451128
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B780106
Received: 2017/09/15, 15:00

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted
a
==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RZ2891		RZ2892		RZ2893		
Sampling Date		2017/09/14 15:10		2017/09/14 14:00		2017/09/14 09:15		
COC Number		08444210		08444210		08444210		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.5	8760834	3.2	8760834	3.7	N/A	8760834
Cation Sum	meq/L	2.2	8760834	3.1	8760834	3.5	N/A	8760834
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.90	8760662	0.96	8760662	0.95	0.010	8760662
Ion Balance (% Difference)	%	5.2	8760663	2.2	8760663	2.5	N/A	8760663
Nitrate (N)	mg/L	0.104	8760534	0.0567	8760534	0.105	0.0020	8760534
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8763469	<0.00050	8763469	<0.00050	0.00050	8763469
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8763472	<0.00050	8763472	<0.00050	0.00050	8763472
Fluoride (F)	mg/L	0.047	8763317	0.068	8763317	0.074	0.010	8763317
Dissolved Organic Carbon (C)	mg/L	0.77	8764523	1.77	8764525	1.54	0.50	8764524
Acidity (pH 4.5)	mg/L	<1.0	8765442	<1.0	8765442	<1.0	1.0	8765442
Alkalinity (Total as CaCO3)	mg/L	62.4	8763812	139	8764049	147	0.50	8764049
Acidity (pH 8.3)	mg/L	<1.0	8765442	<1.0	8765442	<1.0	1.0	8765442
Alkalinity (PP as CaCO3)	mg/L	<0.50	8763812	<0.50	8764049	<0.50	0.50	8764049
Bicarbonate (HCO3)	mg/L	76.1	8763812	170	8764049	179	0.50	8764049
Carbonate (CO3)	mg/L	<0.50	8763812	<0.50	8764049	<0.50	0.50	8764049
Hydroxide (OH)	mg/L	<0.50	8763812	<0.50	8764049	<0.50	0.50	8764049
Anions								
Dissolved Sulphate (SO4)	mg/L	57.4	8763152	21.3	8763152	33.5	0.50	8763152
Dissolved Chloride (Cl)	mg/L	<0.50	8763149	0.60	8763149	0.58	0.50	8763149
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020	8764035	<0.0020	8764035	0.0035	0.0020	8764035
Total Ammonia (N)	mg/L	<0.0050	8765498	<0.0050	8765498	0.0090	0.0050	8765496
Nitrate plus Nitrite (N)	mg/L	0.104	8760892	0.0567	8760892	0.105	0.0020	8760892
Nitrite (N)	mg/L	<0.0020	8760893	<0.0020	8760893	<0.0020	0.0020	8760893
Total Phosphorus (P)	mg/L	<0.0020	8763944	<0.0020	8763944	0.0038	0.0020	8763944
Physical Properties								
Conductivity	uS/cm	245	8763811	294	8764052	334	1.0	8764052
pH	pH	7.95	8763798	8.27	8764050	8.29		8764050

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RZ2891		RZ2892		RZ2893		
Sampling Date		2017/09/14 15:10		2017/09/14 14:00		2017/09/14 09:15		
COC Number		08444210		08444210		08444210		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8762433	<1.0	8762433	1.7	1.0	8762433
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RZ2894		RZ2895		RZ2896		
Sampling Date		2017/09/14 11:45		2017/09/13 14:50		2017/09/13 15:40		
COC Number		08444210		08444210		08444210		
	UNITS	KZ-13	QC Batch	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	1.5	8760834	4.1	8760834	4.0	N/A	8760834
Cation Sum	meq/L	1.4	8760834	3.8	8760834	3.8	N/A	8760834
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.92	8760662	0.94	8760662	0.97	0.010	8760662
Ion Balance (% Difference)	%	4.0	8760663	3.1	8760663	1.5	N/A	8760663
Nitrate (N)	mg/L	0.0492	8760534	0.0947	8760534	0.133	0.0020	8760534
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8763469	0.00054	8763469	0.00066	0.00050	8763469
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8763472	<0.00050	8763472	<0.00050	0.00050	8763472
Fluoride (F)	mg/L	0.046	8763317	0.086	8763317	0.070	0.010	8763317
Dissolved Organic Carbon (C)	mg/L	3.97	8764524	1.46	8764524	1.34	0.50	8764524
Acidity (pH 4.5)	mg/L	<1.0	8765442	<1.0	8765442	<1.0	1.0	8765442
Alkalinity (Total as CaCO3)	mg/L	61.4	8764049	169	8764049	164	0.50	8763812
Acidity (pH 8.3)	mg/L	<1.0	8765442	<1.0	8765442	<1.0	1.0	8765442
Alkalinity (PP as CaCO3)	mg/L	<0.50	8764049	2.62	8764049	2.63	0.50	8763812
Bicarbonate (HCO3)	mg/L	74.8	8764049	200	8764049	194	0.50	8763812
Carbonate (CO3)	mg/L	<0.50	8764049	3.14	8764049	3.16	0.50	8763812
Hydroxide (OH)	mg/L	<0.50	8764049	<0.50	8764049	<0.50	0.50	8763812
Anions								
Dissolved Sulphate (SO4)	mg/L	12.3	8763152	31.7	8763152	30.7	0.50	8763152
Dissolved Chloride (Cl)	mg/L	0.55	8763149	0.51	8763149	0.56	0.50	8763149
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0032	8764035	0.0029	8764035	0.0022	0.0020	8764035
Total Ammonia (N)	mg/L	0.012	8765498	<0.0050	8765492	<0.0050	0.0050	8765492
Nitrate plus Nitrite (N)	mg/L	0.0492	8760892	0.0947	8760892	0.133	0.0020	8760892
Nitrite (N)	mg/L	<0.0020	8760893	<0.0020	8760893	<0.0020	0.0020	8760893
Total Phosphorus (P)	mg/L	0.0038	8763944	0.0032	8763944	<0.0020	0.0020	8763944
Physical Properties								
Conductivity	uS/cm	143	8764052	363	8764052	353	1.0	8763811
pH	pH	7.95	8764050	8.36	8764050	8.35		8763798

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RZ2894		RZ2895		RZ2896		
Sampling Date		2017/09/14 11:45		2017/09/13 14:50		2017/09/13 15:40		
COC Number		08444210		08444210		08444210		
	UNITS	KZ-13	QC Batch	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	1.0	8762433	<1.0	8761694	<1.0	1.0	8761694
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RZ2897		RZ2898		RZ2899		
Sampling Date		2017/09/13 16:25		2017/09/14 10:05		2017/09/13 10:30		
COC Number		08444210		08444210		08444210		
	UNITS	KZ-17	QC Batch	KZ-18	QC Batch	KZ-19	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	3.6	8760834	4.0	8760834	5.0	N/A	8760834
Cation Sum	meq/L	3.3	8760834	3.7	8760834	4.7	N/A	8760834
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.92	8760662	0.92	8760662	0.94	0.010	8760662
Ion Balance (% Difference)	%	4.4	8760663	4.3	8760663	3.3	N/A	8760663
Nitrate (N)	mg/L	0.125	8760534	0.117	8760534	0.0288	0.0020	8760534
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8763469	<0.00050	8763469	<0.00050	0.00050	8763469
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8763472	0.00052	8763472	<0.00050	0.00050	8763472
Fluoride (F)	mg/L	0.094	8763317	0.065	8763317	0.120	0.010	8763317
Dissolved Organic Carbon (C)	mg/L	1.36	8764523	1.52	8764523	3.30	0.50	8764523
Acidity (pH 4.5)	mg/L	<1.0	8765442	<1.0	8765442	<1.0	1.0	8765442
Alkalinity (Total as CaCO3)	mg/L	149	8764049	174	8763812	206	0.50	8763812
Acidity (pH 8.3)	mg/L	<1.0	8765442	<1.0	8765442	<1.0	1.0	8765442
Alkalinity (PP as CaCO3)	mg/L	1.63	8764049	3.37	8763812	5.06	0.50	8763812
Bicarbonate (HCO3)	mg/L	177	8764049	205	8763812	239	0.50	8763812
Carbonate (CO3)	mg/L	1.96	8764049	4.04	8763812	6.07	0.50	8763812
Hydroxide (OH)	mg/L	<0.50	8764049	<0.50	8763812	<0.50	0.50	8763812
Anions								
Dissolved Sulphate (SO4)	mg/L	27.6	8763152	25.5	8763152	39.8	0.50	8763152
Dissolved Chloride (Cl)	mg/L	0.52	8763149	0.70	8763149	0.69	0.50	8763149
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020	8764035	0.0222	8764035	0.0034	0.0020	8764035
Total Ammonia (N)	mg/L	<0.0050	8765498	<0.0050	8765492	<0.0050	0.0050	8765492
Nitrate plus Nitrite (N)	mg/L	0.125	8760892	0.117	8760892	0.0288	0.0020	8760892
Nitrite (N)	mg/L	<0.0020	8760893	<0.0020	8760893	<0.0020	0.0020	8760893
Total Phosphorus (P)	mg/L	0.0025	8763944	0.0213	8763944	0.0045	0.0020	8763944
Physical Properties								
Conductivity	uS/cm	322	8764052	356	8763811	433	1.0	8763811
pH	pH	8.31	8764050	8.37	8763798	8.43		8763798

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RZ2897		RZ2898		RZ2899		
Sampling Date		2017/09/13 16:25		2017/09/14 10:05		2017/09/13 10:30		
COC Number		08444210		08444210		08444210		
	UNITS	KZ-17	QC Batch	KZ-18	QC Batch	KZ-19	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8761694	<1.0	8762433	2.2	1.0	8761694
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RZ2900		RZ2902		RZ2903		
Sampling Date		2017/09/13 12:55		2017/09/13 11:30		2017/09/13 09:40		
COC Number		08444211		08444211		08444211		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	5.3	8760834	4.9	8760834	5.0	N/A	8760834
Cation Sum	meq/L	5.1	8760834	4.7	8760834	4.8	N/A	8760834
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.96	8760662	0.95	8760662	0.95	0.010	8760662
Ion Balance (% Difference)	%	2.3	8760663	2.5	8760663	2.4	N/A	8760663
Nitrate (N)	mg/L	<0.0020	8760534	0.0316	8760534	0.0310	0.0020	8760534
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00056	8763469	<0.00050	8763469	0.00051	0.00050	8763469
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8763472	0.00055	8763472	0.00053	0.00050	8763472
Fluoride (F)	mg/L	0.160	8763317	0.130	8763318	0.120	0.010	8763318
Dissolved Organic Carbon (C)	mg/L	4.60	8764523	3.08	8764523	3.29	0.50	8764523
Acidity (pH 4.5)	mg/L	<1.0	8765442	<1.0	8765442	<1.0	1.0	8765442
Alkalinity (Total as CaCO3)	mg/L	217	8763812	201	8763812	206	0.50	8763812
Acidity (pH 8.3)	mg/L	<1.0	8765442	<1.0	8765442	<1.0	1.0	8765442
Alkalinity (PP as CaCO3)	mg/L	4.75	8763812	4.27	8763812	4.69	0.50	8763812
Bicarbonate (HCO3)	mg/L	254	8763812	235	8763812	240	0.50	8763812
Carbonate (CO3)	mg/L	5.70	8763812	5.12	8763812	5.63	0.50	8763812
Hydroxide (OH)	mg/L	<0.50	8763812	<0.50	8763812	<0.50	0.50	8763812
Anions								
Dissolved Sulphate (SO4)	mg/L	45.0	8763152	41.2	8763152	41.0	0.50	8763152
Dissolved Chloride (Cl)	mg/L	0.80	8763149	0.74	8763149	0.75	0.50	8763149
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0046	8764035	0.0033	8764035	0.0028	0.0020	8764035
Total Ammonia (N)	mg/L	<0.0050	8765492	0.0050	8765492	<0.0050	0.0050	8765498
Nitrate plus Nitrite (N)	mg/L	<0.0020	8760892	0.0316	8760892	0.0310	0.0020	8760892
Nitrite (N)	mg/L	<0.0020	8760893	<0.0020	8760893	<0.0020	0.0020	8760893
Total Phosphorus (P)	mg/L	0.0111	8764034	0.0072	8764034	0.0085	0.0020	8764034
Physical Properties								
Conductivity	uS/cm	462	8763811	431	8763811	435	1.0	8763811
pH	pH	8.43	8763798	8.42	8763798	8.42		8763798

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RZ2900		RZ2902		RZ2903		
Sampling Date		2017/09/13 12:55		2017/09/13 11:30		2017/09/13 09:40		
COC Number		08444211		08444211		08444211		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	1.4	8761694	<1.0	8762433	2.3	1.0	8762433
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RZ2904			RZ2905			RZ2906		
Sampling Date		2017/09/14 13:00			2017/09/14 08:30			2017/09/15 15:00		
COC Number		08444211			08444211			08444211		
	UNITS	KZ-28	RDL	QC Batch	KZ-37	RDL	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters										
Anion Sum	meq/L	0.016	N/A	8760834	3.8	N/A	8760834	0.013	N/A	8760834
Cation Sum	meq/L	0.0034	N/A	8760834	3.6	N/A	8760834	0.0051	N/A	8760834
Filter and HNO3 Preservation	N/A	FIELD		ONSITE	FIELD		ONSITE			ONSITE
Ion Balance	N/A	0.21 (1)	0.010	8760662	0.93	0.010	8760662	0.41 (1)	0.010	8760662
Ion Balance (% Difference)	%	65 (1)	N/A	8760663	3.7	N/A	8760663	42 (1)	N/A	8760663
Nitrate (N)	mg/L	0.0026	0.0020	8760534	0.111	0.0020	8760534	<0.0020	0.0020	8760534
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8763469	<0.00050	0.00050	8764880	<0.00050	0.00050	8764880
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8763472	<0.00050	0.00050	8764885	<0.00050	0.00050	8764885
Fluoride (F)	mg/L	0.018	0.010	8763318	0.072	0.010	8763318	0.017	0.010	8763318
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8764523	1.58	0.50	8764523	<0.50	0.50	8764525
Acidity (pH 4.5)	mg/L	<1.0	1.0	8765442	<1.0	1.0	8765442	<1.0	1.0	8765442
Alkalinity (Total as CaCO3)	mg/L	<0.50	0.50	8764049	156	0.50	8763812	0.58	0.50	8763812
Acidity (pH 8.3)	mg/L	<1.0	1.0	8765442	<1.0	1.0	8765442	<1.0	1.0	8765442
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8764049	1.91	0.50	8763812	<0.50	0.50	8763812
Bicarbonate (HCO3)	mg/L	<0.50	0.50	8764049	185	0.50	8763812	0.71	0.50	8763812
Carbonate (CO3)	mg/L	<0.50	0.50	8764049	2.29	0.50	8763812	<0.50	0.50	8763812
Hydroxide (OH)	mg/L	<0.50	0.50	8764049	<0.50	0.50	8763812	<0.50	0.50	8763812
Anions										
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8763152	32.9	0.50	8763152	<0.50	0.50	8763152
Dissolved Chloride (Cl)	mg/L	0.53	0.50	8763149	0.68	0.50	8763149	<0.50	0.50	8763149
Nutrients										
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8764035	0.0039	0.0020	8764035	<0.0020	0.0020	8764035
Total Ammonia (N)	mg/L	<0.0050	0.0050	8765496	<0.0050	0.0050	8765498	<0.0050	0.0050	8765492
Nitrate plus Nitrite (N)	mg/L	0.0026	0.0020	8760892	0.111	0.0020	8760892	<0.0020	0.0020	8760892
Nitrite (N)	mg/L	<0.0020	0.0020	8760893	<0.0020	0.0020	8760893	<0.0020	0.0020	8760893
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8763944	0.0066	0.0020	8764034	<0.0020	0.0020	8763944
Physical Properties										
Conductivity	uS/cm	1.1	1.0	8764052	341	1.0	8763811	1.2	1.0	8763811

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		RZ2904			RZ2905			RZ2906		
Sampling Date		2017/09/14 13:00			2017/09/14 08:30			2017/09/15 15:00		
COC Number		08444211			08444211			08444211		
	UNITS	KZ-28	RDL	QC Batch	KZ-37	RDL	QC Batch	TRIP BLANK	RDL	QC Batch
pH	pH	5.47		8764050	8.33		8763798	5.29		8763798
Physical Properties										
Total Suspended Solids	mg/L	<1.0	1.0	8762433	1.9 (1)	1.1	8762433	<1.0	1.0	8762433

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RZ2891		RZ2892	RZ2893	RZ2894		
Sampling Date		2017/09/14 15:10		2017/09/14 14:00	2017/09/14 09:15	2017/09/14 11:45		
COC Number		08444210		08444210	08444210	08444210		
	UNITS	KZ-2	QC Batch	KZ-6	KZ-9	KZ-13	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	107	8760454	153	169	65.4	0.50	8760454
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8763073	<0.0000020	<0.0000020	<0.0000020	0.0000020	8763178
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00375	8761858	0.00279	0.00226	0.00915	0.00050	8761858
Dissolved Antimony (Sb)	mg/L	<0.000020	8761858	<0.000020	0.000041	0.000025	0.000020	8761858
Dissolved Arsenic (As)	mg/L	0.000080	8761858	0.000074	0.000221	0.000201	0.000020	8761858
Dissolved Barium (Ba)	mg/L	0.0673	8761858	0.0446	0.0849	0.103	0.000020	8761858
Dissolved Beryllium (Be)	mg/L	<0.000010	8761858	<0.000010	<0.000010	<0.000010	0.000010	8761858
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8761858	<0.0000050	<0.0000050	<0.0000050	0.0000050	8761858
Dissolved Boron (B)	mg/L	<0.010	8761858	<0.010	<0.010	<0.010	0.010	8761858
Dissolved Cadmium (Cd)	mg/L	0.000237	8761858	0.0000160	0.0000760	0.0000220	0.0000050	8761858
Dissolved Chromium (Cr)	mg/L	<0.00010	8761858	<0.00010	<0.00010	<0.00010	0.00010	8761858
Dissolved Cobalt (Co)	mg/L	<0.0000050	8761858	0.0000060	0.0000700	0.0000230	0.0000050	8761858
Dissolved Copper (Cu)	mg/L	0.000547	8761858	0.000147	0.000383	0.000492	0.000050	8761858
Dissolved Iron (Fe)	mg/L	<0.0010	8761858	0.0184	0.248	0.0524	0.0010	8761858
Dissolved Lead (Pb)	mg/L	0.0000160	8761858	<0.0000050	0.0000070	0.0000140	0.0000050	8761858
Dissolved Lithium (Li)	mg/L	0.00123	8761858	0.00070	0.00259	0.00113	0.00050	8761858
Dissolved Manganese (Mn)	mg/L	<0.000050	8761858	0.000912	0.0596	0.0222	0.000050	8761858
Dissolved Molybdenum (Mo)	mg/L	0.000620	8761858	0.000484	0.000626	0.000613	0.000050	8761858
Dissolved Nickel (Ni)	mg/L	0.000278	8761858	0.000158	0.000404	0.000429	0.000020	8761858
Dissolved Phosphorus (P)	mg/L	<0.0020	8761858	<0.0020	0.0023	0.0023	0.0020	8761858
Dissolved Selenium (Se)	mg/L	0.00135	8761858	0.000733	0.00100	0.000163	0.000040	8761858
Dissolved Silicon (Si)	mg/L	2.42	8761858	2.52	3.06	2.29	0.050	8761858
Dissolved Silver (Ag)	mg/L	<0.0000050	8761858	<0.0000050	<0.0000050	<0.0000050	0.0000050	8761858
Dissolved Strontium (Sr)	mg/L	0.118	8761858	0.162	0.196	0.0674	0.000050	8761858
Dissolved Thallium (Tl)	mg/L	0.0000040	8761858	<0.0000020	<0.0000020	<0.0000020	0.0000020	8761858
Dissolved Tin (Sn)	mg/L	<0.00020	8761858	<0.00020	<0.00020	<0.00020	0.00020	8761858
Dissolved Titanium (Ti)	mg/L	<0.00050	8761858	<0.00050	<0.00050	<0.00050	0.00050	8761858
Dissolved Uranium (U)	mg/L	0.00264	8761858	0.000892	0.00136	0.000679	0.0000020	8761858
Dissolved Vanadium (V)	mg/L	<0.00020	8761858	<0.00020	<0.00020	<0.00020	0.00020	8761858

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RZ2891		RZ2892	RZ2893	RZ2894		
Sampling Date		2017/09/14 15:10		2017/09/14 14:00	2017/09/14 09:15	2017/09/14 11:45		
COC Number		08444210		08444210	08444210	08444210		
	UNITS	KZ-2	QC Batch	KZ-6	KZ-9	KZ-13	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0219	8761858	0.00041	0.0134	0.00285	0.00010	8761858
Dissolved Zirconium (Zr)	mg/L	<0.00010	8761858	<0.00010	<0.00010	<0.00010	0.00010	8761858
Dissolved Calcium (Ca)	mg/L	36.3	8760456	50.6	56.1	22.3	0.050	8760456
Dissolved Magnesium (Mg)	mg/L	3.95	8760456	6.36	6.96	2.38	0.050	8760456
Dissolved Potassium (K)	mg/L	1.69	8760456	0.898	1.51	1.43	0.050	8760456
Dissolved Sodium (Na)	mg/L	0.702	8760456	0.780	1.16	0.912	0.050	8760456
Dissolved Sulphur (S)	mg/L	17.6	8760456	6.9	11.7	3.9	3.0	8760456

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RZ2895		RZ2896	RZ2897	RZ2898		
Sampling Date		2017/09/13 14:50		2017/09/13 15:40	2017/09/13 16:25	2017/09/14 10:05		
COC Number		08444210		08444210	08444210	08444210		
	UNITS	KZ-15	QC Batch	KZ-16	KZ-17	KZ-18	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	188	8760454	188	160	184	0.50	8760454
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8763178	<0.0000020	<0.0000020	<0.0000020	0.0000020	8763073
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00183	8761858	0.00195	0.00113	0.00660	0.00050	8761858
Dissolved Antimony (Sb)	mg/L	0.000029	8761858	<0.000020	0.000027	0.000027	0.000020	8761858
Dissolved Arsenic (As)	mg/L	0.000542	8761858	0.000318	0.000234	0.000373	0.000020	8761858
Dissolved Barium (Ba)	mg/L	0.0725	8761858	0.0748	0.0666	0.0455	0.000020	8761858
Dissolved Beryllium (Be)	mg/L	<0.000010	8761858	<0.000010	<0.000010	<0.000010	0.000010	8761858
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8761858	<0.0000050	<0.0000050	<0.0000050	0.0000050	8761858
Dissolved Boron (B)	mg/L	<0.010	8761858	<0.010	<0.010	<0.010	0.010	8761858
Dissolved Cadmium (Cd)	mg/L	0.0000330	8761858	0.0000180	0.0000190	0.0000260	0.0000050	8761858
Dissolved Chromium (Cr)	mg/L	<0.00010	8761858	<0.00010	<0.00010	<0.00010	0.00010	8761858
Dissolved Cobalt (Co)	mg/L	0.0000260	8761858	0.0000160	0.0000060	0.0000060	0.0000050	8761858
Dissolved Copper (Cu)	mg/L	0.000294	8761858	0.000293	0.000383	0.000128	0.000050	8761858
Dissolved Iron (Fe)	mg/L	0.0347	8761858	0.0061	<0.0010	0.0039	0.0010	8761858
Dissolved Lead (Pb)	mg/L	<0.0000050	8761858	<0.0000050	<0.0000050	<0.0000050	0.0000050	8761858
Dissolved Lithium (Li)	mg/L	0.00253	8761858	0.00222	0.00270	0.00136	0.00050	8761858
Dissolved Manganese (Mn)	mg/L	0.0282	8761858	0.00572	0.000421	0.00284	0.000050	8761858
Dissolved Molybdenum (Mo)	mg/L	0.00109	8761858	0.000545	0.000830	0.00118	0.000050	8761858
Dissolved Nickel (Ni)	mg/L	0.000466	8761858	0.000344	0.000363	0.000303	0.000020	8761858
Dissolved Phosphorus (P)	mg/L	0.0022	8761858	<0.0020	<0.0020	0.0171	0.0020	8761858
Dissolved Selenium (Se)	mg/L	0.00120	8761858	0.00108	0.000978	0.00112	0.000040	8761858
Dissolved Silicon (Si)	mg/L	3.16	8761858	2.79	3.30	3.01	0.050	8761858
Dissolved Silver (Ag)	mg/L	<0.0000050	8761858	<0.0000050	<0.0000050	<0.0000050	0.0000050	8761858
Dissolved Strontium (Sr)	mg/L	0.196	8761858	0.196	0.169	0.152	0.000050	8761858
Dissolved Thallium (Tl)	mg/L	<0.0000020	8761858	<0.0000020	<0.0000020	<0.0000020	0.0000020	8761858
Dissolved Tin (Sn)	mg/L	<0.00020	8761858	<0.00020	<0.00020	<0.00020	0.00020	8761858
Dissolved Titanium (Ti)	mg/L	<0.00050	8761858	<0.00050	<0.00050	<0.00050	0.00050	8761858
Dissolved Uranium (U)	mg/L	0.00274	8761858	0.00217	0.00193	0.00202	0.0000020	8761858
Dissolved Vanadium (V)	mg/L	<0.00020	8761858	<0.00020	<0.00020	<0.00020	0.00020	8761858

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RZ2895		RZ2896	RZ2897	RZ2898		
Sampling Date		2017/09/13 14:50		2017/09/13 15:40	2017/09/13 16:25	2017/09/14 10:05		
COC Number		08444210		08444210	08444210	08444210		
	UNITS	KZ-15	QC Batch	KZ-16	KZ-17	KZ-18	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00270	8761858	0.00045	0.00088	0.00071	0.00010	8761858
Dissolved Zirconium (Zr)	mg/L	<0.00010	8761858	<0.00010	<0.00010	<0.00010	0.00010	8761858
Dissolved Calcium (Ca)	mg/L	56.2	8760456	57.7	48.5	50.1	0.050	8760456
Dissolved Magnesium (Mg)	mg/L	11.4	8760456	10.6	9.42	14.2	0.050	8760456
Dissolved Potassium (K)	mg/L	1.15	8760456	1.14	1.19	0.476	0.050	8760456
Dissolved Sodium (Na)	mg/L	1.11	8760456	1.15	1.07	0.724	0.050	8760456
Dissolved Sulphur (S)	mg/L	10.4	8760456	9.9	9.4	7.0	3.0	8760456

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RZ2899		RZ2900		RZ2902		
Sampling Date		2017/09/13 10:30		2017/09/13 12:55		2017/09/13 11:30		
COC Number		08444210		08444211		08444211		
	UNITS	KZ-19	QC Batch	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	228	8760454	249	8760454	229	0.50	8760454
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8763178	<0.0000020	8763073	<0.0000020	0.0000020	8763178
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00274	8761858	0.00290	8761858	0.00196	0.00050	8761858
Dissolved Antimony (Sb)	mg/L	0.000073	8761858	0.000090	8761858	0.000059	0.000020	8761858
Dissolved Arsenic (As)	mg/L	0.000919	8761858	0.00164	8761858	0.00128	0.000020	8761858
Dissolved Barium (Ba)	mg/L	0.0718	8761858	0.0647	8761858	0.0699	0.000020	8761858
Dissolved Beryllium (Be)	mg/L	<0.000010	8761858	<0.000010	8761858	<0.000010	0.000010	8761858
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8761858	<0.0000050	8761858	<0.0000050	0.0000050	8761858
Dissolved Boron (B)	mg/L	<0.010	8761858	<0.010	8761858	<0.010	0.010	8761858
Dissolved Cadmium (Cd)	mg/L	0.0000130	8761858	0.0000080	8761858	0.0000150	0.0000050	8761858
Dissolved Chromium (Cr)	mg/L	<0.00010	8761858	<0.00010	8761858	<0.00010	0.00010	8761858
Dissolved Cobalt (Co)	mg/L	0.0000380	8761858	0.0000900	8761858	0.0000590	0.0000050	8761858
Dissolved Copper (Cu)	mg/L	0.000467	8761858	0.000316	8761858	0.000327	0.000050	8761858
Dissolved Iron (Fe)	mg/L	0.0649	8761858	0.115	8761858	0.0973	0.0010	8761858
Dissolved Lead (Pb)	mg/L	0.0000110	8761858	<0.0000050	8761858	<0.0000050	0.0000050	8761858
Dissolved Lithium (Li)	mg/L	0.00494	8761858	0.00533	8761858	0.00422	0.00050	8761858
Dissolved Manganese (Mn)	mg/L	0.0209	8761858	0.0744	8761858	0.0403	0.000050	8761858
Dissolved Molybdenum (Mo)	mg/L	0.00121	8761858	0.00175	8761858	0.00134	0.000050	8761858
Dissolved Nickel (Ni)	mg/L	0.00115	8761858	0.00210	8761858	0.00124	0.000020	8761858
Dissolved Phosphorus (P)	mg/L	0.0029	8761858	0.0050	8761858	0.0030	0.0020	8761858
Dissolved Selenium (Se)	mg/L	0.000815	8761858	0.000699	8761858	0.000910	0.000040	8761858
Dissolved Silicon (Si)	mg/L	4.22	8761858	4.36	8761858	3.63	0.050	8761858
Dissolved Silver (Ag)	mg/L	<0.0000050	8761858	<0.0000050	8761858	<0.0000050	0.0000050	8761858
Dissolved Strontium (Sr)	mg/L	0.214	8761858	0.208	8761858	0.206	0.000050	8761858
Dissolved Thallium (Tl)	mg/L	<0.0000020	8761858	<0.0000020	8761858	<0.0000020	0.0000020	8761858
Dissolved Tin (Sn)	mg/L	0.00028	8761858	<0.00020	8761858	<0.00020	0.00020	8761858
Dissolved Titanium (Ti)	mg/L	<0.00050	8761858	<0.00050	8761858	<0.00050	0.00050	8761858
Dissolved Uranium (U)	mg/L	0.00281	8761858	0.00329	8761858	0.00307	0.0000020	8761858
Dissolved Vanadium (V)	mg/L	<0.00020	8761858	<0.00020	8761858	<0.00020	0.00020	8761858

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RZ2899		RZ2900		RZ2902		
Sampling Date		2017/09/13 10:30		2017/09/13 12:55		2017/09/13 11:30		
COC Number		08444210		08444211		08444211		
	UNITS	KZ-19	QC Batch	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00072	8761858	0.00067	8761858	0.00109	0.00010	8761858
Dissolved Zirconium (Zr)	mg/L	<0.00010	8761858	0.00013	8761858	<0.00010	0.00010	8761858
Dissolved Calcium (Ca)	mg/L	60.4	8760456	61.3	8760456	60.9	0.050	8760456
Dissolved Magnesium (Mg)	mg/L	18.9	8760456	23.2	8760456	18.6	0.050	8760456
Dissolved Potassium (K)	mg/L	1.33	8760456	1.58	8760456	1.41	0.050	8760456
Dissolved Sodium (Na)	mg/L	1.45	8760456	1.48	8760456	1.43	0.050	8760456
Dissolved Sulphur (S)	mg/L	12.5	8760456	14.2	8760456	12.9	3.0	8760456

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RZ2903		RZ2904	RZ2905	RZ2906		
Sampling Date		2017/09/13 09:40		2017/09/14 13:00	2017/09/14 08:30	2017/09/15 15:00		
COC Number		08444211		08444211	08444211	08444211		
	UNITS	KZ-26	QC Batch	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	233	8760454	<0.50	174	<0.50	0.50	8760454
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8763073	<0.0000020	<0.0000020	<0.0000020	0.0000020	8763178
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00224	8761858	<0.00050	0.00329	<0.00050	0.00050	8761858
Dissolved Antimony (Sb)	mg/L	0.000076	8761858	<0.000020	0.000040	<0.000020	0.000020	8761858
Dissolved Arsenic (As)	mg/L	0.000961	8761858	<0.000020	0.000262	<0.000020	0.000020	8761858
Dissolved Barium (Ba)	mg/L	0.0728	8761858	<0.000020	0.0777	<0.000020	0.000020	8761858
Dissolved Beryllium (Be)	mg/L	<0.000010	8761858	<0.000010	<0.000010	<0.000010	0.000010	8761858
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8761858	<0.0000050	<0.0000050	<0.0000050	0.0000050	8761858
Dissolved Boron (B)	mg/L	<0.010	8761858	<0.010	<0.010	<0.010	0.010	8761858
Dissolved Cadmium (Cd)	mg/L	0.0000120	8761858	<0.0000050	0.0000700	<0.0000050	0.0000050	8761858
Dissolved Chromium (Cr)	mg/L	<0.00010	8761858	<0.00010	<0.00010	<0.00010	0.00010	8761858
Dissolved Cobalt (Co)	mg/L	0.0000450	8761858	<0.0000050	0.0000570	<0.0000050	0.0000050	8761858
Dissolved Copper (Cu)	mg/L	0.000461	8761858	<0.000050	0.000328	<0.000050	0.000050	8761858
Dissolved Iron (Fe)	mg/L	0.0697	8761858	<0.0010	0.170	<0.0010	0.0010	8761858
Dissolved Lead (Pb)	mg/L	<0.0000050	8761858	<0.0000050	0.0000060	<0.0000050	0.0000050	8761858
Dissolved Lithium (Li)	mg/L	0.00486	8761858	<0.00050	0.00266	<0.00050	0.00050	8761858
Dissolved Manganese (Mn)	mg/L	0.0210	8761858	<0.000050	0.0487	<0.000050	0.000050	8761858
Dissolved Molybdenum (Mo)	mg/L	0.00121	8761858	<0.000050	0.000796	<0.000050	0.000050	8761858
Dissolved Nickel (Ni)	mg/L	0.00111	8761858	<0.000020	0.000376	<0.000020	0.000020	8761858
Dissolved Phosphorus (P)	mg/L	0.0030	8761858	<0.0020	0.0056	<0.0020	0.0020	8761858
Dissolved Selenium (Se)	mg/L	0.000845	8761858	<0.000040	0.00105	<0.000040	0.000040	8761858
Dissolved Silicon (Si)	mg/L	3.79	8761858	<0.050	3.00	<0.050	0.050	8761858
Dissolved Silver (Ag)	mg/L	<0.0000050	8761858	<0.0000050	<0.0000050	<0.0000050	0.0000050	8761858
Dissolved Strontium (Sr)	mg/L	0.215	8761858	<0.000050	0.189	<0.000050	0.000050	8761858
Dissolved Thallium (Tl)	mg/L	<0.0000020	8761858	<0.0000020	<0.0000020	<0.0000020	0.0000020	8761858
Dissolved Tin (Sn)	mg/L	<0.00020	8761858	<0.00020	0.00021	<0.00020	0.00020	8761858
Dissolved Titanium (Ti)	mg/L	<0.00050	8761858	<0.00050	<0.00050	<0.00050	0.00050	8761858
Dissolved Uranium (U)	mg/L	0.00292	8761858	<0.0000020	0.00157	<0.0000020	0.0000020	8761858
Dissolved Vanadium (V)	mg/L	<0.00020	8761858	<0.00020	<0.00020	<0.00020	0.00020	8761858

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		RZ2903		RZ2904	RZ2905	RZ2906		
Sampling Date		2017/09/13 09:40		2017/09/14 13:00	2017/09/14 08:30	2017/09/15 15:00		
COC Number		08444211		08444211	08444211	08444211		
	UNITS	KZ-26	QC Batch	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00069	8761858	<0.00010	0.0102	<0.00010	0.00010	8761858
Dissolved Zirconium (Zr)	mg/L	<0.00010	8761858	<0.00010	<0.00010	<0.00010	0.00010	8761858
Dissolved Calcium (Ca)	mg/L	61.8	8760456	<0.050	53.8	<0.050	0.050	8760456
Dissolved Magnesium (Mg)	mg/L	19.1	8760456	<0.050	9.57	<0.050	0.050	8760456
Dissolved Potassium (K)	mg/L	1.37	8760456	<0.050	1.25	<0.050	0.050	8760456
Dissolved Sodium (Na)	mg/L	1.49	8760456	<0.050	1.09	<0.050	0.050	8760456
Dissolved Sulphur (S)	mg/L	13.1	8760456	<3.0	10.5	<3.0	3.0	8760456

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RZ2891	RZ2892	RZ2893	RZ2894	RZ2895		
Sampling Date		2017/09/14 15:10	2017/09/14 14:00	2017/09/14 09:15	2017/09/14 11:45	2017/09/13 14:50		
COC Number		08444210	08444210	08444210	08444210	08444210		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	110	150	170	66.3	185	0.50	8760453
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8762158
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00425	0.00338	0.00828	0.0196	0.00437	0.00050	8762706
Total Antimony (Sb)	mg/L	0.000024	<0.000020	0.000040	0.000031	0.000035	0.000020	8762706
Total Arsenic (As)	mg/L	0.000080	0.000067	0.000267	0.000245	0.000648	0.000020	8762706
Total Barium (Ba)	mg/L	0.0672	0.0448	0.0857	0.101	0.0721	0.000020	8762706
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8762706
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8762706
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8762706
Total Cadmium (Cd)	mg/L	0.000234	0.0000180	0.000109	0.0000280	0.0000380	0.0000050	8762706
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8762706
Total Cobalt (Co)	mg/L	0.0000070	0.0000090	0.0000780	0.0000300	0.0000370	0.0000050	8762706
Total Copper (Cu)	mg/L	0.000602	0.000179	0.000434	0.000695	0.000378	0.000050	8762706
Total Iron (Fe)	mg/L	0.0017	0.0293	0.377	0.0884	0.0692	0.0010	8762706
Total Lead (Pb)	mg/L	0.0000210	0.0000050	0.0000440	0.0000420	0.0000100	0.0000050	8762706
Total Lithium (Li)	mg/L	0.00116	0.00074	0.00274	0.00113	0.00243	0.00050	8762706
Total Manganese (Mn)	mg/L	0.000067	0.00174	0.0616	0.0256	0.0313	0.000050	8762706
Total Molybdenum (Mo)	mg/L	0.000623	0.000483	0.000645	0.000621	0.00109	0.000050	8762706
Total Nickel (Ni)	mg/L	0.000332	0.000173	0.000383	0.000472	0.000536	0.000020	8762706
Total Phosphorus (P)	mg/L	<0.0020	<0.0020	<0.0020	0.0038	0.0050	0.0020	8762706
Total Selenium (Se)	mg/L	0.00130	0.000783	0.00116	0.000176	0.00123	0.000040	8762706
Total Silicon (Si)	mg/L	2.26	3.00	3.42	2.20	2.77	0.050	8762706
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8762706
Total Strontium (Sr)	mg/L	0.129	0.163	0.197	0.0679	0.190	0.000050	8762706
Total Thallium (Tl)	mg/L	0.0000040	<0.0000020	<0.0000020	0.0000020	<0.0000020	0.0000020	8762706
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8762706
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00080	<0.00050	0.00050	8762706
Total Uranium (U)	mg/L	0.00269	0.000908	0.00133	0.000687	0.00279	0.0000020	8762706
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8762706

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RZ2891	RZ2892	RZ2893	RZ2894	RZ2895		
Sampling Date		2017/09/14 15:10	2017/09/14 14:00	2017/09/14 09:15	2017/09/14 11:45	2017/09/13 14:50		
COC Number		08444210	08444210	08444210	08444210	08444210		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0241	0.00051	0.0159	0.00326	0.00326	0.00010	8762706
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8762706
Total Calcium (Ca)	mg/L	37.0	49.7	56.7	22.5	54.9	0.050	8760458
Total Magnesium (Mg)	mg/L	4.41	6.40	6.84	2.43	11.7	0.050	8760458
Total Potassium (K)	mg/L	1.86	0.883	1.46	1.43	1.17	0.050	8760458
Total Sodium (Na)	mg/L	0.771	0.765	1.11	0.929	1.14	0.050	8760458
Total Sulphur (S)	mg/L	19.2	7.7	12.3	3.8	10.2	3.0	8760458

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RZ2896		RZ2897	RZ2898	RZ2899		
Sampling Date		2017/09/13 15:40		2017/09/13 16:25	2017/09/14 10:05	2017/09/13 10:30		
COC Number		08444210		08444210	08444210	08444210		
	UNITS	KZ-16	QC Batch	KZ-17	KZ-18	KZ-19	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	178	8760453	164	192	234	0.50	8760453
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	8762158	<0.0000020	<0.0000020	<0.0000020	0.0000020	8763368
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00208	8762706	0.00098	0.00736	0.0234	0.00050	8762706
Total Antimony (Sb)	mg/L	<0.000020	8762706	0.000033	0.000027	0.000080	0.000020	8762706
Total Arsenic (As)	mg/L	0.000331	8762706	0.000249	0.000424	0.00124	0.000020	8762706
Total Barium (Ba)	mg/L	0.0744	8762706	0.0649	0.0440	0.0722	0.000020	8762706
Total Beryllium (Be)	mg/L	<0.000010	8762706	<0.000010	<0.000010	<0.000010	0.000010	8762706
Total Bismuth (Bi)	mg/L	<0.0000050	8762706	<0.0000050	<0.0000050	<0.0000050	0.0000050	8762706
Total Boron (B)	mg/L	<0.010	8762706	<0.010	<0.010	<0.010	0.010	8762706
Total Cadmium (Cd)	mg/L	0.0000210	8762706	0.0000230	0.0000250	0.0000190	0.0000050	8762706
Total Chromium (Cr)	mg/L	0.00015	8762706	<0.00010	<0.00010	0.00011	0.00010	8762706
Total Cobalt (Co)	mg/L	0.0000200	8762706	0.0000060	0.0000090	0.0000710	0.0000050	8762706
Total Copper (Cu)	mg/L	0.000330	8762706	0.000376	0.000161	0.000576	0.000050	8762706
Total Iron (Fe)	mg/L	0.0083	8762706	0.0012	0.0052	0.188	0.0010	8762706
Total Lead (Pb)	mg/L	<0.0000050	8762706	<0.0000050	<0.0000050	0.0000480	0.0000050	8762706
Total Lithium (Li)	mg/L	0.00231	8762706	0.00287	0.00126	0.00468	0.00050	8762706
Total Manganese (Mn)	mg/L	0.00632	8762706	0.00260	0.00344	0.0262	0.000050	8762706
Total Molybdenum (Mo)	mg/L	0.000553	8762706	0.00104	0.00114	0.00120	0.000050	8762706
Total Nickel (Ni)	mg/L	0.000408	8762706	0.000425	0.000363	0.00120	0.000020	8762706
Total Phosphorus (P)	mg/L	<0.0020	8762706	0.0021	0.0191	0.0067	0.0020	8762706
Total Selenium (Se)	mg/L	0.00116	8762706	0.000946	0.00103	0.000847	0.000040	8762706
Total Silicon (Si)	mg/L	3.30	8762706	3.14	2.84	3.55	0.050	8762706
Total Silver (Ag)	mg/L	<0.0000050	8762706	<0.0000050	<0.0000050	<0.0000050	0.0000050	8762706
Total Strontium (Sr)	mg/L	0.197	8762706	0.166	0.169	0.204	0.000050	8762706
Total Thallium (Tl)	mg/L	<0.0000020	8762706	<0.0000020	<0.0000020	<0.0000020	0.0000020	8762706
Total Tin (Sn)	mg/L	<0.00020	8762706	<0.00020	<0.00020	<0.00020	0.00020	8762706
Total Titanium (Ti)	mg/L	<0.00050	8762706	<0.00050	<0.00050	0.00056	0.00050	8762706
Total Uranium (U)	mg/L	0.00213	8762706	0.00189	0.00206	0.00292	0.0000020	8762706
Total Vanadium (V)	mg/L	<0.00020	8762706	<0.00020	<0.00020	<0.00020	0.00020	8762706
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RZ2896		RZ2897	RZ2898	RZ2899		
Sampling Date		2017/09/13 15:40		2017/09/13 16:25	2017/09/14 10:05	2017/09/13 10:30		
COC Number		08444210		08444210	08444210	08444210		
	UNITS	KZ-16	QC Batch	KZ-17	KZ-18	KZ-19	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00062	8762706	0.00149	0.00082	0.00123	0.00010	8762706
Total Zirconium (Zr)	mg/L	<0.00010	8762706	<0.00010	<0.00010	<0.00010	0.00010	8762706
Total Calcium (Ca)	mg/L	53.9	8760458	49.3	49.7	61.7	0.050	8760458
Total Magnesium (Mg)	mg/L	10.5	8760458	9.87	16.4	19.4	0.050	8760458
Total Potassium (K)	mg/L	1.14	8760458	1.20	0.547	1.36	0.050	8760458
Total Sodium (Na)	mg/L	1.14	8760458	1.11	0.850	1.53	0.050	8760458
Total Sulphur (S)	mg/L	10.7	8760458	8.9	8.1	13.1	3.0	8760458
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RZ2900	RZ2902	RZ2904	RZ2905		
Sampling Date		2017/09/13 12:55	2017/09/13 11:30	2017/09/14 13:00	2017/09/14 08:30		
COC Number		08444211	08444211	08444211	08444211		
	UNITS	KZ-21	KZ-22	KZ-28	KZ-37	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	253	222	<0.50	174	0.50	8760453
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8763368
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00788	0.00488	0.00053	0.0146	0.00050	8762706
Total Antimony (Sb)	mg/L	0.000095	0.000064	<0.000020	0.000043	0.000020	8762706
Total Arsenic (As)	mg/L	0.00248	0.00164	<0.000020	0.000325	0.000020	8762706
Total Barium (Ba)	mg/L	0.0639	0.0736	<0.000020	0.0753	0.000020	8762706
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8762706
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8762706
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8762706
Total Cadmium (Cd)	mg/L	0.0000110	0.0000210	<0.0000050	0.0000830	0.0000050	8762706
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8762706
Total Cobalt (Co)	mg/L	0.000105	0.0000660	<0.0000050	0.0000710	0.0000050	8762706
Total Copper (Cu)	mg/L	0.000340	0.000368	<0.000050	0.000395	0.000050	8762706
Total Iron (Fe)	mg/L	0.452	0.229	<0.0010	0.294	0.0010	8762706
Total Lead (Pb)	mg/L	0.0000140	0.0000110	<0.0000050	0.0000510	0.0000050	8762706
Total Lithium (Li)	mg/L	0.00491	0.00429	<0.00050	0.00237	0.00050	8762706
Total Manganese (Mn)	mg/L	0.0789	0.0437	<0.000050	0.0497	0.000050	8762706
Total Molybdenum (Mo)	mg/L	0.00173	0.00140	<0.000050	0.000786	0.000050	8762706
Total Nickel (Ni)	mg/L	0.00222	0.00124	<0.000020	0.000417	0.000020	8762706
Total Phosphorus (P)	mg/L	0.0110	0.0050	<0.0020	0.0066	0.0020	8762706
Total Selenium (Se)	mg/L	0.000713	0.000909	<0.000040	0.00106	0.000040	8762706
Total Silicon (Si)	mg/L	4.15	3.48	<0.050	2.95	0.050	8762706
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8762706
Total Strontium (Sr)	mg/L	0.194	0.200	0.000063	0.181	0.000050	8762706
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8762706
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8762706
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00068	0.00050	8762706
Total Uranium (U)	mg/L	0.00329	0.00318	<0.0000020	0.00154	0.0000020	8762706
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8762706
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RZ2900	RZ2902	RZ2904	RZ2905		
Sampling Date		2017/09/13 12:55	2017/09/13 11:30	2017/09/14 13:00	2017/09/14 08:30		
COC Number		08444211	08444211	08444211	08444211		
	UNITS	KZ-21	KZ-22	KZ-28	KZ-37	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00111	0.00144	<0.00010	0.0112	0.00010	8762706
Total Zirconium (Zr)	mg/L	0.00014	<0.00010	<0.00010	<0.00010	0.00010	8762706
Total Calcium (Ca)	mg/L	63.0	58.8	<0.050	54.2	0.050	8760458
Total Magnesium (Mg)	mg/L	23.1	18.3	<0.050	9.24	0.050	8760458
Total Potassium (K)	mg/L	1.58	1.34	<0.050	1.21	0.050	8760458
Total Sodium (Na)	mg/L	1.48	1.38	<0.050	1.08	0.050	8760458
Total Sulphur (S)	mg/L	13.8	13.6	<3.0	10.4	3.0	8760458
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RZ2906		
Sampling Date		2017/09/15 15:00		
COC Number		08444211		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	<0.50	0.50	8760453
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8763368
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	<0.00050	0.00050	8762706
Total Antimony (Sb)	mg/L	<0.000020	0.000020	8762706
Total Arsenic (As)	mg/L	<0.000020	0.000020	8762706
Total Barium (Ba)	mg/L	0.000117 (1)	0.000020	8767168
Total Beryllium (Be)	mg/L	<0.000010	0.000010	8762706
Total Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8762706
Total Boron (B)	mg/L	<0.010	0.010	8762706
Total Cadmium (Cd)	mg/L	<0.0000050	0.0000050	8762706
Total Chromium (Cr)	mg/L	<0.00010	0.00010	8762706
Total Cobalt (Co)	mg/L	<0.0000050	0.0000050	8762706
Total Copper (Cu)	mg/L	<0.000050	0.000050	8762706
Total Iron (Fe)	mg/L	<0.0010	0.0010	8762706
Total Lead (Pb)	mg/L	<0.0000050	0.0000050	8762706
Total Lithium (Li)	mg/L	<0.00050	0.00050	8762706
Total Manganese (Mn)	mg/L	<0.000050	0.000050	8762706
Total Molybdenum (Mo)	mg/L	<0.000050	0.000050	8762706
Total Nickel (Ni)	mg/L	<0.000020	0.000020	8762706
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8762706
Total Selenium (Se)	mg/L	<0.000040	0.000040	8762706
Total Silicon (Si)	mg/L	<0.050	0.050	8762706
Total Silver (Ag)	mg/L	<0.0000050	0.0000050	8762706
Total Strontium (Sr)	mg/L	<0.000050	0.000050	8762706
Total Thallium (Tl)	mg/L	<0.0000020	0.0000020	8762706
Total Tin (Sn)	mg/L	<0.00020	0.00020	8762706
Total Titanium (Ti)	mg/L	<0.00050	0.00050	8762706
Total Uranium (U)	mg/L	<0.0000020	0.0000020	8762706

RDL = Reportable Detection Limit
(1) Test Repeated

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		RZ2906		
Sampling Date		2017/09/15 15:00		
COC Number		08444211		
	UNITS	TRIP BLANK	RDL	QC Batch
Total Vanadium (V)	mg/L	<0.00020	0.00020	8762706
Total Zinc (Zn)	mg/L	<0.00010	0.00010	8762706
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8762706
Total Calcium (Ca)	mg/L	<0.050	0.050	8760458
Total Magnesium (Mg)	mg/L	<0.050	0.050	8760458
Total Potassium (K)	mg/L	<0.050	0.050	8760458
Total Sodium (Na)	mg/L	<0.050	0.050	8760458
Total Sulphur (S)	mg/L	<3.0	3.0	8760458
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RZ2903		
Sampling Date		2017/09/13 09:40		
COC Number		08444211		
	UNITS	KZ-26	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	235	0.50	8760453
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8763368
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.0283	0.0030	8764745
Total Antimony (Sb)	mg/L	0.000076	0.000020	8764745
Total Arsenic (As)	mg/L	0.00117	0.000020	8764745
Total Barium (Ba)	mg/L	0.0728	0.000050	8764745
Total Beryllium (Be)	mg/L	<0.000010	0.000010	8764745
Total Bismuth (Bi)	mg/L	<0.000010	0.000010	8764745
Total Boron (B)	mg/L	<0.010	0.010	8764745
Total Cadmium (Cd)	mg/L	0.0000187	0.0000050	8764745
Total Chromium (Cr)	mg/L	0.00011	0.00010	8764745
Total Cobalt (Co)	mg/L	0.000074	0.000010	8764745
Total Copper (Cu)	mg/L	0.00060	0.00010	8764745
Total Iron (Fe)	mg/L	0.203	0.0050	8764745
Total Lead (Pb)	mg/L	0.000053	0.000020	8764745
Total Lithium (Li)	mg/L	0.00422	0.00050	8764745
Total Manganese (Mn)	mg/L	0.0266	0.00010	8764745
Total Molybdenum (Mo)	mg/L	0.00117	0.000050	8764745
Total Nickel (Ni)	mg/L	0.00130	0.00010	8764745
Total Phosphorus (P)	mg/L	0.0093	0.0050	8764745
Total Selenium (Se)	mg/L	0.000783	0.000040	8764745
Total Silicon (Si)	mg/L	3.84	0.050	8764745
Total Silver (Ag)	mg/L	<0.000010	0.000010	8764745
Total Strontium (Sr)	mg/L	0.196	0.000050	8764745
Total Thallium (Tl)	mg/L	<0.0000020	0.0000020	8764745
Total Tin (Sn)	mg/L	<0.00020	0.00020	8764745
Total Titanium (Ti)	mg/L	<0.0020	0.0020	8764745
Total Uranium (U)	mg/L	0.00263	0.0000050	8764745
Total Vanadium (V)	mg/L	<0.00020	0.00020	8764745
RDL = Reportable Detection Limit				

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LL TOTAL METALS (DIGESTED) WITH CV HG

Maxxam ID		RZ2903		
Sampling Date		2017/09/13 09:40		
COC Number		08444211		
	UNITS	KZ-26	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0014	0.0010	8764745
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8764745
Total Calcium (Ca)	mg/L	62.8	0.25	8760458
Total Magnesium (Mg)	mg/L	19.0	0.25	8760458
Total Potassium (K)	mg/L	1.33	0.25	8760458
Total Sodium (Na)	mg/L	1.46	0.25	8760458
Total Sulphur (S)	mg/L	13.8	3.0	8760458
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RZ2891
Sample ID: KZ-2
Matrix: Water

Collected: 2017/09/14
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8765442	2017/09/19	2017/09/19	Name Redacted
Alkalinity - Low Level	AT/ALK	8763812	2017/09/19	2017/09/20	
Chloride - Low Level	KONE/COL	8763149	N/A	2017/09/18	
Cyanide SAD (strong acid dissociable)	TECH/COL	8763469	N/A	2017/09/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8763472	N/A	2017/09/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8764523	N/A	2017/09/20	
Conductance - Low Level	AT/ALK	8763811	2017/09/19	2017/09/20	
Fluoride - Low Level	ISE/ISE	8763317	N/A	2017/09/19	
Hardness Total (calculated as CaCO3)	CALC	8760453	N/A	2017/09/19	
Hardness (calculated as CaCO3)	CALC	8760454	N/A	2017/09/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8763073	N/A	2017/09/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8762158	2017/09/18	2017/09/18	
Ion Balance (as Cations/Anions Ratio)	CALC	8760662	N/A	2017/09/20	
Ion Balance	CALC	8760663	N/A	2017/09/20	
Sum of cations, anions	CALC	8760834	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8760456	N/A	2017/09/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8761858	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8760458	N/A	2017/09/19	
Elements by ICPMS Low Level (total)	ICP/CRCM	8762706	N/A	2017/09/19	
Ammonia-N Low Level (Preserved)	KONE/COL	8765498	N/A	2017/09/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8760892	N/A	2017/09/16	
Nitrite (N) (low level)	TRAA/COL	8760893	N/A	2017/09/16	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8760534	N/A	2017/09/19	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/09/16	
pH Water	AT/ALK	8763798	2017/09/19	2017/09/20	
Sulphate - Low Level	KONE/COL	8763152	N/A	2017/09/18	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8764035	2017/09/16	2017/09/19	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8763944	2017/09/19	2017/09/19	
Total Suspended Solids-Low Level	BAL/BAL	8762433	2017/09/19	2017/09/19	

Maxxam ID: RZ2891 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2017/09/14
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8763469	N/A	2017/09/19	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8763472	N/A	2017/09/19	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8761858	N/A	2017/09/19	
Elements by ICPMS Low Level (total)	ICP/CRCM	8762706	N/A	2017/09/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RZ2892
Sample ID: KZ-6
Matrix: Water

Collected: 2017/09/14
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8765442	2017/09/19	2017/09/19	Name Redacted
Alkalinity - Low Level	AT/ALK	8764049	2017/09/19	2017/09/20	
Chloride - Low Level	KONE/COL	8763149	N/A	2017/09/18	
Cyanide SAD (strong acid dissociable)	TECH/COL	8763469	N/A	2017/09/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8763472	N/A	2017/09/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8764525	N/A	2017/09/20	
Conductance - Low Level	AT/ALK	8764052	2017/09/19	2017/09/20	
Fluoride - Low Level	ISE/ISE	8763317	N/A	2017/09/19	
Hardness Total (calculated as CaCO3)	CALC	8760453	N/A	2017/09/19	
Hardness (calculated as CaCO3)	CALC	8760454	N/A	2017/09/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8763178	N/A	2017/09/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8762158	2017/09/18	2017/09/18	
Ion Balance (as Cations/Anions Ratio)	CALC	8760662	N/A	2017/09/20	
Ion Balance	CALC	8760663	N/A	2017/09/20	
Sum of cations, anions	CALC	8760834	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8760456	N/A	2017/09/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8761858	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8760458	N/A	2017/09/19	
Elements by ICPMS Low Level (total)	ICP/CRCM	8762706	N/A	2017/09/19	
Ammonia-N Low Level (Preserved)	KONE/COL	8765498	N/A	2017/09/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8760892	N/A	2017/09/16	
Nitrite (N) (low level)	TRAA/COL	8760893	N/A	2017/09/16	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8760534	N/A	2017/09/19	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/09/16	
pH Water	AT/ALK	8764050	2017/09/19	2017/09/20	
Sulphate - Low Level	KONE/COL	8763152	N/A	2017/09/18	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8764035	2017/09/16	2017/09/19	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8763944	2017/09/19	2017/09/19	
Total Suspended Solids-Low Level	BAL/BAL	8762433	2017/09/19	2017/09/19	

Maxxam ID: RZ2892 Dup
Sample ID: KZ-6
Matrix: Water

Collected: 2017/09/14
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride - Low Level	KONE/COL	8763149	N/A	2017/09/18	Name Redacted
Sulphate - Low Level	KONE/COL	8763152	N/A	2017/09/18	

Maxxam ID: RZ2893
Sample ID: KZ-9
Matrix: Water

Collected: 2017/09/14
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8765442	2017/09/19	2017/09/19	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RZ2893
Sample ID: KZ-9
Matrix: Water

Collected: 2017/09/14
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Low Level	AT/ALK	8764049	2017/09/19	2017/09/20	Name Redacted
Chloride - Low Level	KONE/COL	8763149	N/A	2017/09/18	
Cyanide SAD (strong acid dissociable)	TECH/COL	8763469	N/A	2017/09/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8763472	N/A	2017/09/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8764524	N/A	2017/09/20	
Conductance - Low Level	AT/ALK	8764052	2017/09/19	2017/09/20	
Fluoride - Low Level	ISE/ISE	8763317	N/A	2017/09/19	
Hardness Total (calculated as CaCO3)	CALC	8760453	N/A	2017/09/19	
Hardness (calculated as CaCO3)	CALC	8760454	N/A	2017/09/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8763178	N/A	2017/09/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8762158	2017/09/18	2017/09/18	
Ion Balance (as Cations/Anions Ratio)	CALC	8760662	N/A	2017/09/20	
Ion Balance	CALC	8760663	N/A	2017/09/20	
Sum of cations, anions	CALC	8760834	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8760456	N/A	2017/09/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8761858	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8760458	N/A	2017/09/19	
Elements by ICPMS Low Level (total)	ICP/CRCM	8762706	N/A	2017/09/19	
Ammonia-N Low Level (Preserved)	KONE/COL	8765496	N/A	2017/09/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8760892	N/A	2017/09/16	
Nitrite (N) (low level)	TRAA/COL	8760893	N/A	2017/09/16	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8760534	N/A	2017/09/19	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/09/16	
pH Water	AT/ALK	8764050	2017/09/19	2017/09/20	
Sulphate - Low Level	KONE/COL	8763152	N/A	2017/09/18	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8764035	2017/09/16	2017/09/19	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8763944	2017/09/19	2017/09/19	
Total Suspended Solids-Low Level	BAL/BAL	8762433	2017/09/19	2017/09/19	

Maxxam ID: RZ2894
Sample ID: KZ-13
Matrix: Water

Collected: 2017/09/14
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8765442	2017/09/19	2017/09/19	Name Redacted
Alkalinity - Low Level	AT/ALK	8764049	2017/09/19	2017/09/20	
Chloride - Low Level	KONE/COL	8763149	N/A	2017/09/18	
Cyanide SAD (strong acid dissociable)	TECH/COL	8763469	N/A	2017/09/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8763472	N/A	2017/09/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8764524	N/A	2017/09/20	
Conductance - Low Level	AT/ALK	8764052	2017/09/19	2017/09/20	
Fluoride - Low Level	ISE/ISE	8763317	N/A	2017/09/19	
Hardness Total (calculated as CaCO3)	CALC	8760453	N/A	2017/09/19	
Hardness (calculated as CaCO3)	CALC	8760454	N/A	2017/09/20	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RZ2894
Sample ID: KZ-13
Matrix: Water

Collected: 2017/09/14
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8763178	N/A	2017/09/19	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8762158	2017/09/18	2017/09/18	
Ion Balance (as Cations/Anions Ratio)	CALC	8760662	N/A	2017/09/20	
Ion Balance	CALC	8760663	N/A	2017/09/20	
Sum of cations, anions	CALC	8760834	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8760456	N/A	2017/09/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8761858	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8760458	N/A	2017/09/19	
Elements by ICPMS Low Level (total)	ICP/CRCM	8762706	N/A	2017/09/19	
Ammonia-N Low Level (Preserved)	KONE/COL	8765498	N/A	2017/09/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8760892	N/A	2017/09/16	
Nitrite (N) (low level)	TRAA/COL	8760893	N/A	2017/09/16	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8760534	N/A	2017/09/19	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/09/16	
pH Water	AT/ALK	8764050	2017/09/19	2017/09/20	
Sulphate - Low Level	KONE/COL	8763152	N/A	2017/09/18	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8764035	2017/09/16	2017/09/19	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8763944	2017/09/19	2017/09/19	
Total Suspended Solids-Low Level	BAL/BAL	8762433	2017/09/19	2017/09/19	

Maxxam ID: RZ2895
Sample ID: KZ-15
Matrix: Water

Collected: 2017/09/13
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8765442	2017/09/19	2017/09/19	Name Redacted
Alkalinity - Low Level	AT/ALK	8764049	2017/09/19	2017/09/20	
Chloride - Low Level	KONE/COL	8763149	N/A	2017/09/18	
Cyanide SAD (strong acid dissociable)	TECH/COL	8763469	N/A	2017/09/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8763472	N/A	2017/09/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8764524	N/A	2017/09/20	
Conductance - Low Level	AT/ALK	8764052	2017/09/19	2017/09/20	
Fluoride - Low Level	ISE/ISE	8763317	N/A	2017/09/19	
Hardness Total (calculated as CaCO3)	CALC	8760453	N/A	2017/09/19	
Hardness (calculated as CaCO3)	CALC	8760454	N/A	2017/09/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8763178	N/A	2017/09/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8762158	2017/09/18	2017/09/18	
Ion Balance (as Cations/Anions Ratio)	CALC	8760662	N/A	2017/09/20	
Ion Balance	CALC	8760663	N/A	2017/09/20	
Sum of cations, anions	CALC	8760834	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8760456	N/A	2017/09/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8761858	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8760458	N/A	2017/09/19	
Elements by ICPMS Low Level (total)	ICP/CRCM	8762706	N/A	2017/09/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RZ2895
Sample ID: KZ-15
Matrix: Water

Collected: 2017/09/13
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N Low Level (Preserved)	KONE/COL	8765492	N/A	2017/09/20	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8760892	N/A	2017/09/16	
Nitrite (N) (low level)	TRAA/COL	8760893	N/A	2017/09/16	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8760534	N/A	2017/09/19	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/09/16	
pH Water	AT/ALK	8764050	2017/09/19	2017/09/20	
Sulphate - Low Level	KONE/COL	8763152	N/A	2017/09/18	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8764035	2017/09/16	2017/09/19	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8763944	2017/09/16	2017/09/19	
Total Suspended Solids-Low Level	BAL/BAL	8761694	2017/09/18	2017/09/18	

Maxxam ID: RZ2895 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2017/09/13
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8760892	N/A	2017/09/16	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8760893	N/A	2017/09/16	

Maxxam ID: RZ2896
Sample ID: KZ-16
Matrix: Water

Collected: 2017/09/13
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8765442	2017/09/19	2017/09/19	Name Redacted
Alkalinity - Low Level	AT/ALK	8763812	2017/09/19	2017/09/20	
Chloride - Low Level	KONE/COL	8763149	N/A	2017/09/18	
Cyanide SAD (strong acid dissociable)	TECH/COL	8763469	N/A	2017/09/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8763472	N/A	2017/09/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8764524	N/A	2017/09/20	
Conductance - Low Level	AT/ALK	8763811	2017/09/19	2017/09/20	
Fluoride - Low Level	ISE/ISE	8763317	N/A	2017/09/19	
Hardness Total (calculated as CaCO3)	CALC	8760453	N/A	2017/09/19	
Hardness (calculated as CaCO3)	CALC	8760454	N/A	2017/09/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8763073	N/A	2017/09/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8762158	2017/09/18	2017/09/18	
Ion Balance (as Cations/Anions Ratio)	CALC	8760662	N/A	2017/09/20	
Ion Balance	CALC	8760663	N/A	2017/09/20	
Sum of cations, anions	CALC	8760834	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8760456	N/A	2017/09/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8761858	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8760458	N/A	2017/09/19	
Elements by ICPMS Low Level (total)	ICP/CRCM	8762706	N/A	2017/09/19	
Ammonia-N Low Level (Preserved)	KONE/COL	8765492	N/A	2017/09/20	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RZ2896
Sample ID: KZ-16
Matrix: Water

Collected: 2017/09/13
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8760892	N/A	2017/09/16	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8760893	N/A	2017/09/16	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8760534	N/A	2017/09/19	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/09/16	
pH Water	AT/ALK	8763798	2017/09/19	2017/09/20	
Sulphate - Low Level	KONE/COL	8763152	N/A	2017/09/18	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8764035	2017/09/16	2017/09/19	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8763944	2017/09/16	2017/09/19	
Total Suspended Solids-Low Level	BAL/BAL	8761694	2017/09/18	2017/09/18	

Maxxam ID: RZ2896 Dup
Sample ID: KZ-16
Matrix: Water

Collected: 2017/09/13
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N Low Level (Preserved)	KONE/COL	8765492	N/A	2017/09/20	Name Redacted
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8764035	2017/09/19	2017/09/19	

Maxxam ID: RZ2897
Sample ID: KZ-17
Matrix: Water

Collected: 2017/09/13
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8765442	2017/09/19	2017/09/19	Name Redacted
Alkalinity - Low Level	AT/ALK	8764049	2017/09/19	2017/09/20	
Chloride - Low Level	KONE/COL	8763149	N/A	2017/09/18	
Cyanide SAD (strong acid dissociable)	TECH/COL	8763469	N/A	2017/09/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8763472	N/A	2017/09/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8764523	N/A	2017/09/20	
Conductance - Low Level	AT/ALK	8764052	2017/09/19	2017/09/20	
Fluoride - Low Level	ISE/ISE	8763317	N/A	2017/09/19	
Hardness Total (calculated as CaCO3)	CALC	8760453	N/A	2017/09/19	
Hardness (calculated as CaCO3)	CALC	8760454	N/A	2017/09/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8763073	N/A	2017/09/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8763368	2017/09/19	2017/09/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8760662	N/A	2017/09/20	
Ion Balance	CALC	8760663	N/A	2017/09/20	
Sum of cations, anions	CALC	8760834	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8760456	N/A	2017/09/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8761858	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8760458	N/A	2017/09/19	
Elements by ICPMS Low Level (total)	ICP/CRCM	8762706	N/A	2017/09/19	
Ammonia-N Low Level (Preserved)	KONE/COL	8765498	N/A	2017/09/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8760892	N/A	2017/09/16	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RZ2897
Sample ID: KZ-17
Matrix: Water

Collected: 2017/09/13
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrite (N) (low level)	TRAA/COL	8760893	N/A	2017/09/16	Name Redacted
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8760534	N/A	2017/09/19	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/09/16	
pH Water	AT/ALK	8764050	2017/09/19	2017/09/20	
Sulphate - Low Level	KONE/COL	8763152	N/A	2017/09/18	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8764035	2017/09/16	2017/09/19	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8763944	2017/09/16	2017/09/19	
Total Suspended Solids-Low Level	BAL/BAL	8761694	2017/09/18	2017/09/18	

Maxxam ID: RZ2898
Sample ID: KZ-18
Matrix: Water

Collected: 2017/09/14
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8765442	2017/09/19	2017/09/19	Name Redacted
Alkalinity - Low Level	AT/ALK	8763812	2017/09/19	2017/09/20	
Chloride - Low Level	KONE/COL	8763149	N/A	2017/09/18	
Cyanide SAD (strong acid dissociable)	TECH/COL	8763469	N/A	2017/09/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8763472	N/A	2017/09/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8764523	N/A	2017/09/20	
Conductance - Low Level	AT/ALK	8763811	2017/09/19	2017/09/20	
Fluoride - Low Level	ISE/ISE	8763317	N/A	2017/09/19	
Hardness Total (calculated as CaCO3)	CALC	8760453	N/A	2017/09/19	
Hardness (calculated as CaCO3)	CALC	8760454	N/A	2017/09/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8763073	N/A	2017/09/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8763368	2017/09/19	2017/09/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8760662	N/A	2017/09/20	
Ion Balance	CALC	8760663	N/A	2017/09/20	
Sum of cations, anions	CALC	8760834	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8760456	N/A	2017/09/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8761858	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8760458	N/A	2017/09/19	
Elements by ICPMS Low Level (total)	ICP/CRCM	8762706	N/A	2017/09/19	
Ammonia-N Low Level (Preserved)	KONE/COL	8765492	N/A	2017/09/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8760892	N/A	2017/09/16	
Nitrite (N) (low level)	TRAA/COL	8760893	N/A	2017/09/16	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8760534	N/A	2017/09/19	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/09/16	
pH Water	AT/ALK	8763798	2017/09/19	2017/09/20	
Sulphate - Low Level	KONE/COL	8763152	N/A	2017/09/18	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8764035	2017/09/16	2017/09/19	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8763944	2017/09/19	2017/09/19	
Total Suspended Solids-Low Level	BAL/BAL	8762433	2017/09/19	2017/09/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RZ2899
Sample ID: KZ-19
Matrix: Water

Collected: 2017/09/13
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8765442	2017/09/19	2017/09/19	Name Redacted
Alkalinity - Low Level	AT/ALK	8763812	2017/09/19	2017/09/20	
Chloride - Low Level	KONE/COL	8763149	N/A	2017/09/18	
Cyanide SAD (strong acid dissociable)	TECH/COL	8763469	N/A	2017/09/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8763472	N/A	2017/09/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8764523	N/A	2017/09/20	
Conductance - Low Level	AT/ALK	8763811	2017/09/19	2017/09/20	
Fluoride - Low Level	ISE/ISE	8763317	N/A	2017/09/19	
Hardness Total (calculated as CaCO3)	CALC	8760453	N/A	2017/09/19	
Hardness (calculated as CaCO3)	CALC	8760454	N/A	2017/09/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8763178	N/A	2017/09/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8763368	2017/09/19	2017/09/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8760662	N/A	2017/09/20	
Ion Balance	CALC	8760663	N/A	2017/09/20	
Sum of cations, anions	CALC	8760834	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8760456	N/A	2017/09/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8761858	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8760458	N/A	2017/09/19	
Elements by ICPMS Low Level (total)	ICP/CRCM	8762706	N/A	2017/09/19	
Ammonia-N Low Level (Preserved)	KONE/COL	8765492	N/A	2017/09/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8760892	N/A	2017/09/16	
Nitrite (N) (low level)	TRAA/COL	8760893	N/A	2017/09/16	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8760534	N/A	2017/09/19	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/09/16	
pH Water	AT/ALK	8763798	2017/09/19	2017/09/20	
Sulphate - Low Level	KONE/COL	8763152	N/A	2017/09/18	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8764035	2017/09/16	2017/09/19	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8763944	2017/09/16	2017/09/19	
Total Suspended Solids-Low Level	BAL/BAL	8761694	2017/09/18	2017/09/18	

Maxxam ID: RZ2900
Sample ID: KZ-21
Matrix: Water

Collected: 2017/09/13
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8765442	2017/09/19	2017/09/19	Name Redacted
Alkalinity - Low Level	AT/ALK	8763812	2017/09/19	2017/09/20	
Chloride - Low Level	KONE/COL	8763149	N/A	2017/09/18	
Cyanide SAD (strong acid dissociable)	TECH/COL	8763469	N/A	2017/09/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8763472	N/A	2017/09/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8764523	N/A	2017/09/20	
Conductance - Low Level	AT/ALK	8763811	2017/09/19	2017/09/20	
Fluoride - Low Level	ISE/ISE	8763317	N/A	2017/09/19	
Hardness Total (calculated as CaCO3)	CALC	8760453	N/A	2017/09/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RZ2900
Sample ID: KZ-21
Matrix: Water

Collected: 2017/09/13
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8760454	N/A	2017/09/20	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8763073	N/A	2017/09/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8763368	2017/09/19	2017/09/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8760662	N/A	2017/09/20	
Ion Balance	CALC	8760663	N/A	2017/09/20	
Sum of cations, anions	CALC	8760834	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8760456	N/A	2017/09/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8761858	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8760458	N/A	2017/09/19	
Elements by ICPMS Low Level (total)	ICP/CRCM	8762706	N/A	2017/09/19	
Ammonia-N Low Level (Preserved)	KONE/COL	8765492	N/A	2017/09/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8760892	N/A	2017/09/16	
Nitrite (N) (low level)	TRAA/COL	8760893	N/A	2017/09/16	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8760534	N/A	2017/09/19	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/09/16	
pH Water	AT/ALK	8763798	2017/09/19	2017/09/20	
Sulphate - Low Level	KONE/COL	8763152	N/A	2017/09/18	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8764035	2017/09/16	2017/09/19	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8764034	2017/09/16	2017/09/19	
Total Suspended Solids-Low Level	BAL/BAL	8761694	2017/09/18	2017/09/18	

Maxxam ID: RZ2902
Sample ID: KZ-22
Matrix: Water

Collected: 2017/09/13
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8765442	2017/09/19	2017/09/19	Name Redacted
Alkalinity - Low Level	AT/ALK	8763812	2017/09/19	2017/09/20	
Chloride - Low Level	KONE/COL	8763149	N/A	2017/09/18	
Cyanide SAD (strong acid dissociable)	TECH/COL	8763469	N/A	2017/09/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8763472	N/A	2017/09/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8764523	N/A	2017/09/20	
Conductance - Low Level	AT/ALK	8763811	2017/09/19	2017/09/20	
Fluoride - Low Level	ISE/ISE	8763318	N/A	2017/09/19	
Hardness Total (calculated as CaCO3)	CALC	8760453	N/A	2017/09/19	
Hardness (calculated as CaCO3)	CALC	8760454	N/A	2017/09/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8763178	N/A	2017/09/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8763368	2017/09/19	2017/09/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8760662	N/A	2017/09/20	
Ion Balance	CALC	8760663	N/A	2017/09/20	
Sum of cations, anions	CALC	8760834	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8760456	N/A	2017/09/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8761858	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8760458	N/A	2017/09/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RZ2902
Sample ID: KZ-22
Matrix: Water

Collected: 2017/09/13
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8762706	N/A	2017/09/19	Name Redacted
Ammonia-N Low Level (Preserved)	KONE/COL	8765492	N/A	2017/09/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8760892	N/A	2017/09/16	
Nitrite (N) (low level)	TRAA/COL	8760893	N/A	2017/09/16	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8760534	N/A	2017/09/19	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/09/16	
pH Water	AT/ALK	8763798	2017/09/19	2017/09/20	
Sulphate - Low Level	KONE/COL	8763152	N/A	2017/09/18	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8764035	2017/09/16	2017/09/19	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8764034	2017/09/16	2017/09/19	
Total Suspended Solids-Low Level	BAL/BAL	8762433	2017/09/19	2017/09/19	

Maxxam ID: RZ2902 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2017/09/13
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8764523	N/A	2017/09/20	Name Redacted

Maxxam ID: RZ2903
Sample ID: KZ-26
Matrix: Water

Collected: 2017/09/13
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8765442	2017/09/19	2017/09/19	Name Redacted
Alkalinity - Low Level	AT/ALK	8763812	2017/09/19	2017/09/20	
Chloride - Low Level	KONE/COL	8763149	N/A	2017/09/18	
Cyanide SAD (strong acid dissociable)	TECH/COL	8763469	N/A	2017/09/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8763472	N/A	2017/09/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8764523	N/A	2017/09/20	
Conductance - Low Level	AT/ALK	8763811	2017/09/19	2017/09/20	
Fluoride - Low Level	ISE/ISE	8763318	N/A	2017/09/19	
Hardness Total (calculated as CaCO3)	CALC	8760453	N/A	2017/09/20	
Hardness (calculated as CaCO3)	CALC	8760454	N/A	2017/09/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8763073	N/A	2017/09/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8763368	2017/09/19	2017/09/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8760662	N/A	2017/09/20	
Ion Balance	CALC	8760663	N/A	2017/09/20	
Sum of cations, anions	CALC	8760834	N/A	2017/09/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8760456	N/A	2017/09/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8761858	N/A	2017/09/19	
Elements by ICPMS Digested LL (total)	ICP/CRCM	8764745	2017/09/20	2017/09/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8760458	N/A	2017/09/20	
Ammonia-N Low Level (Preserved)	KONE/COL	8765498	N/A	2017/09/20	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RZ2903
Sample ID: KZ-26
Matrix: Water

Collected: 2017/09/13
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8760892	N/A	2017/09/16	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8760893	N/A	2017/09/16	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8760534	N/A	2017/09/19	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/09/16	
pH Water	AT/ALK	8763798	2017/09/19	2017/09/20	
Sulphate - Low Level	KONE/COL	8763152	N/A	2017/09/18	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8764035	2017/09/16	2017/09/19	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8764034	2017/09/16	2017/09/19	
Total Suspended Solids-Low Level	BAL/BAL	8762433	2017/09/19	2017/09/19	

Maxxam ID: RZ2904
Sample ID: KZ-28
Matrix: Water

Collected: 2017/09/14
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8765442	2017/09/19	2017/09/19	Name Redacted
Alkalinity - Low Level	AT/ALK	8764049	2017/09/19	2017/09/20	
Chloride - Low Level	KONE/COL	8763149	N/A	2017/09/18	
Cyanide SAD (strong acid dissociable)	TECH/COL	8763469	N/A	2017/09/19	
Cyanide WAD (weak acid dissociable)	TECH/COL	8763472	N/A	2017/09/19	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8764523	N/A	2017/09/20	
Conductance - Low Level	AT/ALK	8764052	2017/09/19	2017/09/20	
Fluoride - Low Level	ISE/ISE	8763318	N/A	2017/09/19	
Hardness Total (calculated as CaCO3)	CALC	8760453	N/A	2017/09/19	
Hardness (calculated as CaCO3)	CALC	8760454	N/A	2017/09/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8763178	N/A	2017/09/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8763368	2017/09/19	2017/09/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8760662	N/A	2017/09/20	
Ion Balance	CALC	8760663	N/A	2017/09/20	
Sum of cations, anions	CALC	8760834	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8760456	N/A	2017/09/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8761858	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8760458	N/A	2017/09/19	
Elements by ICPMS Low Level (total)	ICP/CRCM	8762706	N/A	2017/09/19	
Ammonia-N Low Level (Preserved)	KONE/COL	8765496	N/A	2017/09/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8760892	N/A	2017/09/16	
Nitrite (N) (low level)	TRAA/COL	8760893	N/A	2017/09/16	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8760534	N/A	2017/09/19	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/09/16	
pH Water	AT/ALK	8764050	2017/09/19	2017/09/20	
Sulphate - Low Level	KONE/COL	8763152	N/A	2017/09/18	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8764035	2017/09/16	2017/09/19	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8763944	2017/09/19	2017/09/19	
Total Suspended Solids-Low Level	BAL/BAL	8762433	2017/09/19	2017/09/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RZ2905
Sample ID: KZ-37
Matrix: Water

Collected: 2017/09/14
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8765442	2017/09/19	2017/09/19	Name Redacted
Alkalinity - Low Level	AT/ALK	8763812	2017/09/19	2017/09/20	
Chloride - Low Level	KONE/COL	8763149	N/A	2017/09/18	
Cyanide SAD (strong acid dissociable)	TECH/COL	8764880	N/A	2017/09/20	
Cyanide WAD (weak acid dissociable)	TECH/COL	8764885	N/A	2017/09/20	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8764523	N/A	2017/09/20	
Conductance - Low Level	AT/ALK	8763811	2017/09/19	2017/09/20	
Fluoride - Low Level	ISE/ISE	8763318	N/A	2017/09/19	
Hardness Total (calculated as CaCO3)	CALC	8760453	N/A	2017/09/19	
Hardness (calculated as CaCO3)	CALC	8760454	N/A	2017/09/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8763178	N/A	2017/09/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8763368	2017/09/19	2017/09/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8760662	N/A	2017/09/20	
Ion Balance	CALC	8760663	N/A	2017/09/20	
Sum of cations, anions	CALC	8760834	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8760456	N/A	2017/09/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8761858	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8760458	N/A	2017/09/19	
Elements by ICPMS Low Level (total)	ICP/CRCM	8762706	N/A	2017/09/19	
Ammonia-N Low Level (Preserved)	KONE/COL	8765498	N/A	2017/09/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8760892	N/A	2017/09/16	
Nitrite (N) (low level)	TRAA/COL	8760893	N/A	2017/09/16	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8760534	N/A	2017/09/19	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/09/16	
pH Water	AT/ALK	8763798	2017/09/19	2017/09/20	
Sulphate - Low Level	KONE/COL	8763152	N/A	2017/09/18	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8764035	2017/09/16	2017/09/19	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8764034	2017/09/19	2017/09/19	
Total Suspended Solids-Low Level	BAL/BAL	8762433	2017/09/19	2017/09/19	

Maxxam ID: RZ2905 Dup
Sample ID: KZ-37
Matrix: Water

Collected: 2017/09/14
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8764880	N/A	2017/09/20	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8764885	N/A	2017/09/20	

Maxxam ID: RZ2906
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/09/15
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8765442	2017/09/19	2017/09/19	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: RZ2906
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/09/15
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Low Level	AT/ALK	8763812	2017/09/19	2017/09/20	Name Redacted
Chloride - Low Level	KONE/COL	8763149	N/A	2017/09/18	
Cyanide SAD (strong acid dissociable)	TECH/COL	8764880	N/A	2017/09/20	
Cyanide WAD (weak acid dissociable)	TECH/COL	8764885	N/A	2017/09/20	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8764525	N/A	2017/09/20	
Conductance - Low Level	AT/ALK	8763811	2017/09/19	2017/09/20	
Fluoride - Low Level	ISE/ISE	8763318	N/A	2017/09/19	
Hardness Total (calculated as CaCO3)	CALC	8760453	N/A	2017/09/19	
Hardness (calculated as CaCO3)	CALC	8760454	N/A	2017/09/20	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8763178	N/A	2017/09/19	
Mercury (Total-LowLevel) by CVAF	CV/AF	8763368	2017/09/19	2017/09/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8760662	N/A	2017/09/20	
Ion Balance	CALC	8760663	N/A	2017/09/20	
Sum of cations, anions	CALC	8760834	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8760456	N/A	2017/09/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8761858	N/A	2017/09/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8760458	N/A	2017/09/19	
Elements by ICPMS Low Level (total)	ICP/CRCM	8762706	N/A	2017/09/19	
Ammonia-N Low Level (Preserved)	KONE/COL	8765492	N/A	2017/09/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8760892	N/A	2017/09/16	
Nitrite (N) (low level)	TRAA/COL	8760893	N/A	2017/09/16	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8760534	N/A	2017/09/19	
pH Water	AT/ALK	8763798	2017/09/19	2017/09/20	
Sulphate - Low Level	KONE/COL	8763152	N/A	2017/09/18	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8764035	2017/09/16	2017/09/19	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8763944	2017/09/19	2017/09/19	
Total Suspended Solids-Low Level	BAL/BAL	8762433	2017/09/19	2017/09/19	

Maxxam ID: RZ2906 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/09/15
Shipped:
Received: 2017/09/15

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8765442	2017/09/19	2017/09/19	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8763178	N/A	2017/09/19	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8761858	N/A	2017/09/19	
Elements by ICPMS Low Level (total)	ICP/CRCM	8762706	N/A	2017/09/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.7°C
Package 2	6.0°C
Package 3	3.0°C

Revised Report V2 (M_S): Comment added to sample Trip Blank for Total Metals at the parameter level to appear in A085 EDD report.

Sample RZ2903 [KZ-26] : Sample analyzed for digested low level metals due to sediment in sample. This results in an increased reportable detection limit for Al B Ba Bi Cr Co Cu Fe Mn Ni P Pb Sb Si Ti U V and Zn.

Sample RZ2906, Elements by ICPMS Low Level (total): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8760892	Nitrate plus Nitrite (N)	2017/09/16	106	80 - 120	107	80 - 120	<0.0020	mg/L	0.74	25
8760893	Nitrite (N)	2017/09/16	103	80 - 120	100	80 - 120	<0.0020	mg/L	NC	25
8761694	Total Suspended Solids	2017/09/18			98	80 - 120	<1.0	mg/L		
8761858	Dissolved Aluminum (Al)	2017/09/19	104	80 - 120	113	80 - 120	<0.00050	mg/L	NC	20
8761858	Dissolved Antimony (Sb)	2017/09/19	100	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8761858	Dissolved Arsenic (As)	2017/09/19	107	80 - 120	112	80 - 120	<0.000020	mg/L	NC	20
8761858	Dissolved Barium (Ba)	2017/09/19	NC	80 - 120	108	80 - 120	<0.000020	mg/L	NC	20
8761858	Dissolved Beryllium (Be)	2017/09/19	103	80 - 120	106	80 - 120	<0.000010	mg/L	NC	20
8761858	Dissolved Bismuth (Bi)	2017/09/19	100	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8761858	Dissolved Boron (B)	2017/09/19	98	80 - 120	102	80 - 120	<0.010	mg/L	NC	20
8761858	Dissolved Cadmium (Cd)	2017/09/19	99	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8761858	Dissolved Chromium (Cr)	2017/09/19	95	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20
8761858	Dissolved Cobalt (Co)	2017/09/19	93	80 - 120	105	80 - 120	<0.0000050	mg/L	NC	20
8761858	Dissolved Copper (Cu)	2017/09/19	93	80 - 120	107	80 - 120	<0.000050	mg/L	NC	20
8761858	Dissolved Iron (Fe)	2017/09/19	100	80 - 120	105	80 - 120	<0.0010	mg/L	NC	20
8761858	Dissolved Lead (Pb)	2017/09/19	102	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8761858	Dissolved Lithium (Li)	2017/09/19	98	80 - 120	107	80 - 120	<0.00050	mg/L	NC	20
8761858	Dissolved Manganese (Mn)	2017/09/19	99	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20
8761858	Dissolved Molybdenum (Mo)	2017/09/19	103	80 - 120	107	80 - 120	<0.000050	mg/L	NC	20
8761858	Dissolved Nickel (Ni)	2017/09/19	94	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
8761858	Dissolved Phosphorus (P)	2017/09/19					<0.0020	mg/L	NC	20
8761858	Dissolved Selenium (Se)	2017/09/19	105	80 - 120	110	80 - 120	<0.000040	mg/L	NC	20
8761858	Dissolved Silicon (Si)	2017/09/19					<0.050	mg/L	NC	20
8761858	Dissolved Silver (Ag)	2017/09/19	106	80 - 120	113	80 - 120	<0.0000050	mg/L	NC	20
8761858	Dissolved Strontium (Sr)	2017/09/19	NC	80 - 120	110	80 - 120	<0.000050	mg/L	NC	20
8761858	Dissolved Thallium (Tl)	2017/09/19	103	80 - 120	105	80 - 120	<0.0000020	mg/L	NC	20
8761858	Dissolved Tin (Sn)	2017/09/19	95	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
8761858	Dissolved Titanium (Ti)	2017/09/19	99	80 - 120	112	80 - 120	<0.00050	mg/L	NC	20
8761858	Dissolved Uranium (U)	2017/09/19	105	80 - 120	106	80 - 120	<0.0000020	mg/L	NC	20
8761858	Dissolved Vanadium (V)	2017/09/19	98	80 - 120	106	80 - 120	<0.00020	mg/L	NC	20
8761858	Dissolved Zinc (Zn)	2017/09/19	NC	80 - 120	112	80 - 120	<0.00010	mg/L	NC	20

Maxxam Job #: B780106
Report Date: 2017/09/27

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8761858	Dissolved Zirconium (Zr)	2017/09/19	94	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8762158	Total Mercury (Hg)	2017/09/18	103	80 - 120	106	80 - 120	<0.0000020	mg/L	NC	20
8762433	Total Suspended Solids	2017/09/19			102	80 - 120	<1.0	mg/L		
8762706	Total Aluminum (Al)	2017/09/19	105	80 - 120	111	80 - 120	<0.00050	mg/L	NC	20
8762706	Total Antimony (Sb)	2017/09/19	101	80 - 120	104	80 - 120	<0.000020	mg/L	NC	20
8762706	Total Arsenic (As)	2017/09/19	105	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
8762706	Total Barium (Ba)	2017/09/19	NC	80 - 120	107	80 - 120	<0.000020	mg/L	1.1	20
8762706	Total Beryllium (Be)	2017/09/19	100	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20
8762706	Total Bismuth (Bi)	2017/09/19	101	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8762706	Total Boron (B)	2017/09/19	99	80 - 120	99	80 - 120	<0.010	mg/L	NC	20
8762706	Total Cadmium (Cd)	2017/09/19	101	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8762706	Total Chromium (Cr)	2017/09/19	95	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8762706	Total Cobalt (Co)	2017/09/19	95	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8762706	Total Copper (Cu)	2017/09/19	94	80 - 120	105	80 - 120	<0.000050	mg/L	NC	20
8762706	Total Iron (Fe)	2017/09/19	100	80 - 120	107	80 - 120	<0.0010	mg/L	NC	20
8762706	Total Lead (Pb)	2017/09/19	103	80 - 120	109	80 - 120	<0.0000050	mg/L	NC	20
8762706	Total Lithium (Li)	2017/09/19	96	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
8762706	Total Manganese (Mn)	2017/09/19	98	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8762706	Total Molybdenum (Mo)	2017/09/19	106	80 - 120	105	80 - 120	<0.000050	mg/L	NC	20
8762706	Total Nickel (Ni)	2017/09/19	94	80 - 120	103	80 - 120	<0.000020	mg/L	NC	20
8762706	Total Phosphorus (P)	2017/09/19					<0.0020	mg/L	NC	20
8762706	Total Selenium (Se)	2017/09/19	105	80 - 120	106	80 - 120	<0.000040	mg/L	NC	20
8762706	Total Silicon (Si)	2017/09/19					<0.050	mg/L	NC	20
8762706	Total Silver (Ag)	2017/09/19	109	80 - 120	113	80 - 120	<0.0000050	mg/L	NC	20
8762706	Total Strontium (Sr)	2017/09/19	NC	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8762706	Total Thallium (Tl)	2017/09/19	103	80 - 120	106	80 - 120	<0.0000020	mg/L	NC	20
8762706	Total Tin (Sn)	2017/09/19	98	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8762706	Total Titanium (Ti)	2017/09/19	98	80 - 120	107	80 - 120	<0.00050	mg/L	NC	20
8762706	Total Uranium (U)	2017/09/19	105	80 - 120	107	80 - 120	<0.0000020	mg/L	NC	20
8762706	Total Vanadium (V)	2017/09/19	100	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
8762706	Total Zinc (Zn)	2017/09/19	NC	80 - 120	108	80 - 120	<0.00010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8762706	Total Zirconium (Zr)	2017/09/19	97	80 - 120	93	80 - 120	<0.00010	mg/L	NC	20
8763073	Dissolved Mercury (Hg)	2017/09/19	104	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8763149	Dissolved Chloride (Cl)	2017/09/18	105	80 - 120	100	80 - 120	<0.50	mg/L	18	20
8763152	Dissolved Sulphate (SO4)	2017/09/18	NC	80 - 120	98	80 - 120	<0.50	mg/L	0.075	20
8763178	Dissolved Mercury (Hg)	2017/09/19	105	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8763317	Fluoride (F)	2017/09/19	103	80 - 120	98	80 - 120	0.014, RDL=0.010	mg/L	0	20
8763318	Fluoride (F)	2017/09/19	104	80 - 120	102	80 - 120	0.018, RDL=0.010	mg/L	0	20
8763368	Total Mercury (Hg)	2017/09/19	95	80 - 120	94	80 - 120	<0.0000020	mg/L	NC	20
8763469	Strong Acid Dissoc. Cyanide (CN)	2017/09/19	100	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8763472	Weak Acid Dissoc. Cyanide (CN)	2017/09/19	105	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8763798	pH	2017/09/20			102	97 - 103			0.13	20
8763811	Conductivity	2017/09/20			100	80 - 120	<1.0	uS/cm	0.88	20
8763812	Alkalinity (PP as CaCO3)	2017/09/20					<0.50	mg/L	NC	20
8763812	Alkalinity (Total as CaCO3)	2017/09/20	NC	80 - 120	99	80 - 120	0.52, RDL=0.50	mg/L	0.094	20
8763812	Bicarbonate (HCO3)	2017/09/20					0.63, RDL=0.50	mg/L	0.094	20
8763812	Carbonate (CO3)	2017/09/20					<0.50	mg/L	NC	20
8763812	Hydroxide (OH)	2017/09/20					<0.50	mg/L	NC	20
8763944	Total Phosphorus (P)	2017/09/19	99	80 - 120	107	80 - 120	<0.0020	mg/L	0.50	20
8764034	Total Phosphorus (P)	2017/09/19	100	80 - 120	106	80 - 120	<0.0020	mg/L	4.6	20
8764035	Dissolved Phosphorus (P)	2017/09/19	93	80 - 120	108	80 - 120	<0.0020	mg/L	5.4	20
8764049	Alkalinity (PP as CaCO3)	2017/09/20					<0.50	mg/L		
8764049	Alkalinity (Total as CaCO3)	2017/09/20			101	80 - 120	0.65, RDL=0.50	mg/L		
8764049	Bicarbonate (HCO3)	2017/09/20					0.79, RDL=0.50	mg/L		
8764049	Carbonate (CO3)	2017/09/20					<0.50	mg/L		
8764049	Hydroxide (OH)	2017/09/20					<0.50	mg/L		
8764050	pH	2017/09/20			101	97 - 103				
8764052	Conductivity	2017/09/20			101	80 - 120	<1.0	uS/cm		
8764523	Dissolved Organic Carbon (C)	2017/09/20	113	80 - 120	111	80 - 120	<0.50	mg/L	6.4	20
8764524	Dissolved Organic Carbon (C)	2017/09/20	107	80 - 120	111	80 - 120	<0.50	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8764525	Dissolved Organic Carbon (C)	2017/09/20	113	80 - 120	115	80 - 120	<0.50	mg/L	NC	20
8764745	Total Aluminum (Al)	2017/09/20	158 (1)	80 - 120	106	80 - 120	<0.0030	mg/L	28 (1)	20
8764745	Total Antimony (Sb)	2017/09/20	107	80 - 120	98	80 - 120	<0.000020	mg/L	5.8	20
8764745	Total Arsenic (As)	2017/09/20	108	80 - 120	99	80 - 120	<0.000020	mg/L	5.3	20
8764745	Total Barium (Ba)	2017/09/20	NC	80 - 120	98	80 - 120	<0.000050	mg/L	0.57	20
8764745	Total Beryllium (Be)	2017/09/20	101	80 - 120	94	80 - 120	<0.000010	mg/L	NC	20
8764745	Total Bismuth (Bi)	2017/09/20	101	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8764745	Total Boron (B)	2017/09/20	102	80 - 120	105	80 - 120	<0.010	mg/L	NC	20
8764745	Total Cadmium (Cd)	2017/09/20	108	80 - 120	102	80 - 120	<0.0000050	mg/L	1.8	20
8764745	Total Chromium (Cr)	2017/09/20	106	80 - 120	100	80 - 120	<0.00010	mg/L	17	20
8764745	Total Cobalt (Co)	2017/09/20	101	80 - 120	99	80 - 120	<0.000010	mg/L	0.82	20
8764745	Total Copper (Cu)	2017/09/20	99	80 - 120	100	80 - 120	<0.00010	mg/L	3.0	20
8764745	Total Iron (Fe)	2017/09/20	NC	80 - 120	104	80 - 120	<0.0050	mg/L	1.7	20
8764745	Total Lead (Pb)	2017/09/20	101	80 - 120	98	80 - 120	<0.000020	mg/L	6.4	20
8764745	Total Lithium (Li)	2017/09/20	100	80 - 120	94	80 - 120	<0.00050	mg/L	3.3	20
8764745	Total Manganese (Mn)	2017/09/20	NC	80 - 120	96	80 - 120	<0.00010	mg/L	2.6	20
8764745	Total Molybdenum (Mo)	2017/09/20	104	80 - 120	101	80 - 120	<0.000050	mg/L	1.3	20
8764745	Total Nickel (Ni)	2017/09/20	101	80 - 120	98	80 - 120	<0.00010	mg/L	3.6	20
8764745	Total Phosphorus (P)	2017/09/20					<0.0050	mg/L	9.4	20
8764745	Total Selenium (Se)	2017/09/20	104	80 - 120	102	80 - 120	<0.000040	mg/L	10	20
8764745	Total Silicon (Si)	2017/09/20					<0.050	mg/L	1.0	20
8764745	Total Silver (Ag)	2017/09/20	105	80 - 120	102	80 - 120	<0.000010	mg/L	12	20
8764745	Total Strontium (Sr)	2017/09/20	NC	80 - 120	95	80 - 120	<0.000050	mg/L	1.8	20
8764745	Total Thallium (Tl)	2017/09/20	104	80 - 120	98	80 - 120	<0.0000020	mg/L	15	20
8764745	Total Tin (Sn)	2017/09/20	97	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8764745	Total Titanium (Ti)	2017/09/20	138 (1)	80 - 120	105	80 - 120	<0.0020	mg/L	NC	20
8764745	Total Uranium (U)	2017/09/20	104	80 - 120	95	80 - 120	<0.0000050	mg/L	1.2	20
8764745	Total Vanadium (V)	2017/09/20	107	80 - 120	98	80 - 120	<0.00020	mg/L	0.25	20
8764745	Total Zinc (Zn)	2017/09/20	108	80 - 120	101	80 - 120	<0.0010	mg/L	5.9	20
8764745	Total Zirconium (Zr)	2017/09/20	NC	80 - 120	98	80 - 120	<0.00010	mg/L	3.7	20
8764880	Strong Acid Dissoc. Cyanide (CN)	2017/09/20	107	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8764885	Weak Acid Dissoc. Cyanide (CN)	2017/09/20	99	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8765442	Acidity (pH 4.5)	2017/09/19					<1.0	mg/L	NC	20
8765442	Acidity (pH 8.3)	2017/09/19			88	80 - 120	<1.0	mg/L	0.31	20
8765492	Total Ammonia (N)	2017/09/20	89	80 - 120	106	80 - 120	<0.0050	mg/L	NC	20
8765496	Total Ammonia (N)	2017/09/20	NC	80 - 120	105	80 - 120	<0.0050	mg/L	1.0	20
8765498	Total Ammonia (N)	2017/09/20	90	80 - 120	104	80 - 120	<0.0050	mg/L	NC	20
8767168	Total Barium (Ba)	2017/09/22			105	80 - 120	<0.000020	mg/L	0.85	20

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B780106
Report Date: 2017/09/27

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Name Redacted Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08444210

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where ap		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:
						Rush Confirmation #:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		14-Sep-17	15:10	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3	KZ-6		14-Sep-17	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
4	KZ-9		14-Sep-17	9:15	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5	KZ-13		14-Sep-17	11:45	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
6	KZ-15		13-Sep-17	14:50	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
7	KZ-16		13-Sep-17	15:40	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
8	KZ-17		13-Sep-17	16:25	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
9	KZ-18		14-Sep-17	10:05	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
10	KZ-19		13-Sep-17	10:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	

LABORATORY USE ONLY

CUSTODY SEAL (Y) / N		COOLER TEMPERATURES
Present	Intact	
Y	Y	9,9,6
Y	Y	7,5,10
Y	Y	6,7,7

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Signature x@1500
2017-09-15
TEMP: 4, 3, 4
5 7 6
3 2 4

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	15/09/2017	13:00	Signature Redacted	2017/09/16	15:50

B780106_COC

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

BBY FCD-00077/05

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08444211

Invoice Information		Report Information (if differs from invoice)		Project Information (where ap	
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:	
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah
Phone:		Phone:	(867) 668-6463	Site #:	
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature

Turnaround Time (TAT) Required

x Regular TAT 5 days (Most analyses)

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Rush TAT (Surcharges will be applied)

☐ Same Day ☐ 2 Days ☐ 1 Day ☐ 3 Days

Date Required:

Rush Confirmation #:

Regulatory Criteria

☐ BC CSR Soil ☐ BC CSR Water

☐ CCME (Specify) ☐ Other (Specify)

☐ Drinking Water ☐ BC Water Quality

Special Instructions

☐ Return Cooler

☐ Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-21		13-Sep-17	12:55	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
2	KZ-22		13-Sep-17	11:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3	KZ-26		13-Sep-17	9:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
4	KZ-28		14-Sep-17	13:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	KZ-37		14-Sep-17	8:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6	Trip Blank		n/a	n/a	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
7																			
8																			
9																			
10																			

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
Y	Y	9.9.6
Y	Y	7.5.10
Y	Y	6.7.7

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Shyana @1500
2017-09-15
TEMP: 4 13 14
5 7 6
3 2 4

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	15/09/2017	13:00	Signature Redacted	2017/09/16	15:50
			V		

B780106_COC

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08445604, 08445605

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/10/18
Report #: R2462365
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B788495
Received: 2017/10/06, 16:20

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	15	2017/10/10	2017/10/10	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Low Level	14	2017/10/10	2017/10/12	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Low Level	1	2017/10/16	2017/10/16	BBY6SOP-00026	SM 22 2320 B m
Chloride - Low Level	15	N/A	2017/10/10	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	15	N/A	2017/10/11	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	15	N/A	2017/10/11	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	15	N/A	2017/10/12	BBY6SOP-00003	SM 22 5310 C m
Conductance - Low Level	15	2017/10/10	2017/10/12	BBY6SOP-00026	SM 22 2510 B m
Fluoride - Low Level	15	N/A	2017/10/11	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3) (2)	15	N/A	2017/10/12	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	15	N/A	2017/10/12	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	15	N/A	2017/10/11	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	15	2017/10/11	2017/10/11	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance (as Cations/Anions Ratio)	15	N/A	2017/10/12	BBY WI-00033	Auto Calc
Ion Balance	15	N/A	2017/10/12	BBY WI-00033	SM 22 1030E
Sum of cations, anions	15	N/A	2017/10/12	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	15	N/A	2017/10/12	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	15	N/A	2017/10/11	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	15	N/A	2017/10/12	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	15	N/A	2017/10/11	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N Low Level (Preserved)	14	N/A	2017/10/13	BBY6SOP-00009	EPA 350.1 m
Ammonia-N Low Level (Preserved)	1	N/A	2017/10/16	BBY6SOP-00009	EPA 350.1 m
Nitrate+Nitrite (N) (low level)	15	N/A	2017/10/11	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	15	N/A	2017/10/11	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N) Low Level Calc	15	N/A	2017/10/12	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	14	N/A	2017/10/11	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (3)	15	2017/10/10	2017/10/12	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate - Low Level	15	N/A	2017/10/10	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	15	2017/10/11	2017/10/11	BBY6SOP-00013	SM 22 4500-P E m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08445604, 08445605

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/10/18
Report #: R2462365
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B788495
Received: 2017/10/06, 16:20

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Phosphorus - Low Level Unpreserved	15	2017/10/11	2017/10/11	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	15	2017/10/11	2017/10/12	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(3) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08445604, 08445605

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/10/18
Report #: R2462365
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B788495
Received: 2017/10/06, 16:20

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SE1056		SE1057		SE1058		
Sampling Date		2017/10/05 14:20		2017/10/05 13:15		2017/10/05 10:00		
COC Number		08445604		08445604		08445604		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.6	8787281	3.3	8787281	3.7	N/A	8787281
Cation Sum	meq/L	2.3	8787281	2.7	8787281	3.4	N/A	8787281
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.91	8787279	0.81	8787279	0.93	0.010	8787279
Ion Balance (% Difference)	%	4.6	8787280	10	8787280	3.5	N/A	8787280
Nitrate (N)	mg/L	0.116	8787288	0.0711	8787288	0.115	0.0020	8787288
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8788858	<0.00050	8788858	<0.00050	0.00050	8788858
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8788860	<0.00050	8788860	<0.00050	0.00050	8788860
Fluoride (F)	mg/L	0.041	8788929	0.063	8788929	0.073	0.010	8788929
Dissolved Organic Carbon (C)	mg/L	0.91	8790258	1.42	8790258	1.27	0.50	8790258
Acidity (pH 4.5)	mg/L	<1.0	8787408	<1.0	8787408	<1.0	1.0	8788130
Alkalinity (Total as CaCO3)	mg/L	66.5	8787983	139	8787983	147	0.50	8787999
Acidity (pH 8.3)	mg/L	<1.0	8787408	<1.0	8787408	<1.0	1.0	8788130
Alkalinity (PP as CaCO3)	mg/L	<0.50	8787983	<0.50	8787983	<0.50	0.50	8787999
Bicarbonate (HCO3)	mg/L	81.1	8787983	170	8787983	179	0.50	8787999
Carbonate (CO3)	mg/L	<0.50	8787983	<0.50	8787983	<0.50	0.50	8787999
Hydroxide (OH)	mg/L	<0.50	8787983	<0.50	8787983	<0.50	0.50	8787999
Anions								
Dissolved Sulphate (SO4)	mg/L	59.1	8788746	21.4	8788706	34.4	0.50	8788722
Dissolved Chloride (Cl)	mg/L	<0.50	8788695	0.91	8788700	0.66	0.50	8788717
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020	8789523	0.0031	8789523	0.0025	0.0020	8789523
Total Ammonia (N)	mg/L	<0.0050	8792081	<0.0050	8792081	0.011	0.0050	8792081
Nitrate plus Nitrite (N)	mg/L	0.116	8790879	0.0711	8790879	0.115	0.0020	8790867
Nitrite (N)	mg/L	<0.0020	8790880	<0.0020	8790880	<0.0020	0.0020	8790870
Total Phosphorus (P)	mg/L	<0.0020	8789531	0.0021	8789531	0.0028	0.0020	8789531
Physical Properties								
Conductivity	uS/cm	256	8787981	295	8787981	339	1.0	8787994
pH	pH	7.97	8787977	8.26	8787977	8.26		8787988

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SE1056		SE1057		SE1058		
Sampling Date		2017/10/05 14:20		2017/10/05 13:15		2017/10/05 10:00		
COC Number		08445604		08445604		08445604		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8788668	1.1	8788668	1.4	1.0	8788668
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SE1059	SE1060		SE1061	SE1062		
Sampling Date		2017/10/03 15:50	2017/10/04 15:20		2017/10/04 16:20	2017/10/04 17:00		
COC Number		08445604	08445604		08445604	08445604		
	UNITS	KZ-13	KZ-15	QC Batch	KZ-16	KZ-17	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	1.6	4.2	8787281	4.1	3.7	N/A	8787281
Cation Sum	meq/L	1.4	3.9	8787281	3.9	3.4	N/A	8787281
Filter and HNO3 Preservation	N/A	FIELD	FIELD	ONSITE	FIELD	FIELD		ONSITE
Ion Balance	N/A	0.86	0.92	8787279	0.95	0.93	0.010	8787279
Ion Balance (% Difference)	%	7.6	4.2	8787280	2.8	3.9	N/A	8787280
Nitrate (N)	mg/L	0.0742	0.130	8787288	0.169	0.181	0.0020	8787288
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00055	<0.00050	8788858	<0.00050	<0.00050	0.00050	8788858
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	8788860	<0.00050	<0.00050	0.00050	8788860
Fluoride (F)	mg/L	0.045	0.086	8788929	0.072	0.084	0.010	8788934
Dissolved Organic Carbon (C)	mg/L	3.47	1.17	8790258	1.22	1.02	0.50	8790258
Acidity (pH 4.5)	mg/L	<1.0	<1.0	8787408	<1.0	<1.0	1.0	8787408
Alkalinity (Total as CaCO3)	mg/L	65.5	176	8787983	172	154	0.50	8787983
Acidity (pH 8.3)	mg/L	<1.0	<1.0	8787408	<1.0	<1.0	1.0	8787408
Alkalinity (PP as CaCO3)	mg/L	<0.50	3.24	8787983	1.93	<0.50	0.50	8787983
Bicarbonate (HCO3)	mg/L	79.9	207	8787983	205	188	0.50	8787983
Carbonate (CO3)	mg/L	<0.50	3.89	8787983	2.32	<0.50	0.50	8787983
Hydroxide (OH)	mg/L	<0.50	<0.50	8787983	<0.50	<0.50	0.50	8787983
Anions								
Dissolved Sulphate (SO4)	mg/L	13.5	30.7	8788706	31.0	29.4	0.50	8788746
Dissolved Chloride (Cl)	mg/L	0.70	0.77	8788700	<0.50	0.58	0.50	8788695
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0038	0.0031	8789523	<0.0020	<0.0020	0.0020	8789523
Total Ammonia (N)	mg/L	0.012	0.0090	8792081	0.0050	0.013	0.0050	8792081
Nitrate plus Nitrite (N)	mg/L	0.0742	0.130	8790879	0.169	0.181	0.0020	8790879
Nitrite (N)	mg/L	<0.0020	<0.0020	8790880	<0.0020	<0.0020	0.0020	8790880
Total Phosphorus (P)	mg/L	0.0029	0.0028	8789531	0.0022	0.0117	0.0020	8789531
Physical Properties								
Conductivity	uS/cm	152	376	8787981	365	339	1.0	8787981
pH	pH	7.98	8.38	8787977	8.34	8.23		8787977

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SE1059	SE1060		SE1061	SE1062		
Sampling Date		2017/10/03 15:50	2017/10/04 15:20		2017/10/04 16:20	2017/10/04 17:00		
COC Number		08445604	08445604		08445604	08445604		
	UNITS	KZ-13	KZ-15	QC Batch	KZ-16	KZ-17	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	1.6	<1.0	8788668	<1.0	<1.0	1.0	8788668
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SE1063		SE1064		SE1068	SE1069		
Sampling Date		2017/10/05 10:35		2017/10/05 12:30		2017/10/04 14:25	2017/10/04 13:25		
COC Number		08445604		08445604		08445605	08445605		
	UNITS	KZ-18	QC Batch	KZ-19	QC Batch	KZ-21	KZ-22	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	4.2	8787281	3.3	8787281	5.5	5.1	N/A	8787281
Cation Sum	meq/L	3.6	8787281	2.9	8787281	5.1	4.9	N/A	8787281
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD	FIELD		ONSITE
Ion Balance	N/A	0.86	8787279	0.90	8787279	0.92	0.96	0.010	8787279
Ion Balance (% Difference)	%	7.4	8787280	5.0	8787280	4.1	2.0	N/A	8787280
Nitrate (N)	mg/L	0.144	8787288	0.0730	8787288	0.0100	0.0709	0.0020	8787288
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8788858	<0.00050	8788858	0.00057	0.00050	0.00050	8788858
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8788860	<0.00050	8788860	<0.00050	<0.00050	0.00050	8788860
Fluoride (F)	mg/L	0.067	8788934	0.062	8788934	0.170	0.130	0.010	8788934
Dissolved Organic Carbon (C)	mg/L	1.34	8790258	1.31	8790258	4.39	2.86	0.50	8790258
Acidity (pH 4.5)	mg/L	<1.0	8787406	<1.0	8787408	<1.0	<1.0	1.0	8787408
Alkalinity (Total as CaCO3)	mg/L	182	8787983	139	8787983	227	210	0.50	8787983
Acidity (pH 8.3)	mg/L	<1.0	8787406	<1.0	8787408	<1.0	1.9	1.0	8787408
Alkalinity (PP as CaCO3)	mg/L	2.49	8787983	1.45	8787983	4.78	3.65	0.50	8787983
Bicarbonate (HCO3)	mg/L	216	8787983	166	8787983	266	247	0.50	8787983
Carbonate (CO3)	mg/L	2.99	8787983	1.74	8787983	5.74	4.38	0.50	8787983
Hydroxide (OH)	mg/L	<0.50	8787983	<0.50	8787983	<0.50	<0.50	0.50	8787983
Anions									
Dissolved Sulphate (SO4)	mg/L	25.1	8788746	21.5	8788706	44.8	41.2	0.50	8788706
Dissolved Chloride (Cl)	mg/L	0.79	8788695	0.80	8788700	0.89	0.79	0.50	8788700
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0282	8789523	0.0028	8789523	0.0151	0.0087	0.0020	8789523
Total Ammonia (N)	mg/L	0.011	8792081	<0.0050	8792081	0.022	0.054	0.0050	8792081
Nitrate plus Nitrite (N)	mg/L	0.144	8790879	0.0752	8790867	0.0121	0.0709	0.0020	8790879
Nitrite (N)	mg/L	<0.0020	8790880	0.0022	8790870	0.0021	<0.0020	0.0020	8790880
Total Phosphorus (P)	mg/L	0.0294	8789531	0.0026	8789531	0.0144	0.0063	0.0020	8789531
Physical Properties									
Conductivity	uS/cm	364	8787981	295	8787981	483	446	1.0	8787981
pH	pH	8.34	8787977	8.31	8787977	8.42	8.40		8787977

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SE1063		SE1064		SE1068	SE1069		
Sampling Date		2017/10/05 10:35		2017/10/05 12:30		2017/10/04 14:25	2017/10/04 13:25		
COC Number		08445604		08445604		08445605	08445605		
	UNITS	KZ-18	QC Batch	KZ-19	QC Batch	KZ-21	KZ-22	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8788668	1.5	8788673	3.7	2.0	1.0	8788673
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SE1070		SE1071		SE1072		
Sampling Date		2017/10/04 10:55		2017/10/04 10:00		2017/10/05 09:25		
COC Number		08445605		08445605		08445605		
	UNITS	KZ-26	QC Batch	KZ-28	QC Batch	KZ-37	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	5.2	8787281	0.023	8787281	3.8	N/A	8787281
Cation Sum	meq/L	4.8	8787281	0.0067	8787281	3.6	N/A	8787281
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.92	8787279	0.29 (1)	8787279	0.94	0.010	8787279
Ion Balance (% Difference)	%	4.0	8787280	55 (1)	8787280	3.1	N/A	8787280
Nitrate (N)	mg/L	0.0752	8787288	0.0139 (2)	8787288	0.119	0.0020	8787288
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8788858	<0.00050	8788858	<0.00050	0.00050	8788858
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8788860	<0.00050	8788860	<0.00050	0.00050	8788860
Fluoride (F)	mg/L	0.120	8788934	0.014	8788934	0.071	0.010	8788934
Dissolved Organic Carbon (C)	mg/L	2.87	8790258	<0.50	8790258	1.31	0.50	8790258
Acidity (pH 4.5)	mg/L	<1.0	8787408	<1.0	8787408	<1.0	1.0	8787408
Alkalinity (Total as CaCO3)	mg/L	215	8787983	<0.50	8787983	155	0.50	8787983
Acidity (pH 8.3)	mg/L	<1.0	8787408	<1.0	8787408	2.0	1.0	8787408
Alkalinity (PP as CaCO3)	mg/L	4.96	8787983	<0.50	8787983	<0.50	0.50	8787983
Bicarbonate (HCO3)	mg/L	250	8787983	<0.50	8787983	189	0.50	8787983
Carbonate (CO3)	mg/L	5.95	8787983	<0.50	8787983	<0.50	0.50	8787983
Hydroxide (OH)	mg/L	<0.50	8787983	<0.50	8787983	<0.50	0.50	8787983
Anions								
Dissolved Sulphate (SO4)	mg/L	41.0	8788746	<0.50	8788706	31.2	0.50	8788706
Dissolved Chloride (Cl)	mg/L	0.87	8788695	0.75	8788700	1.1	0.50	8788700
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0053	8789523	<0.0020	8789523	0.0063	0.0020	8789523
Total Ammonia (N)	mg/L	0.0070	8792081	0.0090 (2)	8795319	0.028	0.0050	8792081
Nitrate plus Nitrite (N)	mg/L	0.0777	8790879	0.0139 (2)	8790879	0.119	0.0020	8790879
Nitrite (N)	mg/L	0.0025	8790880	<0.0020	8790880	<0.0020	0.0020	8790880
Total Phosphorus (P)	mg/L	0.0054	8789531	<0.0020	8789531	0.0053	0.0020	8789531

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).
(2) Test repeated

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SE1070		SE1071		SE1072		
Sampling Date		2017/10/04 10:55		2017/10/04 10:00		2017/10/05 09:25		
COC Number		08445605		08445605		08445605		
	UNITS	KZ-26	QC Batch	KZ-28	QC Batch	KZ-37	RDL	QC Batch
Physical Properties								
Conductivity	uS/cm	452	8787981	1.2	8787981	346	1.0	8787981
pH	pH	8.44	8787977	5.28	8787977	8.23		8787977
Physical Properties								
Total Suspended Solids	mg/L	5.5	8788673	<1.0	8788673	1.1	1.0	8788673
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SE1073		
Sampling Date		2017/10/06 16:20		
COC Number		08445605		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Anion Sum	meq/L	0.043	N/A	8787281
Cation Sum	meq/L	0.0017	N/A	8787281
Ion Balance	N/A	0.039 (1)	0.010	8787279
Ion Balance (% Difference)	%	92 (1)	N/A	8787280
Nitrate (N)	mg/L	<0.0020	0.0020	8787288
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8788858
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8788860
Fluoride (F)	mg/L	0.012	0.010	8788934
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8790258
Acidity (pH 4.5)	mg/L	<1.0	1.0	8787408
Alkalinity (Total as CaCO3)	mg/L	<0.50	0.50	8795291
Acidity (pH 8.3)	mg/L	<1.0	1.0	8787408
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8795291
Bicarbonate (HCO3)	mg/L	<0.50	0.50	8795291
Carbonate (CO3)	mg/L	<0.50	0.50	8795291
Hydroxide (OH)	mg/L	<0.50	0.50	8795291
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8788706
Dissolved Chloride (Cl)	mg/L	0.72	0.50	8788700
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8789523
Total Ammonia (N)	mg/L	<0.0050	0.0050	8792081
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	8790879
Nitrite (N)	mg/L	<0.0020	0.0020	8790880
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8789531
Physical Properties				
Conductivity	uS/cm	1.1	1.0	8787981

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SE1073		
Sampling Date		2017/10/06 16:20		
COC Number		08445605		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
pH	pH	5.76		8787977
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8788673
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SE1056	SE1057	SE1058	SE1059	SE1060		
Sampling Date		2017/10/05 14:20	2017/10/05 13:15	2017/10/05 10:00	2017/10/03 15:50	2017/10/04 15:20		
COC Number		08445604	08445604	08445604	08445604	08445604		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	113	130	167	65.2	189	0.50	8787278
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000027	0.0000020	8788442
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00362	0.00189	0.00243	0.00667	0.00183	0.00050	8788609
Dissolved Antimony (Sb)	mg/L	0.000021	<0.000020	0.000050	0.000027	0.000031	0.000020	8788609
Dissolved Arsenic (As)	mg/L	0.000065	0.000077	0.000199	0.000214	0.000522	0.000020	8788609
Dissolved Barium (Ba)	mg/L	0.0663	0.0400	0.0811	0.0993	0.0700	0.000020	8788609
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8788609
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8788609
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8788609
Dissolved Cadmium (Cd)	mg/L	0.000211	0.0000130	0.0000750	0.0000190	0.0000310	0.0000050	8788609
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8788609
Dissolved Cobalt (Co)	mg/L	0.0000080	0.0000080	0.0000830	0.0000260	0.0000300	0.0000050	8788609
Dissolved Copper (Cu)	mg/L	0.000570	0.000153	0.000339	0.000437	0.000298	0.000050	8788609
Dissolved Iron (Fe)	mg/L	0.0010	0.0118	0.263	0.0482	0.0302	0.0010	8788609
Dissolved Lead (Pb)	mg/L	0.0000180	<0.0000050	<0.0000050	0.0000090	0.0000060	0.0000050	8788609
Dissolved Lithium (Li)	mg/L	0.00102	0.00059	0.00262	0.00101	0.00229	0.00050	8788609
Dissolved Manganese (Mn)	mg/L	0.000065	0.000483	0.0662	0.0283	0.0286	0.000050	8788609
Dissolved Molybdenum (Mo)	mg/L	0.000604	0.000480	0.000624	0.000648	0.00109	0.000050	8788609
Dissolved Nickel (Ni)	mg/L	0.000302	0.000143	0.000370	0.000401	0.000537	0.000020	8788609
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	0.0034	0.0031	0.0040	0.0020	8788609
Dissolved Selenium (Se)	mg/L	0.00136	0.000602	0.000989	0.000174	0.00108	0.000040	8788609
Dissolved Silicon (Si)	mg/L	2.05	2.08	2.89	2.09	2.75	0.050	8788609
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8788609
Dissolved Strontium (Sr)	mg/L	0.128	0.141	0.177	0.0683	0.186	0.000050	8788609
Dissolved Thallium (Tl)	mg/L	0.0000040	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8788609
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8788609
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8788609
Dissolved Uranium (U)	mg/L	0.00298	0.000870	0.00132	0.000729	0.00275	0.0000020	8788609
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8788609

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SE1056	SE1057	SE1058	SE1059	SE1060		
Sampling Date		2017/10/05 14:20	2017/10/05 13:15	2017/10/05 10:00	2017/10/03 15:50	2017/10/04 15:20		
COC Number		08445604	08445604	08445604	08445604	08445604		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0236	0.00030	0.0124	0.00213	0.00295	0.00010	8788609
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8788609
Dissolved Calcium (Ca)	mg/L	37.2	41.7	55.6	21.7	56.2	0.050	8787283
Dissolved Magnesium (Mg)	mg/L	4.88	6.26	6.86	2.66	11.8	0.050	8787283
Dissolved Potassium (K)	mg/L	1.84	0.796	1.36	1.49	1.13	0.050	8787283
Dissolved Sodium (Na)	mg/L	0.813	0.735	1.17	0.995	1.18	0.050	8787283
Dissolved Sulphur (S)	mg/L	20.0	7.0	11.2	4.3	12.2	3.0	8787283
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SE1061	SE1062	SE1063	SE1064	SE1068		
Sampling Date		2017/10/04 16:20	2017/10/04 17:00	2017/10/05 10:35	2017/10/05 12:30	2017/10/04 14:25		
COC Number		08445604	08445604	08445604	08445604	08445605		
	UNITS	KZ-16	KZ-17	KZ-18	KZ-19	KZ-21	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	189	169	179	144	249	0.50	8787278
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8788442
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00116	0.00092	0.00494	0.00168	0.00170	0.00050	8788609
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000030	0.000028	<0.000020	0.000087	0.000020	8788609
Dissolved Arsenic (As)	mg/L	0.000357	0.000220	0.000485	0.000076	0.00140	0.000020	8788609
Dissolved Barium (Ba)	mg/L	0.0659	0.0650	0.0457	0.0392	0.0619	0.000020	8788609
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8788609
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8788609
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8788609
Dissolved Cadmium (Cd)	mg/L	0.0000170	0.0000190	0.0000280	0.0000150	0.0000080	0.0000050	8788609
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8788609
Dissolved Cobalt (Co)	mg/L	0.0000210	0.0000060	0.0000120	0.0000080	0.0000990	0.0000050	8788609
Dissolved Copper (Cu)	mg/L	0.000289	0.000324	0.000132	0.000156	0.000287	0.000050	8788609
Dissolved Iron (Fe)	mg/L	0.0056	<0.0010	0.0069	0.0149	0.0899	0.0010	8788609
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000070	0.0000050	8788609
Dissolved Lithium (Li)	mg/L	0.00195	0.00232	0.00131	0.00051	0.00428	0.00050	8788609
Dissolved Manganese (Mn)	mg/L	0.00630	0.000807	0.00465	0.000523	0.0876	0.000050	8788609
Dissolved Molybdenum (Mo)	mg/L	0.000521	0.000834	0.00131	0.000465	0.00174	0.000050	8788609
Dissolved Nickel (Ni)	mg/L	0.000402	0.000371	0.000345	0.000150	0.00196	0.000020	8788609
Dissolved Phosphorus (P)	mg/L	0.0022	<0.0020	0.0235	<0.0020	<0.0020	0.0020	8788609
Dissolved Selenium (Se)	mg/L	0.000998	0.00103	0.00110	0.000680	0.000636	0.000040	8788609
Dissolved Silicon (Si)	mg/L	2.69	2.84	2.71	2.30	3.76	0.050	8788609
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8788609
Dissolved Strontium (Sr)	mg/L	0.181	0.160	0.146	0.145	0.182	0.000050	8788609
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8788609
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8788609
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8788609
Dissolved Uranium (U)	mg/L	0.00212	0.00203	0.00226	0.000833	0.00345	0.0000020	8788609
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8788609

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SE1061	SE1062	SE1063	SE1064	SE1068		
Sampling Date		2017/10/04 16:20	2017/10/04 17:00	2017/10/05 10:35	2017/10/05 12:30	2017/10/04 14:25		
COC Number		08445604	08445604	08445604	08445604	08445605		
	UNITS	KZ-16	KZ-17	KZ-18	KZ-19	KZ-21	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00048	0.00091	0.00078	0.00037	0.00054	0.00010	8788609
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00012	0.00010	8788609
Dissolved Calcium (Ca)	mg/L	57.1	51.7	46.7	47.2	60.8	0.050	8787283
Dissolved Magnesium (Mg)	mg/L	11.4	9.59	15.1	6.45	23.5	0.050	8787283
Dissolved Potassium (K)	mg/L	1.08	1.07	0.475	0.807	1.38	0.050	8787283
Dissolved Sodium (Na)	mg/L	1.23	1.09	0.816	0.742	1.53	0.050	8787283
Dissolved Sulphur (S)	mg/L	10.3	9.0	7.0	7.1	14.5	3.0	8787283

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SE1069	SE1070		SE1071		
Sampling Date		2017/10/04 13:25	2017/10/04 10:55		2017/10/04 10:00		
COC Number		08445605	08445605		08445605		
	UNITS	KZ-22	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	239	235	8787278	<0.50	0.50	8787278
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8788442	<0.0000020	0.0000020	8788442
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00134	0.00168	8788609	0.00066 (1)	0.00050	8788609
Dissolved Antimony (Sb)	mg/L	0.000057	0.000072	8788609	<0.000020	0.000020	8788609
Dissolved Arsenic (As)	mg/L	0.00113	0.000875	8788609	<0.000020	0.000020	8788609
Dissolved Barium (Ba)	mg/L	0.0657	0.0694	8788609	0.000123 (1)	0.000020	8794202
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000065 (2)	8788609	<0.000010	0.000010	8788609
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8788609	<0.0000050	0.0000050	8788609
Dissolved Boron (B)	mg/L	<0.010	<0.010	8788609	<0.010	0.010	8788609
Dissolved Cadmium (Cd)	mg/L	0.0000140	0.0000130	8788609	<0.0000050	0.0000050	8788609
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	8788609	<0.00010	0.00010	8788609
Dissolved Cobalt (Co)	mg/L	0.0000660	0.0000530	8788609	<0.0000050	0.0000050	8788609
Dissolved Copper (Cu)	mg/L	0.000334	0.00347 (2)	8788609	<0.000050	0.000050	8788609
Dissolved Iron (Fe)	mg/L	0.0766	0.0549	8788609	<0.0010	0.0010	8788609
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000050	8788609	0.0000100 (1)	0.0000050	8788609
Dissolved Lithium (Li)	mg/L	0.00344	0.00419	8788609	<0.00050	0.00050	8788609
Dissolved Manganese (Mn)	mg/L	0.0462	0.0228	8788609	<0.000050	0.000050	8788609
Dissolved Molybdenum (Mo)	mg/L	0.00130	0.00116	8788609	<0.000050	0.000050	8788609
Dissolved Nickel (Ni)	mg/L	0.00120	0.00105	8788609	<0.000020	0.000020	8788609
Dissolved Phosphorus (P)	mg/L	0.0027	0.0031	8788609	<0.0020	0.0020	8788609
Dissolved Selenium (Se)	mg/L	0.000936	0.000835	8788609	<0.000040	0.000040	8788609
Dissolved Silicon (Si)	mg/L	3.45	3.37	8788609	<0.050	0.050	8788609
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	8788609	<0.0000050	0.0000050	8788609
Dissolved Strontium (Sr)	mg/L	0.192	0.203	8788609	0.000253 (1)	0.000050	8794202
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8788609	<0.0000020	0.0000020	8788609
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	8788609	<0.00020	0.00020	8788609
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	8788609	<0.00050	0.00050	8788609
Dissolved Uranium (U)	mg/L	0.00311	0.00295	8788609	<0.0000020	0.0000020	8788609

RDL = Reportable Detection Limit
(1) Test repeated
(2) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SE1069	SE1070		SE1071		
Sampling Date		2017/10/04 13:25	2017/10/04 10:55		2017/10/04 10:00		
COC Number		08445605	08445605		08445605		
	UNITS	KZ-22	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	8788609	<0.00020	0.00020	8788609
Dissolved Zinc (Zn)	mg/L	0.00105	0.00058	8788609	0.00063 (1)	0.00010	8794202
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	8788609	<0.00010	0.00010	8788609
Dissolved Calcium (Ca)	mg/L	63.6	61.7	8787283	<0.050	0.050	8787283
Dissolved Magnesium (Mg)	mg/L	19.6	19.6	8787283	<0.050	0.050	8787283
Dissolved Potassium (K)	mg/L	1.30	1.28	8787283	<0.050	0.050	8787283
Dissolved Sodium (Na)	mg/L	1.48	1.59	8787283	<0.050	0.050	8787283
Dissolved Sulphur (S)	mg/L	13.9	13.0	8787283	<3.0	3.0	8787283

RDL = Reportable Detection Limit
(1) Test repeated

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SE1072	SE1073		
Sampling Date		2017/10/05 09:25	2017/10/06 16:20		
COC Number		08445605	08445605		
	UNITS	KZ-37	TRIP BLANK	RDL	QC Batch
Misc. Inorganics					
Dissolved Hardness (CaCO3)	mg/L	174	<0.50	0.50	8787278
Elements					
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8788442
Dissolved Metals by ICPMS					
Dissolved Aluminum (Al)	mg/L	0.00259	<0.00050	0.00050	8788609
Dissolved Antimony (Sb)	mg/L	0.000038	<0.000020	0.000020	8788609
Dissolved Arsenic (As)	mg/L	0.000250	<0.000020	0.000020	8788609
Dissolved Barium (Ba)	mg/L	0.0714	<0.000020	0.000020	8788609
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	8788609
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	0.0000050	8788609
Dissolved Boron (B)	mg/L	<0.010	<0.010	0.010	8788609
Dissolved Cadmium (Cd)	mg/L	0.0000690	<0.0000050	0.0000050	8788609
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00010	8788609
Dissolved Cobalt (Co)	mg/L	0.0000680	<0.0000050	0.0000050	8788609
Dissolved Copper (Cu)	mg/L	0.000284	<0.000050	0.000050	8788609
Dissolved Iron (Fe)	mg/L	0.196	<0.0010	0.0010	8788609
Dissolved Lead (Pb)	mg/L	0.0000060	<0.0000050	0.0000050	8788609
Dissolved Lithium (Li)	mg/L	0.00213	<0.00050	0.00050	8788609
Dissolved Manganese (Mn)	mg/L	0.0556	<0.000050	0.000050	8788609
Dissolved Molybdenum (Mo)	mg/L	0.000745	<0.000050	0.000050	8788609
Dissolved Nickel (Ni)	mg/L	0.000384	<0.000020	0.000020	8788609
Dissolved Phosphorus (P)	mg/L	0.0086	<0.0020	0.0020	8788609
Dissolved Selenium (Se)	mg/L	0.00105	<0.000040	0.000040	8788609
Dissolved Silicon (Si)	mg/L	2.78	<0.050	0.050	8788609
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	0.0000050	8788609
Dissolved Strontium (Sr)	mg/L	0.176	<0.000050	0.000050	8788609
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	8788609
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8788609
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00050	8788609
Dissolved Uranium (U)	mg/L	0.00151	<0.0000020	0.0000020	8788609
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	0.00020	8788609
RDL = Reportable Detection Limit					

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SE1072	SE1073		
Sampling Date		2017/10/05 09:25	2017/10/06 16:20		
COC Number		08445605	08445605		
	UNITS	KZ-37	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0107	<0.00010	0.00010	8788609
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8788609
Dissolved Calcium (Ca)	mg/L	54.7	<0.050	0.050	8787283
Dissolved Magnesium (Mg)	mg/L	9.06	<0.050	0.050	8787283
Dissolved Potassium (K)	mg/L	1.17	<0.050	0.050	8787283
Dissolved Sodium (Na)	mg/L	1.15	<0.050	0.050	8787283
Dissolved Sulphur (S)	mg/L	10.2	<3.0	3.0	8787283
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SE1056	SE1057	SE1058	SE1059	SE1060		
Sampling Date		2017/10/05 14:20	2017/10/05 13:15	2017/10/05 10:00	2017/10/03 15:50	2017/10/04 15:20		
COC Number		08445604	08445604	08445604	08445604	08445604		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	117	146	165	69.1	189	0.50	8786945
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8788405
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00342	0.00295	0.0101	0.0328	0.00701	0.00050	8788451
Total Antimony (Sb)	mg/L	0.000027	<0.000020	0.000044	0.000033	0.000031	0.000020	8788451
Total Arsenic (As)	mg/L	0.000067	0.000074	0.000258	0.000241	0.000688	0.000020	8788451
Total Barium (Ba)	mg/L	0.0695	0.0385	0.0794	0.102	0.0703	0.000020	8788451
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8788451
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8788451
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8788451
Total Cadmium (Cd)	mg/L	0.000217	0.0000160	0.0000960	0.0000250	0.0000350	0.0000050	8788451
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00013	<0.00010	0.00010	8788451
Total Cobalt (Co)	mg/L	0.0000080	0.0000100	0.0000900	0.0000440	0.0000450	0.0000050	8788451
Total Copper (Cu)	mg/L	0.000620	0.000170	0.000389	0.000501	0.000335	0.000050	8788451
Total Iron (Fe)	mg/L	0.0017	0.0248	0.426	0.123	0.0934	0.0010	8788451
Total Lead (Pb)	mg/L	0.0000210	<0.0000050	0.0000400	0.0000640	0.0000230	0.0000050	8788451
Total Lithium (Li)	mg/L	0.00100	<0.00050	0.00247	0.00101	0.00218	0.00050	8788451
Total Manganese (Mn)	mg/L	0.000139	0.00186	0.0663	0.0337	0.0345	0.000050	8788451
Total Molybdenum (Mo)	mg/L	0.000638	0.000455	0.000615	0.000671	0.00109	0.000050	8788451
Total Nickel (Ni)	mg/L	0.000319	0.000170	0.000387	0.000484	0.000570	0.000020	8788451
Total Phosphorus (P)	mg/L	<0.0020	0.0023	0.0032	0.0043	0.0050	0.0020	8788451
Total Selenium (Se)	mg/L	0.00146	0.000709	0.000941	0.000165	0.00112	0.000040	8788451
Total Silicon (Si)	mg/L	2.14	2.35	2.84	2.22	2.75	0.050	8788451
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8788451
Total Strontium (Sr)	mg/L	0.131	0.148	0.172	0.0706	0.191	0.000050	8788451
Total Thallium (Tl)	mg/L	0.0000040	<0.0000020	<0.0000020	0.0000020	<0.0000020	0.0000020	8788451
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8788451
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00053	0.00214	0.00058	0.00050	8788451
Total Uranium (U)	mg/L	0.00305	0.000807	0.00128	0.000733	0.00274	0.0000020	8788451
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8788451

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SE1056	SE1057	SE1058	SE1059	SE1060		
Sampling Date		2017/10/05 14:20	2017/10/05 13:15	2017/10/05 10:00	2017/10/03 15:50	2017/10/04 15:20		
COC Number		08445604	08445604	08445604	08445604	08445604		
	UNITS	**KZ-2**	**KZ-6**	**KZ-9**	**KZ-13**	**KZ-15**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.0241	0.00044	0.0134	0.00297	0.00355	0.00010	8788451
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8788451
Total Calcium (Ca)	mg/L	39.1	48.2	55.4	23.4	56.3	0.050	8787331
Total Magnesium (Mg)	mg/L	4.80	6.17	6.50	2.61	11.7	0.050	8787331
Total Potassium (K)	mg/L	1.88	0.810	1.31	1.50	1.14	0.050	8787331
Total Sodium (Na)	mg/L	0.792	0.725	1.12	0.969	1.18	0.050	8787331
Total Sulphur (S)	mg/L	20.0	6.9	10.3	4.2	10.5	3.0	8787331

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SE1061	SE1062	SE1063	SE1064	SE1068		
Sampling Date		2017/10/04 16:20	2017/10/04 17:00	2017/10/05 10:35	2017/10/05 12:30	2017/10/04 14:25		
COC Number		08445604	08445604	08445604	08445604	08445605		
	UNITS	KZ-16	KZ-17	KZ-18	KZ-19	KZ-21	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	187	165	184	147	255	0.50	8786945
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8788405
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00161	0.00115	0.00670	0.00328	0.00991	0.00050	8788451
Total Antimony (Sb)	mg/L	0.000023	0.000031	0.000033	<0.000020	0.000090	0.000020	8788451
Total Arsenic (As)	mg/L	0.000352	0.000241	0.000531	0.000085	0.00330	0.000020	8788451
Total Barium (Ba)	mg/L	0.0688	0.0638	0.0457	0.0404	0.0616	0.000020	8788451
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8788451
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8788451
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8788451
Total Cadmium (Cd)	mg/L	0.0000180	0.0000200	0.0000270	0.0000170	0.0000150	0.0000050	8788451
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00010	<0.00010	0.00012	0.00010	8788451
Total Cobalt (Co)	mg/L	0.0000240	0.0000080	0.0000150	0.0000080	0.000142	0.0000050	8788451
Total Copper (Cu)	mg/L	0.000312	0.000382	0.000168	0.000159	0.000367	0.000050	8788451
Total Iron (Fe)	mg/L	0.0076	0.0015	0.0092	0.0242	0.728	0.0010	8788451
Total Lead (Pb)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000210	0.0000050	8788451
Total Lithium (Li)	mg/L	0.00193	0.00213	0.00121	0.00054	0.00404	0.00050	8788451
Total Manganese (Mn)	mg/L	0.00719	0.000682	0.00549	0.00150	0.115	0.000050	8788451
Total Molybdenum (Mo)	mg/L	0.000540	0.000790	0.00132	0.000484	0.00166	0.000050	8788451
Total Nickel (Ni)	mg/L	0.000448	0.000369	0.000396	0.000163	0.00238	0.000020	8788451
Total Phosphorus (P)	mg/L	<0.0020	0.0022	0.0292	0.0024	0.0189	0.0020	8788451
Total Selenium (Se)	mg/L	0.00100	0.000968	0.00111	0.000711	0.000661	0.000040	8788451
Total Silicon (Si)	mg/L	2.66	2.65	2.66	2.38	3.86	0.050	8788451
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8788451
Total Strontium (Sr)	mg/L	0.196	0.174	0.160	0.147	0.197	0.000050	8788451
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8788451
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8788451
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00056	0.00050	8788451
Total Uranium (U)	mg/L	0.00219	0.00199	0.00222	0.000873	0.00333	0.0000020	8788451
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8788451

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SE1061	SE1062	SE1063	SE1064	SE1068		
Sampling Date		2017/10/04 16:20	2017/10/04 17:00	2017/10/05 10:35	2017/10/05 12:30	2017/10/04 14:25		
COC Number		08445604	08445604	08445604	08445604	08445605		
	UNITS	KZ-16	KZ-17	KZ-18	KZ-19	KZ-21	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00042	0.00095	0.00091	0.00034	0.00136	0.00010	8788451
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00015	0.00010	8788451
Total Calcium (Ca)	mg/L	55.3	48.7	47.2	48.5	61.0	0.050	8787331
Total Magnesium (Mg)	mg/L	11.8	10.5	16.2	6.31	24.8	0.050	8787331
Total Potassium (K)	mg/L	1.15	1.18	0.530	0.802	1.50	0.050	8787331
Total Sodium (Na)	mg/L	1.26	1.16	0.845	0.726	1.64	0.050	8787331
Total Sulphur (S)	mg/L	11.0	10.0	7.7	6.9	15.4	3.0	8787331

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SE1069	SE1070		SE1071		
Sampling Date		2017/10/04 13:25	2017/10/04 10:55		2017/10/04 10:00		
COC Number		08445605	08445605		08445605		
	UNITS	KZ-22	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	236	246	8786945	<0.50	0.50	8786945
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8788405	<0.0000020	0.0000020	8788405
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00581	0.0325	8788451	0.00475 (1)	0.00050	8794208
Total Antimony (Sb)	mg/L	0.000062	0.000074	8788451	<0.000020	0.000020	8788451
Total Arsenic (As)	mg/L	0.00182	0.00135	8788451	<0.000020	0.000020	8788451
Total Barium (Ba)	mg/L	0.0695	0.0706	8788451	0.000067 (1)	0.000020	8794208
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	8788451	<0.000010	0.000010	8788451
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8788451	<0.0000050	0.0000050	8788451
Total Boron (B)	mg/L	<0.010	<0.010	8788451	<0.010	0.010	8788451
Total Cadmium (Cd)	mg/L	0.0000200	0.0000220	8788451	<0.0000050	0.0000050	8788451
Total Chromium (Cr)	mg/L	<0.00010	0.00013	8788451	<0.00010	0.00010	8788451
Total Cobalt (Co)	mg/L	0.0000830	0.000100	8788451	<0.0000050	0.0000050	8794208
Total Copper (Cu)	mg/L	0.000378	0.000608	8788451	<0.000050	0.000050	8788451
Total Iron (Fe)	mg/L	0.337	0.321	8788451	0.0054 (1)	0.0010	8788451
Total Lead (Pb)	mg/L	0.0000130	0.0000800	8788451	<0.0000050	0.0000050	8794208
Total Lithium (Li)	mg/L	0.00366	0.00400	8788451	<0.00050	0.00050	8788451
Total Manganese (Mn)	mg/L	0.0564	0.0345	8788451	0.000212 (1)	0.000050	8788451
Total Molybdenum (Mo)	mg/L	0.00133	0.00115	8788451	<0.000050	0.000050	8788451
Total Nickel (Ni)	mg/L	0.00134	0.00131	8788451	<0.000020	0.000020	8794208
Total Phosphorus (P)	mg/L	0.0094	0.0103	8788451	0.0024 (1)	0.0020	8788451
Total Selenium (Se)	mg/L	0.000918	0.000909	8788451	<0.000040	0.000040	8788451
Total Silicon (Si)	mg/L	3.30	3.67	8788451	<0.050	0.050	8788451
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	8788451	<0.0000050	0.0000050	8788451
Total Strontium (Sr)	mg/L	0.201	0.201	8788451	0.000293 (1)	0.000050	8794208
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8788451	<0.0000020	0.0000020	8788451
Total Tin (Sn)	mg/L	<0.00020	<0.00020	8788451	<0.00020	0.00020	8788451
Total Titanium (Ti)	mg/L	0.00050	0.00150	8788451	<0.00050	0.00050	8788451
Total Uranium (U)	mg/L	0.00317	0.00286	8788451	<0.0000020	0.0000020	8788451

RDL = Reportable Detection Limit
(1) Test repeated

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SE1069	SE1070		SE1071		
Sampling Date		2017/10/04 13:25	2017/10/04 10:55		2017/10/04 10:00		
COC Number		08445605	08445605		08445605		
	UNITS	KZ-22	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Total Vanadium (V)	mg/L	<0.00020	<0.00020	8788451	<0.00020	0.00020	8788451
Total Zinc (Zn)	mg/L	0.00162	0.00154	8788451	0.00050 (1)	0.00010	8794208
Total Zirconium (Zr)	mg/L	<0.00010	0.00011	8788451	<0.00010	0.00010	8788451
Total Calcium (Ca)	mg/L	61.3	67.0	8787331	<0.050	0.050	8787331
Total Magnesium (Mg)	mg/L	20.2	19.1	8787331	<0.050	0.050	8787331
Total Potassium (K)	mg/L	1.38	1.28	8787331	<0.050	0.050	8787331
Total Sodium (Na)	mg/L	1.55	1.53	8787331	<0.050	0.050	8787331
Total Sulphur (S)	mg/L	14.1	13.4	8787331	<3.0	3.0	8787331

RDL = Reportable Detection Limit
(1) Test repeated

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SE1072	SE1073		
Sampling Date		2017/10/05 09:25	2017/10/06 16:20		
COC Number		08445605	08445605		
	UNITS	KZ-37	TRIP BLANK	RDL	QC Batch
Calculated Parameters					
Total Hardness (CaCO3)	mg/L	182	<0.50	0.50	8786945
Elements					
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8788405
Total Metals by ICPMS					
Total Aluminum (Al)	mg/L	0.00847	<0.00050	0.00050	8788451
Total Antimony (Sb)	mg/L	0.000039	<0.000020	0.000020	8788451
Total Arsenic (As)	mg/L	0.000317	<0.000020	0.000020	8788451
Total Barium (Ba)	mg/L	0.0691	<0.000020	0.000020	8788451
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	8788451
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	0.0000050	8788451
Total Boron (B)	mg/L	<0.010	<0.010	0.010	8788451
Total Cadmium (Cd)	mg/L	0.0000770	<0.0000050	0.0000050	8788451
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00010	8788451
Total Cobalt (Co)	mg/L	0.0000870	<0.0000050	0.0000050	8788451
Total Copper (Cu)	mg/L	0.000406	<0.000050	0.000050	8788451
Total Iron (Fe)	mg/L	0.322	<0.0010	0.0010	8788451
Total Lead (Pb)	mg/L	0.0000330	<0.0000050	0.0000050	8788451
Total Lithium (Li)	mg/L	0.00211	<0.00050	0.00050	8788451
Total Manganese (Mn)	mg/L	0.0610	<0.000050	0.000050	8788451
Total Molybdenum (Mo)	mg/L	0.000743	<0.000050	0.000050	8788451
Total Nickel (Ni)	mg/L	0.000457	<0.000020	0.000020	8788451
Total Phosphorus (P)	mg/L	0.0080	<0.0020	0.0020	8788451
Total Selenium (Se)	mg/L	0.00105	<0.000040	0.000040	8788451
Total Silicon (Si)	mg/L	2.90	<0.050	0.050	8788451
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	0.0000050	8788451
Total Strontium (Sr)	mg/L	0.185	<0.000050	0.000050	8788451
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	8788451
Total Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8788451
Total Titanium (Ti)	mg/L	0.00055	<0.00050	0.00050	8788451
Total Uranium (U)	mg/L	0.00143	<0.0000020	0.0000020	8788451
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00020	8788451
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SE1072	SE1073		
Sampling Date		2017/10/05 09:25	2017/10/06 16:20		
COC Number		08445605	08445605		
	UNITS	KZ-37	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0118	<0.00010	0.00010	8788451
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8788451
Total Calcium (Ca)	mg/L	56.5	<0.050	0.050	8787331
Total Magnesium (Mg)	mg/L	9.79	<0.050	0.050	8787331
Total Potassium (K)	mg/L	1.28	<0.050	0.050	8787331
Total Sodium (Na)	mg/L	1.20	<0.050	0.050	8787331
Total Sulphur (S)	mg/L	11.1	<3.0	3.0	8787331
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SE1056
Sample ID: KZ-2
Matrix: Water

Collected: 2017/10/05
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8787408	2017/10/10	2017/10/10	Name Redacted
Alkalinity - Low Level	AT/ALK	8787983	2017/10/10	2017/10/12	
Chloride - Low Level	KONE/COL	8788695	N/A	2017/10/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8788858	N/A	2017/10/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8788860	N/A	2017/10/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8790258	N/A	2017/10/12	
Conductance - Low Level	AT/ALK	8787981	2017/10/10	2017/10/12	
Fluoride - Low Level	ISE/ISE	8788929	N/A	2017/10/11	
Hardness Total (calculated as CaCO3)	CALC	8786945	N/A	2017/10/12	
Hardness (calculated as CaCO3)	CALC	8787278	N/A	2017/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8788442	N/A	2017/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8788405	2017/10/11	2017/10/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8787279	N/A	2017/10/12	
Ion Balance	CALC	8787280	N/A	2017/10/12	
Sum of cations, anions	CALC	8787281	N/A	2017/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8787283	N/A	2017/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8788609	N/A	2017/10/11	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8787331	N/A	2017/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8788451	N/A	2017/10/11	
Ammonia-N Low Level (Preserved)	KONE/COL	8792081	N/A	2017/10/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8790879	N/A	2017/10/11	
Nitrite (N) (low level)	TRAA/COL	8790880	N/A	2017/10/11	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8787288	N/A	2017/10/12	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/10/10	
pH Water	AT/ALK	8787977	2017/10/10	2017/10/12	
Sulphate - Low Level	KONE/COL	8788746	N/A	2017/10/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8789523	2017/10/11	2017/10/11	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8789531	2017/10/11	2017/10/11	
Total Suspended Solids-Low Level	BAL/BAL	8788668	2017/10/11	2017/10/12	

Maxxam ID: SE1056 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2017/10/05
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8788858	N/A	2017/10/11	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8788860	N/A	2017/10/11	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8788609	N/A	2017/10/11	
Elements by ICPMS Low Level (total)	ICP/CRCM	8788451	N/A	2017/10/11	
Ammonia-N Low Level (Preserved)	KONE/COL	8792081	N/A	2017/10/13	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SE1057
Sample ID: KZ-6
Matrix: Water

Collected: 2017/10/05
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8787408	2017/10/10	2017/10/10	Name Redacted
Alkalinity - Low Level	AT/ALK	8787983	2017/10/10	2017/10/12	
Chloride - Low Level	KONE/COL	8788700	N/A	2017/10/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8788858	N/A	2017/10/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8788860	N/A	2017/10/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8790258	N/A	2017/10/12	
Conductance - Low Level	AT/ALK	8787981	2017/10/10	2017/10/12	
Fluoride - Low Level	ISE/ISE	8788929	N/A	2017/10/11	
Hardness Total (calculated as CaCO3)	CALC	8786945	N/A	2017/10/12	
Hardness (calculated as CaCO3)	CALC	8787278	N/A	2017/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8788442	N/A	2017/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8788405	2017/10/11	2017/10/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8787279	N/A	2017/10/12	
Ion Balance	CALC	8787280	N/A	2017/10/12	
Sum of cations, anions	CALC	8787281	N/A	2017/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8787283	N/A	2017/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8788609	N/A	2017/10/11	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8787331	N/A	2017/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8788451	N/A	2017/10/11	
Ammonia-N Low Level (Preserved)	KONE/COL	8792081	N/A	2017/10/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8790879	N/A	2017/10/11	
Nitrite (N) (low level)	TRAA/COL	8790880	N/A	2017/10/11	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8787288	N/A	2017/10/12	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/10/10	
pH Water	AT/ALK	8787977	2017/10/10	2017/10/12	
Sulphate - Low Level	KONE/COL	8788706	N/A	2017/10/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8789523	2017/10/11	2017/10/11	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8789531	2017/10/11	2017/10/11	
Total Suspended Solids-Low Level	BAL/BAL	8788668	2017/10/11	2017/10/12	

Maxxam ID: SE1058
Sample ID: KZ-9
Matrix: Water

Collected: 2017/10/05
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8788130	2017/10/10	2017/10/10	Name Redacted
Alkalinity - Low Level	AT/ALK	8787999	2017/10/10	2017/10/12	
Chloride - Low Level	KONE/COL	8788717	N/A	2017/10/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8788858	N/A	2017/10/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8788860	N/A	2017/10/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8790258	N/A	2017/10/12	
Conductance - Low Level	AT/ALK	8787994	2017/10/10	2017/10/12	
Fluoride - Low Level	ISE/ISE	8788929	N/A	2017/10/11	
Hardness Total (calculated as CaCO3)	CALC	8786945	N/A	2017/10/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SE1058
Sample ID: KZ-9
Matrix: Water

Collected: 2017/10/05
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8787278	N/A	2017/10/12	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8788442	N/A	2017/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8788405	2017/10/11	2017/10/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8787279	N/A	2017/10/12	
Ion Balance	CALC	8787280	N/A	2017/10/12	
Sum of cations, anions	CALC	8787281	N/A	2017/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8787283	N/A	2017/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8788609	N/A	2017/10/11	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8787331	N/A	2017/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8788451	N/A	2017/10/11	
Ammonia-N Low Level (Preserved)	KONE/COL	8792081	N/A	2017/10/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8790867	N/A	2017/10/11	
Nitrite (N) (low level)	TRAA/COL	8790870	N/A	2017/10/11	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8787288	N/A	2017/10/12	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/10/10	
pH Water	AT/ALK	8787988	2017/10/10	2017/10/12	
Sulphate - Low Level	KONE/COL	8788722	N/A	2017/10/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8789523	2017/10/11	2017/10/11	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8789531	2017/10/11	2017/10/11	
Total Suspended Solids-Low Level	BAL/BAL	8788668	2017/10/11	2017/10/12	

Maxxam ID: SE1059
Sample ID: KZ-13
Matrix: Water

Collected: 2017/10/03
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8787408	2017/10/10	2017/10/10	Name Redacted
Alkalinity - Low Level	AT/ALK	8787983	2017/10/10	2017/10/12	
Chloride - Low Level	KONE/COL	8788700	N/A	2017/10/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8788858	N/A	2017/10/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8788860	N/A	2017/10/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8790258	N/A	2017/10/12	
Conductance - Low Level	AT/ALK	8787981	2017/10/10	2017/10/12	
Fluoride - Low Level	ISE/ISE	8788929	N/A	2017/10/11	
Hardness Total (calculated as CaCO3)	CALC	8786945	N/A	2017/10/12	
Hardness (calculated as CaCO3)	CALC	8787278	N/A	2017/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8788442	N/A	2017/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8788405	2017/10/11	2017/10/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8787279	N/A	2017/10/12	
Ion Balance	CALC	8787280	N/A	2017/10/12	
Sum of cations, anions	CALC	8787281	N/A	2017/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8787283	N/A	2017/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8788609	N/A	2017/10/11	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8787331	N/A	2017/10/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SE1059
Sample ID: KZ-13
Matrix: Water

Collected: 2017/10/03
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8788451	N/A	2017/10/11	Name Redacted
Ammonia-N Low Level (Preserved)	KONE/COL	8792081	N/A	2017/10/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8790879	N/A	2017/10/11	
Nitrite (N) (low level)	TRAA/COL	8790880	N/A	2017/10/11	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8787288	N/A	2017/10/12	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/10/10	
pH Water	AT/ALK	8787977	2017/10/10	2017/10/12	
Sulphate - Low Level	KONE/COL	8788706	N/A	2017/10/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8789523	2017/10/11	2017/10/11	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8789531	2017/10/11	2017/10/11	
Total Suspended Solids-Low Level	BAL/BAL	8788668	2017/10/11	2017/10/12	

Maxxam ID: SE1060
Sample ID: KZ-15
Matrix: Water

Collected: 2017/10/04
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8787408	2017/10/10	2017/10/10	Name Redacted
Alkalinity - Low Level	AT/ALK	8787983	2017/10/10	2017/10/12	
Chloride - Low Level	KONE/COL	8788700	N/A	2017/10/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8788858	N/A	2017/10/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8788860	N/A	2017/10/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8790258	N/A	2017/10/12	
Conductance - Low Level	AT/ALK	8787981	2017/10/10	2017/10/12	
Fluoride - Low Level	ISE/ISE	8788929	N/A	2017/10/11	
Hardness Total (calculated as CaCO3)	CALC	8786945	N/A	2017/10/12	
Hardness (calculated as CaCO3)	CALC	8787278	N/A	2017/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8788442	N/A	2017/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8788405	2017/10/11	2017/10/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8787279	N/A	2017/10/12	
Ion Balance	CALC	8787280	N/A	2017/10/12	
Sum of cations, anions	CALC	8787281	N/A	2017/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8787283	N/A	2017/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8788609	N/A	2017/10/11	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8787331	N/A	2017/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8788451	N/A	2017/10/11	
Ammonia-N Low Level (Preserved)	KONE/COL	8792081	N/A	2017/10/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8790879	N/A	2017/10/11	
Nitrite (N) (low level)	TRAA/COL	8790880	N/A	2017/10/11	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8787288	N/A	2017/10/12	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/10/10	
pH Water	AT/ALK	8787977	2017/10/10	2017/10/12	
Sulphate - Low Level	KONE/COL	8788706	N/A	2017/10/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8789523	2017/10/11	2017/10/11	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SE1060
Sample ID: KZ-15
Matrix: Water

Collected: 2017/10/04
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - Low Level Unpreserved	KONE/COL	8789531	2017/10/11	2017/10/11	Name Redacted
Total Suspended Solids-Low Level	BAL/BAL	8788668	2017/10/11	2017/10/12	

Maxxam ID: SE1061
Sample ID: KZ-16
Matrix: Water

Collected: 2017/10/04
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8787408	2017/10/10	2017/10/10	Name Redacted
Alkalinity - Low Level	AT/ALK	8787983	2017/10/10	2017/10/12	
Chloride - Low Level	KONE/COL	8788695	N/A	2017/10/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8788858	N/A	2017/10/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8788860	N/A	2017/10/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8790258	N/A	2017/10/12	
Conductance - Low Level	AT/ALK	8787981	2017/10/10	2017/10/12	
Fluoride - Low Level	ISE/ISE	8788934	N/A	2017/10/11	
Hardness Total (calculated as CaCO3)	CALC	8786945	N/A	2017/10/12	
Hardness (calculated as CaCO3)	CALC	8787278	N/A	2017/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8788442	N/A	2017/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8788405	2017/10/11	2017/10/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8787279	N/A	2017/10/12	
Ion Balance	CALC	8787280	N/A	2017/10/12	
Sum of cations, anions	CALC	8787281	N/A	2017/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8787283	N/A	2017/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8788609	N/A	2017/10/11	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8787331	N/A	2017/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8788451	N/A	2017/10/11	
Ammonia-N Low Level (Preserved)	KONE/COL	8792081	N/A	2017/10/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8790879	N/A	2017/10/11	
Nitrite (N) (low level)	TRAA/COL	8790880	N/A	2017/10/11	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8787288	N/A	2017/10/12	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/10/10	
pH Water	AT/ALK	8787977	2017/10/10	2017/10/12	
Sulphate - Low Level	KONE/COL	8788746	N/A	2017/10/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8789523	2017/10/11	2017/10/11	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8789531	2017/10/11	2017/10/11	
Total Suspended Solids-Low Level	BAL/BAL	8788668	2017/10/11	2017/10/12	

Maxxam ID: SE1061 Dup
Sample ID: KZ-16
Matrix: Water

Collected: 2017/10/04
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8787408	2017/10/10	2017/10/10	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SE1062
Sample ID: KZ-17
Matrix: Water

Collected: 2017/10/04
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8787408	2017/10/10	2017/10/10	Name Redacted
Alkalinity - Low Level	AT/ALK	8787983	2017/10/10	2017/10/12	
Chloride - Low Level	KONE/COL	8788695	N/A	2017/10/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8788858	N/A	2017/10/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8788860	N/A	2017/10/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8790258	N/A	2017/10/12	
Conductance - Low Level	AT/ALK	8787981	2017/10/10	2017/10/12	
Fluoride - Low Level	ISE/ISE	8788934	N/A	2017/10/11	
Hardness Total (calculated as CaCO3)	CALC	8786945	N/A	2017/10/12	
Hardness (calculated as CaCO3)	CALC	8787278	N/A	2017/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8788442	N/A	2017/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8788405	2017/10/11	2017/10/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8787279	N/A	2017/10/12	
Ion Balance	CALC	8787280	N/A	2017/10/12	
Sum of cations, anions	CALC	8787281	N/A	2017/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8787283	N/A	2017/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8788609	N/A	2017/10/11	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8787331	N/A	2017/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8788451	N/A	2017/10/11	
Ammonia-N Low Level (Preserved)	KONE/COL	8792081	N/A	2017/10/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8790879	N/A	2017/10/11	
Nitrite (N) (low level)	TRAA/COL	8790880	N/A	2017/10/11	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8787288	N/A	2017/10/12	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/10/10	
pH Water	AT/ALK	8787977	2017/10/10	2017/10/12	
Sulphate - Low Level	KONE/COL	8788746	N/A	2017/10/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8789523	2017/10/11	2017/10/11	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8789531	2017/10/11	2017/10/11	
Total Suspended Solids-Low Level	BAL/BAL	8788668	2017/10/11	2017/10/12	

Maxxam ID: SE1063
Sample ID: KZ-18
Matrix: Water

Collected: 2017/10/05
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8787406	2017/10/10	2017/10/10	Name Redacted
Alkalinity - Low Level	AT/ALK	8787983	2017/10/10	2017/10/12	
Chloride - Low Level	KONE/COL	8788695	N/A	2017/10/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8788858	N/A	2017/10/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8788860	N/A	2017/10/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8790258	N/A	2017/10/12	
Conductance - Low Level	AT/ALK	8787981	2017/10/10	2017/10/12	
Fluoride - Low Level	ISE/ISE	8788934	N/A	2017/10/11	
Hardness Total (calculated as CaCO3)	CALC	8786945	N/A	2017/10/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SE1063
Sample ID: KZ-18
Matrix: Water

Collected: 2017/10/05
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8787278	N/A	2017/10/12	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8788442	N/A	2017/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8788405	2017/10/11	2017/10/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8787279	N/A	2017/10/12	
Ion Balance	CALC	8787280	N/A	2017/10/12	
Sum of cations, anions	CALC	8787281	N/A	2017/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8787283	N/A	2017/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8788609	N/A	2017/10/11	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8787331	N/A	2017/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8788451	N/A	2017/10/11	
Ammonia-N Low Level (Preserved)	KONE/COL	8792081	N/A	2017/10/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8790879	N/A	2017/10/11	
Nitrite (N) (low level)	TRAA/COL	8790880	N/A	2017/10/11	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8787288	N/A	2017/10/12	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/10/10	
pH Water	AT/ALK	8787977	2017/10/10	2017/10/12	
Sulphate - Low Level	KONE/COL	8788746	N/A	2017/10/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8789523	2017/10/11	2017/10/11	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8789531	2017/10/11	2017/10/11	
Total Suspended Solids-Low Level	BAL/BAL	8788668	2017/10/11	2017/10/12	

Maxxam ID: SE1063 Dup
Sample ID: KZ-18
Matrix: Water

Collected: 2017/10/05
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride - Low Level	KONE/COL	8788695	N/A	2017/10/10	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8790879	N/A	2017/10/11	
Nitrite (N) (low level)	TRAA/COL	8790880	N/A	2017/10/11	
Sulphate - Low Level	KONE/COL	8788746	N/A	2017/10/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8789523	2017/10/11	2017/10/11	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8789531	2017/10/11	2017/10/11	

Maxxam ID: SE1064
Sample ID: KZ-19
Matrix: Water

Collected: 2017/10/05
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8787408	2017/10/10	2017/10/10	Name Redacted
Alkalinity - Low Level	AT/ALK	8787983	2017/10/10	2017/10/12	
Chloride - Low Level	KONE/COL	8788700	N/A	2017/10/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8788858	N/A	2017/10/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8788860	N/A	2017/10/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8790258	N/A	2017/10/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SE1064
Sample ID: KZ-19
Matrix: Water

Collected: 2017/10/05
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductance - Low Level	AT/ALK	8787981	2017/10/10	2017/10/12	Name Redacted
Fluoride - Low Level	ISE/ISE	8788934	N/A	2017/10/11	
Hardness Total (calculated as CaCO3)	CALC	8786945	N/A	2017/10/12	
Hardness (calculated as CaCO3)	CALC	8787278	N/A	2017/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8788442	N/A	2017/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8788405	2017/10/11	2017/10/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8787279	N/A	2017/10/12	
Ion Balance	CALC	8787280	N/A	2017/10/12	
Sum of cations, anions	CALC	8787281	N/A	2017/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8787283	N/A	2017/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8788609	N/A	2017/10/11	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8787331	N/A	2017/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8788451	N/A	2017/10/11	
Ammonia-N Low Level (Preserved)	KONE/COL	8792081	N/A	2017/10/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8790867	N/A	2017/10/11	
Nitrite (N) (low level)	TRAA/COL	8790870	N/A	2017/10/11	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8787288	N/A	2017/10/12	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/10/10	
pH Water	AT/ALK	8787977	2017/10/10	2017/10/12	
Sulphate - Low Level	KONE/COL	8788706	N/A	2017/10/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8789523	2017/10/11	2017/10/11	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8789531	2017/10/11	2017/10/11	
Total Suspended Solids-Low Level	BAL/BAL	8788673	2017/10/11	2017/10/12	

Maxxam ID: SE1068
Sample ID: KZ-21
Matrix: Water

Collected: 2017/10/04
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8787408	2017/10/10	2017/10/10	Name Redacted
Alkalinity - Low Level	AT/ALK	8787983	2017/10/10	2017/10/12	
Chloride - Low Level	KONE/COL	8788700	N/A	2017/10/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8788858	N/A	2017/10/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8788860	N/A	2017/10/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8790258	N/A	2017/10/12	
Conductance - Low Level	AT/ALK	8787981	2017/10/10	2017/10/12	
Fluoride - Low Level	ISE/ISE	8788934	N/A	2017/10/11	
Hardness Total (calculated as CaCO3)	CALC	8786945	N/A	2017/10/12	
Hardness (calculated as CaCO3)	CALC	8787278	N/A	2017/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8788442	N/A	2017/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8788405	2017/10/11	2017/10/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8787279	N/A	2017/10/12	
Ion Balance	CALC	8787280	N/A	2017/10/12	
Sum of cations, anions	CALC	8787281	N/A	2017/10/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SE1068
Sample ID: KZ-21
Matrix: Water

Collected: 2017/10/04
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8787283	N/A	2017/10/12	Name Redacted
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8788609	N/A	2017/10/11	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8787331	N/A	2017/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8788451	N/A	2017/10/11	
Ammonia-N Low Level (Preserved)	KONE/COL	8792081	N/A	2017/10/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8790879	N/A	2017/10/11	
Nitrite (N) (low level)	TRAA/COL	8790880	N/A	2017/10/11	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8787288	N/A	2017/10/12	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/10/10	
pH Water	AT/ALK	8787977	2017/10/10	2017/10/12	
Sulphate - Low Level	KONE/COL	8788706	N/A	2017/10/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8789523	2017/10/11	2017/10/11	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8789531	2017/10/11	2017/10/11	
Total Suspended Solids-Low Level	BAL/BAL	8788673	2017/10/11	2017/10/12	

Maxxam ID: SE1069
Sample ID: KZ-22
Matrix: Water

Collected: 2017/10/04
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8787408	2017/10/10	2017/10/10	Name Redacted
Alkalinity - Low Level	AT/ALK	8787983	2017/10/10	2017/10/12	
Chloride - Low Level	KONE/COL	8788700	N/A	2017/10/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8788858	N/A	2017/10/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8788860	N/A	2017/10/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8790258	N/A	2017/10/12	
Conductance - Low Level	AT/ALK	8787981	2017/10/10	2017/10/12	
Fluoride - Low Level	ISE/ISE	8788934	N/A	2017/10/11	
Hardness Total (calculated as CaCO3)	CALC	8786945	N/A	2017/10/12	
Hardness (calculated as CaCO3)	CALC	8787278	N/A	2017/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8788442	N/A	2017/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8788405	2017/10/11	2017/10/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8787279	N/A	2017/10/12	
Ion Balance	CALC	8787280	N/A	2017/10/12	
Sum of cations, anions	CALC	8787281	N/A	2017/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8787283	N/A	2017/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8788609	N/A	2017/10/11	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8787331	N/A	2017/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8788451	N/A	2017/10/11	
Ammonia-N Low Level (Preserved)	KONE/COL	8792081	N/A	2017/10/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8790879	N/A	2017/10/11	
Nitrite (N) (low level)	TRAA/COL	8790880	N/A	2017/10/11	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8787288	N/A	2017/10/12	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/10/10	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SE1069
Sample ID: KZ-22
Matrix: Water

Collected: 2017/10/04
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH Water	AT/ALK	8787977	2017/10/10	2017/10/12	Name Redacted
Sulphate - Low Level	KONE/COL	8788706	N/A	2017/10/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8789523	2017/10/11	2017/10/11	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8789531	2017/10/11	2017/10/11	
Total Suspended Solids-Low Level	BAL/BAL	8788673	2017/10/11	2017/10/12	

Maxxam ID: SE1070
Sample ID: KZ-26
Matrix: Water

Collected: 2017/10/04
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8787408	2017/10/10	2017/10/10	Name Redacted
Alkalinity - Low Level	AT/ALK	8787983	2017/10/10	2017/10/12	
Chloride - Low Level	KONE/COL	8788695	N/A	2017/10/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8788858	N/A	2017/10/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8788860	N/A	2017/10/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8790258	N/A	2017/10/12	
Conductance - Low Level	AT/ALK	8787981	2017/10/10	2017/10/12	
Fluoride - Low Level	ISE/ISE	8788934	N/A	2017/10/11	
Hardness Total (calculated as CaCO3)	CALC	8786945	N/A	2017/10/12	
Hardness (calculated as CaCO3)	CALC	8787278	N/A	2017/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8788442	N/A	2017/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8788405	2017/10/11	2017/10/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8787279	N/A	2017/10/12	
Ion Balance	CALC	8787280	N/A	2017/10/12	
Sum of cations, anions	CALC	8787281	N/A	2017/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8787283	N/A	2017/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8788609	N/A	2017/10/11	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8787331	N/A	2017/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8788451	N/A	2017/10/11	
Ammonia-N Low Level (Preserved)	KONE/COL	8792081	N/A	2017/10/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8790879	N/A	2017/10/11	
Nitrite (N) (low level)	TRAA/COL	8790880	N/A	2017/10/11	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8787288	N/A	2017/10/12	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/10/10	
pH Water	AT/ALK	8787977	2017/10/10	2017/10/12	
Sulphate - Low Level	KONE/COL	8788746	N/A	2017/10/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8789523	2017/10/11	2017/10/11	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8789531	2017/10/11	2017/10/11	
Total Suspended Solids-Low Level	BAL/BAL	8788673	2017/10/11	2017/10/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SE1071
Sample ID: KZ-28
Matrix: Water

Collected: 2017/10/04
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8787408	2017/10/10	2017/10/10	Name Redacted
Alkalinity - Low Level	AT/ALK	8787983	2017/10/10	2017/10/12	
Chloride - Low Level	KONE/COL	8788700	N/A	2017/10/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8788858	N/A	2017/10/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8788860	N/A	2017/10/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8790258	N/A	2017/10/12	
Conductance - Low Level	AT/ALK	8787981	2017/10/10	2017/10/12	
Fluoride - Low Level	ISE/ISE	8788934	N/A	2017/10/11	
Hardness Total (calculated as CaCO3)	CALC	8786945	N/A	2017/10/12	
Hardness (calculated as CaCO3)	CALC	8787278	N/A	2017/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8788442	N/A	2017/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8788405	2017/10/11	2017/10/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8787279	N/A	2017/10/12	
Ion Balance	CALC	8787280	N/A	2017/10/12	
Sum of cations, anions	CALC	8787281	N/A	2017/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8787283	N/A	2017/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8788609	N/A	2017/10/11	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8787331	N/A	2017/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8794208	N/A	2017/10/16	
Ammonia-N Low Level (Preserved)	KONE/COL	8795319	N/A	2017/10/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8790879	N/A	2017/10/11	
Nitrite (N) (low level)	TRAA/COL	8790880	N/A	2017/10/11	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8787288	N/A	2017/10/12	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/10/10	
pH Water	AT/ALK	8787977	2017/10/10	2017/10/12	
Sulphate - Low Level	KONE/COL	8788706	N/A	2017/10/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8789523	2017/10/11	2017/10/11	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8789531	2017/10/11	2017/10/11	
Total Suspended Solids-Low Level	BAL/BAL	8788673	2017/10/11	2017/10/12	

Maxxam ID: SE1072
Sample ID: KZ-37
Matrix: Water

Collected: 2017/10/05
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8787408	2017/10/10	2017/10/10	Name Redacted
Alkalinity - Low Level	AT/ALK	8787983	2017/10/10	2017/10/12	
Chloride - Low Level	KONE/COL	8788700	N/A	2017/10/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8788858	N/A	2017/10/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8788860	N/A	2017/10/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8790258	N/A	2017/10/12	
Conductance - Low Level	AT/ALK	8787981	2017/10/10	2017/10/12	
Fluoride - Low Level	ISE/ISE	8788934	N/A	2017/10/11	
Hardness Total (calculated as CaCO3)	CALC	8786945	N/A	2017/10/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SE1072
Sample ID: KZ-37
Matrix: Water

Collected: 2017/10/05
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8787278	N/A	2017/10/12	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8788442	N/A	2017/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8788405	2017/10/11	2017/10/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8787279	N/A	2017/10/12	
Ion Balance	CALC	8787280	N/A	2017/10/12	
Sum of cations, anions	CALC	8787281	N/A	2017/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8787283	N/A	2017/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8788609	N/A	2017/10/11	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8787331	N/A	2017/10/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8788451	N/A	2017/10/11	
Ammonia-N Low Level (Preserved)	KONE/COL	8792081	N/A	2017/10/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8790879	N/A	2017/10/11	
Nitrite (N) (low level)	TRAA/COL	8790880	N/A	2017/10/11	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8787288	N/A	2017/10/12	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/10/10	
pH Water	AT/ALK	8787977	2017/10/10	2017/10/12	
Sulphate - Low Level	KONE/COL	8788706	N/A	2017/10/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8789523	2017/10/11	2017/10/11	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8789531	2017/10/11	2017/10/11	
Total Suspended Solids-Low Level	BAL/BAL	8788673	2017/10/11	2017/10/12	

Maxxam ID: SE1073
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/10/06
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8787408	2017/10/10	2017/10/10	Name Redacted
Alkalinity - Low Level	AT/ALK	8795291	2017/10/16	2017/10/16	
Chloride - Low Level	KONE/COL	8788700	N/A	2017/10/10	
Cyanide SAD (strong acid dissociable)	TECH/COL	8788858	N/A	2017/10/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8788860	N/A	2017/10/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8790258	N/A	2017/10/12	
Conductance - Low Level	AT/ALK	8787981	2017/10/10	2017/10/12	
Fluoride - Low Level	ISE/ISE	8788934	N/A	2017/10/11	
Hardness Total (calculated as CaCO3)	CALC	8786945	N/A	2017/10/12	
Hardness (calculated as CaCO3)	CALC	8787278	N/A	2017/10/12	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8788442	N/A	2017/10/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8788405	2017/10/11	2017/10/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8787279	N/A	2017/10/12	
Ion Balance	CALC	8787280	N/A	2017/10/12	
Sum of cations, anions	CALC	8787281	N/A	2017/10/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8787283	N/A	2017/10/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8788609	N/A	2017/10/11	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8787331	N/A	2017/10/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SE1073
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/10/06
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8788451	N/A	2017/10/11	Name Redacted
Ammonia-N Low Level (Preserved)	KONE/COL	8792081	N/A	2017/10/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8790879	N/A	2017/10/11	
Nitrite (N) (low level)	TRAA/COL	8790880	N/A	2017/10/11	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8787288	N/A	2017/10/12	
pH Water	AT/ALK	8787977	2017/10/10	2017/10/12	
Sulphate - Low Level	KONE/COL	8788706	N/A	2017/10/10	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8789523	2017/10/11	2017/10/11	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8789531	2017/10/11	2017/10/11	
Total Suspended Solids-Low Level	BAL/BAL	8788673	2017/10/11	2017/10/12	

Maxxam ID: SE1073 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/10/06
Shipped:
Received: 2017/10/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8788442	N/A	2017/10/11	Name Redacted
Mercury (Total-LowLevel) by CVAF	CV/AF	8788405	2017/10/11	2017/10/11	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8788609	N/A	2017/10/11	
Elements by ICPMS Low Level (total)	ICP/CRCM	8788451	N/A	2017/10/11	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.0°C
Package 2	1.0°C
Package 3	1.0°C

Sample SE1056 [KZ-2] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample SE1057 [KZ-6] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample SE1058 [KZ-9] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample SE1059 [KZ-13] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample analyzed past method specified hold time for Total Suspended Solids-Low Level. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample SE1060 [KZ-15] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample SE1061 [KZ-16] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample SE1062 [KZ-17] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample SE1063 [KZ-18] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample SE1064 [KZ-19] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample SE1068 [KZ-21] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample SE1069 [KZ-22] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample SE1070 [KZ-26] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample SE1071 [KZ-28] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample SE1072 [KZ-37] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample SE1073 [TRIP BLANK] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample SE1071, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample SE1071, Elements by ICPMS Low Level (total): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8787406	Acidity (pH 4.5)	2017/10/10					<1.0	mg/L	NC	20
8787406	Acidity (pH 8.3)	2017/10/10			101	80 - 120	<1.0	mg/L	NC	20
8787408	Acidity (pH 4.5)	2017/10/10					<1.0	mg/L	NC	20
8787408	Acidity (pH 8.3)	2017/10/10			101	80 - 120	<1.0	mg/L	NC	20
8787977	pH	2017/10/12			101	97 - 103			0	20
8787981	Conductivity	2017/10/11			101	80 - 120	<1.0	uS/cm		
8787983	Alkalinity (PP as CaCO3)	2017/10/11					<0.50	mg/L		
8787983	Alkalinity (Total as CaCO3)	2017/10/11	NC	80 - 120	101	80 - 120	0.57, RDL=0.50	mg/L		
8787983	Bicarbonate (HCO3)	2017/10/11					0.70, RDL=0.50	mg/L		
8787983	Carbonate (CO3)	2017/10/11					<0.50	mg/L		
8787983	Hydroxide (OH)	2017/10/11					<0.50	mg/L		
8787988	pH	2017/10/12			101	97 - 103			0.53	20
8787994	Conductivity	2017/10/12			103	80 - 120	<1.0	uS/cm	0	20
8787999	Alkalinity (PP as CaCO3)	2017/10/12					<0.50	mg/L	NC	20
8787999	Alkalinity (Total as CaCO3)	2017/10/12	99	80 - 120	103	80 - 120	0.56, RDL=0.50	mg/L	1.2	20
8787999	Bicarbonate (HCO3)	2017/10/12					0.68, RDL=0.50	mg/L	1.2	20
8787999	Carbonate (CO3)	2017/10/12					<0.50	mg/L	NC	20
8787999	Hydroxide (OH)	2017/10/12					<0.50	mg/L	NC	20
8788130	Acidity (pH 4.5)	2017/10/10					<1.0	mg/L	NC	20
8788130	Acidity (pH 8.3)	2017/10/10			102	80 - 120	<1.0	mg/L	NC	20
8788405	Total Mercury (Hg)	2017/10/11	100	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8788442	Dissolved Mercury (Hg)	2017/10/11	96	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8788451	Total Aluminum (Al)	2017/10/11	102	80 - 120	108	80 - 120	<0.00050	mg/L	NC	20
8788451	Total Antimony (Sb)	2017/10/11	99	80 - 120	105	80 - 120	<0.000020	mg/L	NC	20
8788451	Total Arsenic (As)	2017/10/11	103	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
8788451	Total Barium (Ba)	2017/10/11	NC	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
8788451	Total Beryllium (Be)	2017/10/11	95	80 - 120	97	80 - 120	<0.000010	mg/L	NC	20
8788451	Total Bismuth (Bi)	2017/10/11	98	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8788451	Total Boron (B)	2017/10/11	90	80 - 120	98	80 - 120	<0.010	mg/L	NC	20
8788451	Total Cadmium (Cd)	2017/10/11	96	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8788451	Total Chromium (Cr)	2017/10/11	100	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8788451	Total Cobalt (Co)	2017/10/11	96	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8788451	Total Copper (Cu)	2017/10/11	93	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8788451	Total Iron (Fe)	2017/10/11	103	80 - 120	111	80 - 120	<0.0010	mg/L	NC	20
8788451	Total Lead (Pb)	2017/10/11	99	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8788451	Total Lithium (Li)	2017/10/11	91	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8788451	Total Manganese (Mn)	2017/10/11	99	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8788451	Total Molybdenum (Mo)	2017/10/11	101	80 - 120	104	80 - 120	<0.000050	mg/L	NC	20
8788451	Total Nickel (Ni)	2017/10/11	98	80 - 120	107	80 - 120	<0.000020	mg/L	NC	20
8788451	Total Phosphorus (P)	2017/10/11					<0.0020	mg/L	NC	20
8788451	Total Selenium (Se)	2017/10/11	96	80 - 120	107	80 - 120	<0.000040	mg/L	NC	20
8788451	Total Silicon (Si)	2017/10/11					<0.050	mg/L	NC	20
8788451	Total Silver (Ag)	2017/10/11	105	80 - 120	112	80 - 120	<0.0000050	mg/L	NC	20
8788451	Total Strontium (Sr)	2017/10/11	NC	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8788451	Total Thallium (Tl)	2017/10/11	99	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8788451	Total Tin (Sn)	2017/10/11	97	80 - 120	105	80 - 120	<0.00020	mg/L	NC	20
8788451	Total Titanium (Ti)	2017/10/11	98	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8788451	Total Uranium (U)	2017/10/11	106	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8788451	Total Vanadium (V)	2017/10/11	101	80 - 120	103	80 - 120	<0.00020	mg/L	NC	20
8788451	Total Zinc (Zn)	2017/10/11	NC	80 - 120	104	80 - 120	<0.00010	mg/L	NC	20
8788451	Total Zirconium (Zr)	2017/10/11	105	80 - 120	106	80 - 120	<0.00010	mg/L	NC	20
8788609	Dissolved Aluminum (Al)	2017/10/11	99	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8788609	Dissolved Antimony (Sb)	2017/10/11	98	80 - 120	95	80 - 120	<0.000020	mg/L	NC	20
8788609	Dissolved Arsenic (As)	2017/10/11	108	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8788609	Dissolved Barium (Ba)	2017/10/11	NC	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8788609	Dissolved Beryllium (Be)	2017/10/11	90	80 - 120	89	80 - 120	<0.000010	mg/L	NC	20
8788609	Dissolved Bismuth (Bi)	2017/10/11	95	80 - 120	95	80 - 120	<0.0000050	mg/L	NC	20
8788609	Dissolved Boron (B)	2017/10/11	87	80 - 120	88	80 - 120	<0.010	mg/L	NC	20
8788609	Dissolved Cadmium (Cd)	2017/10/11	95	80 - 120	94	80 - 120	<0.0000050	mg/L	NC	20
8788609	Dissolved Chromium (Cr)	2017/10/11	104	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
8788609	Dissolved Cobalt (Co)	2017/10/11	99	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8788609	Dissolved Copper (Cu)	2017/10/11	97	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8788609	Dissolved Iron (Fe)	2017/10/11	112	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
8788609	Dissolved Lead (Pb)	2017/10/11	96	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8788609	Dissolved Lithium (Li)	2017/10/11	88	80 - 120	90	80 - 120	<0.00050	mg/L	NC	20
8788609	Dissolved Manganese (Mn)	2017/10/11	102	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8788609	Dissolved Molybdenum (Mo)	2017/10/11	102	80 - 120	96	80 - 120	<0.000050	mg/L	NC	20
8788609	Dissolved Nickel (Ni)	2017/10/11	102	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8788609	Dissolved Phosphorus (P)	2017/10/11					<0.0020	mg/L	NC	20
8788609	Dissolved Selenium (Se)	2017/10/11	108	80 - 120	97	80 - 120	<0.000040	mg/L	NC	20
8788609	Dissolved Silicon (Si)	2017/10/11					<0.050	mg/L	NC	20
8788609	Dissolved Silver (Ag)	2017/10/11	103	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8788609	Dissolved Strontium (Sr)	2017/10/11	NC	80 - 120	92	80 - 120	<0.000050	mg/L	NC	20
8788609	Dissolved Thallium (Tl)	2017/10/11	95	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8788609	Dissolved Tin (Sn)	2017/10/11	97	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
8788609	Dissolved Titanium (Ti)	2017/10/11	106	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8788609	Dissolved Uranium (U)	2017/10/11	102	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8788609	Dissolved Vanadium (V)	2017/10/11	103	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8788609	Dissolved Zinc (Zn)	2017/10/11	NC	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
8788609	Dissolved Zirconium (Zr)	2017/10/11	103	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
8788668	Total Suspended Solids	2017/10/12			101	80 - 120	<1.0	mg/L		
8788673	Total Suspended Solids	2017/10/12			100	80 - 120	<1.0	mg/L		
8788695	Dissolved Chloride (Cl)	2017/10/10	120	80 - 120	102	80 - 120	<0.50	mg/L	4.3	20
8788700	Dissolved Chloride (Cl)	2017/10/10			96	80 - 120	<0.50	mg/L		
8788706	Dissolved Sulphate (SO4)	2017/10/10	NC	80 - 120	97	80 - 120	<0.50	mg/L	0.086	20
8788717	Dissolved Chloride (Cl)	2017/10/10	107	80 - 120	100	80 - 120	0.55, RDL=0.50	mg/L	4.5	20
8788722	Dissolved Sulphate (SO4)	2017/10/10	102	80 - 120	98	80 - 120	<0.50	mg/L	0.31	20
8788746	Dissolved Sulphate (SO4)	2017/10/10	NC	80 - 120	104	80 - 120	<0.50	mg/L	0.19	20
8788858	Strong Acid Dissoc. Cyanide (CN)	2017/10/11	106	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8788860	Weak Acid Dissoc. Cyanide (CN)	2017/10/11	104	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8788929	Fluoride (F)	2017/10/11	100	80 - 120	102	80 - 120	0.011, RDL=0.010	mg/L	2.3	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8788934	Fluoride (F)	2017/10/11	NC	80 - 120	102	80 - 120	0.012, RDL=0.010	mg/L	0	20
8789523	Dissolved Phosphorus (P)	2017/10/11	102	80 - 120	92	80 - 120	<0.0020	mg/L	0.30	20
8789531	Total Phosphorus (P)	2017/10/11	105	80 - 120	96	80 - 120	<0.0020	mg/L	3.5	20
8790258	Dissolved Organic Carbon (C)	2017/10/12			109	80 - 120	<0.50	mg/L		
8790867	Nitrate plus Nitrite (N)	2017/10/11	103	80 - 120	106	80 - 120	<0.0020	mg/L	0.29	25
8790870	Nitrite (N)	2017/10/11	98	80 - 120	98	80 - 120	<0.0020	mg/L	1.5	25
8790879	Nitrate plus Nitrite (N)	2017/10/11	101	80 - 120	108	80 - 120	<0.0020	mg/L	1.0	25
8790880	Nitrite (N)	2017/10/11	96	80 - 120	102	80 - 120	<0.0020	mg/L	NC	25
8792081	Total Ammonia (N)	2017/10/13	96	80 - 120	98	80 - 120	<0.0050	mg/L	NC	20
8794202	Dissolved Barium (Ba)	2017/10/16			97	80 - 120	<0.000020	mg/L		
8794202	Dissolved Strontium (Sr)	2017/10/16			97	80 - 120	<0.000050	mg/L		
8794202	Dissolved Zinc (Zn)	2017/10/16			106	80 - 120	<0.00010	mg/L		
8794208	Total Aluminum (Al)	2017/10/16			108	80 - 120	<0.00050	mg/L		
8794208	Total Barium (Ba)	2017/10/16			98	80 - 120	<0.000020	mg/L		
8794208	Total Cobalt (Co)	2017/10/16			98	80 - 120	<0.0000050	mg/L		
8794208	Total Lead (Pb)	2017/10/16			100	80 - 120	<0.0000050	mg/L		
8794208	Total Nickel (Ni)	2017/10/16			102	80 - 120	<0.000020	mg/L		
8794208	Total Strontium (Sr)	2017/10/16			95	80 - 120	<0.000050	mg/L		
8794208	Total Zinc (Zn)	2017/10/16			108	80 - 120	<0.00010	mg/L		
8795291	Alkalinity (PP as CaCO3)	2017/10/16					<0.50	mg/L		
8795291	Alkalinity (Total as CaCO3)	2017/10/16			102	80 - 120	<0.50	mg/L		
8795291	Bicarbonate (HCO3)	2017/10/16					<0.50	mg/L		
8795291	Carbonate (CO3)	2017/10/16					<0.50	mg/L		
8795291	Hydroxide (OH)	2017/10/16					<0.50	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8795319	Total Ammonia (N)	2017/10/16			96	80 - 120	<0.0050	mg/L		

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B788495
Report Date: 2017/10/18

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Name Redacted Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC #: 08445604

BBY FCD-00077/05

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature	Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		05-Oct-17	14:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3	KZ-6		05-Oct-17	13:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
4	KZ-9		05-Oct-17	10:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	KZ-13		03-Oct-17	15:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6	KZ-15		04-Oct-17	15:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
7	KZ-16		04-Oct-17	16:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
8	KZ-17		04-Oct-17	17:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
9	KZ-18		05-Oct-17	10:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
10	KZ-19		05-Oct-17	12:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
Y	Y	2,5,3
Y	Y	2,2,2
Y	Y	5,2,2

COOLING MEDIA PRESENT (Y) / N

COMMENTS

RECEIVED IN WHITEHORSE @ 16:20

Signature Redacted

2017-10-06

TEMP: 1 1 1

(/)

\ \ \

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	06/10/2017	16:30	Signature Redacted	2017/10/10	07:18

B788495_COC

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08445605

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:
						Rush Confirmation #:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-21		04-Oct-17	14:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
2	KZ-22		04-Oct-17	13:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3	KZ-26		04-Oct-17	10:55	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
4	KZ-28		04-Oct-17	10:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	KZ-37		05-Oct-17	9:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6	Trip Blank		n/a	n/a	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
7																			
8																			
9																			
10																			

LABORATORY USE ONLY

CUSTODY SEAL Y / N Present	Intact	COOLER TEMPERATURES
Y	Y	2,5,3
Y	Y	2,2,2
Y	Y	5,2,2

COOLING MEDIA PRESENT (Y) / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Signature Redacted @1620
2017-10-06
TEMP: / / / /

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	06/10/2017	16:30	Signature Redacted	2017/10/10	07:18

B788495_COC

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08446304, 08446303

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/11/24
Report #: R2482098
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B798759
Received: 2017/11/06, 13:19

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	15	2017/11/06	2017/11/06	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Low Level	15	2017/11/07	2017/11/07	BBY6SOP-00026	SM 22 2320 B m
Chloride - Low Level	15	N/A	2017/11/07	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	15	N/A	2017/11/22	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	15	N/A	2017/11/22	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	15	N/A	2017/11/07	BBY6SOP-00003	SM 22 5310 C m
Conductance - Low Level	15	2017/11/07	2017/11/07	BBY6SOP-00026	SM 22 2510 B m
Fluoride - Low Level	15	N/A	2017/11/07	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3) (2)	15	N/A	2017/11/07	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	14	N/A	2017/11/08	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	1	N/A	2017/11/10	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	15	N/A	2017/11/07	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	15	2017/11/07	2017/11/07	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance (as Cations/Anions Ratio)	15	N/A	2017/11/08	BBY WI-00033	Auto Calc
Ion Balance	15	N/A	2017/11/08	BBY WI-00033	SM 22 1030E
Sum of cations, anions	12	N/A	2017/11/07	Calc	
Sum of cations, anions	3	N/A	2017/11/08	Calc	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	14	N/A	2017/11/08	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2017/11/10	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	15	N/A	2017/11/08	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	15	N/A	2017/11/07	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Elements by ICPMS Low Level (total)	15	N/A	2017/11/07	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N Low Level (Preserved)	15	N/A	2017/11/07	BBY6SOP-00009	EPA 350.1 m
Nitrate+Nitrite (N) (low level)	15	N/A	2017/11/07	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	15	N/A	2017/11/07	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N) Low Level Calc	15	N/A	2017/11/08	BBY6SOP-00010	SM 22 4500-NO3- I m
Filter and HNO3 Preserve for Metals	13	N/A	2017/11/07	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	1	N/A	2017/11/08	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (3)	15	2017/11/07	2017/11/07	BBY6SOP-00026	SM 22 4500-H+ B m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08446304, 08446303

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/11/24
Report #: R2482098
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B798759
Received: 2017/11/06, 13:19

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Sulphate - Low Level	15	N/A	2017/11/07	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	13	2017/11/07	2017/11/07	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2017/11/08	2017/11/08	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2017/11/10	2017/11/10	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	13	2017/11/07	2017/11/07	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	1	2017/11/08	2017/11/08	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	1	2017/11/09	2017/11/10	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	12	2017/11/06	2017/11/07	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	3	2017/11/07	2017/11/08	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported: unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08446304, 08446303

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/11/24
Report #: R2482098
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B798759
Received: 2017/11/06, 13:19

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(3) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SK5689	SK5690		SK5691	SK5692		
Sampling Date		2017/11/02 16:50	2017/11/02 15:35		2017/11/03 10:15	2017/11/02 14:30		
COC Number		08446304	08446304		08446304	08446304		
	UNITS	KZ-2	KZ-6	QC Batch	KZ-9	KZ-13	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	2.8	3.4	8822801	3.9	1.6	N/A	8822801
Cation Sum	meq/L	2.6	3.2	8822801	3.7	1.5	N/A	8822801
Filter and HNO3 Preservation	N/A	FIELD	FIELD	ONSITE	FIELD	FIELD		ONSITE
Ion Balance	N/A	0.93	0.94	8822798	0.96	0.93	0.010	8822798
Ion Balance (% Difference)	%	3.4	3.0	8822799	2.3	3.6	N/A	8822799
Nitrate (N)	mg/L	0.146	0.130	8820711	0.161	0.140	0.0020	8820711
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	8838877	<0.00050	0.00054	0.00050	8838877
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	8838880	<0.00050	<0.00050	0.00050	8838880
Fluoride (F)	mg/L	0.051	0.070	8821940	0.078	0.046	0.010	8821940
Dissolved Organic Carbon (C)	mg/L	0.84	0.96	8822648	1.39	2.20	0.50	8822648
Acidity (pH 4.5)	mg/L	<1.0	<1.0	8821203	<1.0	<1.0	1.0	8821203
Alkalinity (Total as CaCO3)	mg/L	67.8	146	8822336	154	62.3	0.50	8822348
Acidity (pH 8.3)	mg/L	<1.0	<1.0	8821203	4.1	<1.0	1.0	8821203
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	8822336	<0.50	<0.50	0.50	8822348
Bicarbonate (HCO3)	mg/L	82.7	178	8822336	187	76.1	0.50	8822348
Carbonate (CO3)	mg/L	<0.50	<0.50	8822336	<0.50	<0.50	0.50	8822348
Hydroxide (OH)	mg/L	<0.50	<0.50	8822336	<0.50	<0.50	0.50	8822348
Anions								
Dissolved Sulphate (SO4)	mg/L	66.3	23.1	8823449	39.2	14.9	0.50	8823449
Dissolved Chloride (Cl)	mg/L	0.66	0.50	8823441	0.77	0.63	0.50	8823441
Nutrients								
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0034	8822826	0.0039	0.0028	0.0020	8822826
Total Ammonia (N)	mg/L	<0.0050	<0.0050	8822186	0.014	0.0070	0.0050	8822186
Nitrate plus Nitrite (N)	mg/L	0.146	0.130	8823528	0.161	0.140	0.0020	8823528
Nitrite (N)	mg/L	<0.0020	<0.0020	8823532	<0.0020	<0.0020	0.0020	8823532
Total Phosphorus (P)	mg/L	<0.0020	0.0154	8822827	0.0048	0.0160	0.0020	8822827
Physical Properties								
Conductivity	uS/cm	270	314	8822334	359	151	1.0	8822347
pH	pH	7.98	8.30	8822281	8.06	7.84		8822342

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SK5689	SK5690		SK5691	SK5692		
Sampling Date		2017/11/02 16:50	2017/11/02 15:35		2017/11/03 10:15	2017/11/02 14:30		
COC Number		08446304	08446304		08446304	08446304		
	UNITS	KZ-2	KZ-6	QC Batch	KZ-9	KZ-13	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	<1.0	8821283	1.0	<1.0	1.0	8821283
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SK5693		SK5694		SK5695		
Sampling Date		2017/11/02 12:00		2017/11/02 12:40		2017/11/02 13:18		
COC Number		08446304		08446304		08446304		
	UNITS	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	4.8	8822801	4.9	8822801	4.1	N/A	8822801
Cation Sum	meq/L	4.7	8822801	4.8	8822801	3.7	N/A	8822801
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.98	8822798	0.98	8822798	0.91	0.010	8822798
Ion Balance (% Difference)	%	1.0	8822799	1.2	8822799	4.8	N/A	8822799
Nitrate (N)	mg/L	0.180	8820711	0.240	8820711	0.230	0.0020	8820711
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8838877	<0.00050	8838877	<0.00050	0.00050	8838877
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8838880	<0.00050	8838880	0.00050	0.00050	8838880
Fluoride (F)	mg/L	0.100	8821940	0.076	8821940	0.082	0.010	8821940
Dissolved Organic Carbon (C)	mg/L	1.37	8822648	1.26	8822648	1.14	0.50	8822648
Acidity (pH 4.5)	mg/L	<1.0	8821203	<1.0	8821203	<1.0	1.0	8821203
Alkalinity (Total as CaCO3)	mg/L	199	8822348	208	8822348	168	0.50	8822348
Acidity (pH 8.3)	mg/L	1.3	8821203	3.0	8821203	2.4	1.0	8821203
Alkalinity (PP as CaCO3)	mg/L	<0.50	8822348	1.72	8822348	<0.50	0.50	8822348
Bicarbonate (HCO3)	mg/L	243	8822348	250	8822348	205	0.50	8822348
Carbonate (CO3)	mg/L	<0.50	8822348	2.06	8822348	<0.50	0.50	8822348
Hydroxide (OH)	mg/L	<0.50	8822348	<0.50	8822348	<0.50	0.50	8822348
Anions								
Dissolved Sulphate (SO4)	mg/L	35.9	8823449	35.0	8823449	32.0	0.50	8823449
Dissolved Chloride (Cl)	mg/L	0.73	8823441	0.75	8823441	0.72	0.50	8823441
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0034	8824275	<0.0020 (1)	8827323	0.0020	0.0020	8822826
Total Ammonia (N)	mg/L	0.0050	8822186	0.0050	8822186	<0.0050	0.0050	8822186
Nitrate plus Nitrite (N)	mg/L	0.180	8823528	0.240	8823528	0.230	0.0020	8823528
Nitrite (N)	mg/L	<0.0020	8823532	<0.0020	8823532	<0.0020	0.0020	8823532
Total Phosphorus (P)	mg/L	0.0038	8824281	0.0021	8822827	0.0030	0.0020	8822827
Physical Properties								
Conductivity	uS/cm	436	8822347	443	8822347	370	1.0	8822347

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample was originally analysed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SK5693		SK5694		SK5695		
Sampling Date		2017/11/02 12:00		2017/11/02 12:40		2017/11/02 13:18		
COC Number		08446304		08446304		08446304		
	UNITS	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
pH	pH	8.23	8822342	8.31	8822342	8.18		8822342
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8821283	<1.0	8821283	<1.0	1.0	8821283
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SK5696		SK5697		SK5717		
Sampling Date		2017/11/03 10:40		2017/11/02 14:00		2017/11/02 10:45		
COC Number		08446304		08446304		08446303		
	UNITS	KZ-18	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	4.3	8822801	1.6	8822801	6.2	N/A	8822801
Cation Sum	meq/L	4.1	8822801	1.5	8822801	5.9	N/A	8822801
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.94	8822798	0.94	8822798	0.97	0.010	8822798
Ion Balance (% Difference)	%	3.3	8822799	3.0	8822799	1.8	N/A	8822799
Nitrate (N)	mg/L	0.195	8820711	0.137	8820711	0.0916	0.0020	8820711
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8838877	0.00055	8838877	0.00059	0.00050	8838877
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8838880	0.00056	8838880	<0.00050	0.00050	8838880
Fluoride (F)	mg/L	0.071	8821940	0.045	8821940	0.190	0.010	8821940
Dissolved Organic Carbon (C)	mg/L	0.89	8822648	2.33	8822648	4.05	0.50	8822648
Acidity (pH 4.5)	mg/L	<1.0	8821203	<1.0	8821203	<1.0	1.0	8821203
Alkalinity (Total as CaCO3)	mg/L	190	8822336	61.1	8822348	252	0.50	8822336
Acidity (pH 8.3)	mg/L	2.1	8821203	<1.0	8821203	5.0	1.0	8821203
Alkalinity (PP as CaCO3)	mg/L	<0.50	8822336	<0.50	8822348	<0.50	0.50	8822336
Bicarbonate (HCO3)	mg/L	231	8822336	74.5	8822348	307	0.50	8822336
Carbonate (CO3)	mg/L	<0.50	8822336	<0.50	8822348	<0.50	0.50	8822336
Hydroxide (OH)	mg/L	<0.50	8822336	<0.50	8822348	<0.50	0.50	8822336
Anions								
Dissolved Sulphate (SO4)	mg/L	24.0	8823449	14.7	8823449	52.0	0.50	8823449
Dissolved Chloride (Cl)	mg/L	0.72	8823441	0.66	8823441	0.87	0.50	8823441
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0370	8822826	0.0050	8822826	0.0078	0.0020	8822826
Total Ammonia (N)	mg/L	<0.0050	8822186	0.0080	8822186	0.056	0.0050	8822186
Nitrate plus Nitrite (N)	mg/L	0.195	8823528	0.137	8823528	0.0916	0.0020	8823528
Nitrite (N)	mg/L	<0.0020	8823532	<0.0020	8823532	<0.0020	0.0020	8823532
Total Phosphorus (P)	mg/L	0.0358	8822827	0.0030	8822827	0.0120	0.0020	8822827
Physical Properties								
Conductivity	uS/cm	393	8822334	152	8822347	541	1.0	8822334
pH	pH	8.23	8822281	7.89	8822342	8.21		8822281

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SK5696		SK5697		SK5717		
Sampling Date		2017/11/03 10:40		2017/11/02 14:00		2017/11/02 10:45		
COC Number		08446304		08446304		08446303		
	UNITS	KZ-18	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8821283	<1.0	8821283	<1.0	1.0	8821283
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SK5718		SK5719		SK5720		
Sampling Date		2017/11/02 09:20		2017/11/01 15:40		2017/11/01 15:00		
COC Number		08446303		08446303		08446303		
	UNITS	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	6.0	8822801	5.6	8822801	0.034	N/A	8822801
Cation Sum	meq/L	6.5	8822801	5.1	8822801	0.0012	N/A	8822801
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	1.1	8822798	0.92	8822798	0.035	0.010	8822798
Ion Balance (% Difference)	%	4.1	8822799	4.2	8822799	93	N/A	8822799
Nitrate (N)	mg/L	0.131	8820711	0.148	8820711	0.0046 (1)	0.0020	8820711
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00057	8838877	0.00056	8838877	<0.00050	0.00050	8838877
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00051	8838880	0.00056	8838880	0.00053	0.00050	8838880
Fluoride (F)	mg/L	0.160	8821940	0.130	8821940	0.011	0.010	8821940
Dissolved Organic Carbon (C)	mg/L	3.31	8822648	2.62	8822648	<0.50	0.50	8822648
Acidity (pH 4.5)	mg/L	<1.0	8821203	<1.0	8821203	<1.0	1.0	8821203
Alkalinity (Total as CaCO3)	mg/L	247	8822348	226	8822336	0.89	0.50	8822348
Acidity (pH 8.3)	mg/L	5.5	8821203	<1.0	8821203	<1.0	1.0	8821203
Alkalinity (PP as CaCO3)	mg/L	<0.50	8822348	4.20	8822336	<0.50	0.50	8822348
Bicarbonate (HCO3)	mg/L	302	8822348	266	8822336	1.09	0.50	8822348
Carbonate (CO3)	mg/L	<0.50	8822348	5.04	8822336	<0.50	0.50	8822348
Hydroxide (OH)	mg/L	<0.50	8822348	<0.50	8822336	<0.50	0.50	8822348
Anions								
Dissolved Sulphate (SO4)	mg/L	49.4	8823449	46.7	8823449	<0.50	0.50	8823449
Dissolved Chloride (Cl)	mg/L	0.86	8823441	1.8	8823441	0.55	0.50	8823441
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0081	8822826	0.0060	8822826	<0.0020	0.0020	8822826
Total Ammonia (N)	mg/L	0.044	8822186	0.0070	8822186	<0.0050	0.0050	8822186
Nitrate plus Nitrite (N)	mg/L	0.131	8823528	0.148	8823528	0.0046 (1)	0.0020	8823528
Nitrite (N)	mg/L	<0.0020	8823532	<0.0020	8823532	<0.0020	0.0020	8823532
Total Phosphorus (P)	mg/L	0.0080	8822827	0.0032	8822827	0.0021	0.0020	8822827
Physical Properties								
Conductivity	uS/cm	535	8822347	484	8822334	1.2	1.0	8822347
pH	pH	8.16	8822342	8.41	8822281	5.94		8822342

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Test repeated

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SK5718		SK5719		SK5720		
Sampling Date		2017/11/02 09:20		2017/11/01 15:40		2017/11/01 15:00		
COC Number		08446303		08446303		08446303		
	UNITS	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8821283	<1.0	8821283	<1.0	1.0	8822383
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SK5721		SK5722		
Sampling Date		2017/11/03 09:35		2017/11/06 13:19		
COC Number		08446303		08446303		
	UNITS	KZ-37	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters						
Anion Sum	meq/L	4.0	8822801	0.029	N/A	8822801
Cation Sum	meq/L	3.8	8822801	0.0017	N/A	8822801
Filter and HNO3 Preservation	N/A	FIELD	ONSITE			
Ion Balance	N/A	0.94	8822798	0.059	0.010	8822798
Ion Balance (% Difference)	%	3.3	8822799	89	N/A	8822799
Nitrate (N)	mg/L	0.172	8820711	<0.0020	0.0020	8820711
Misc. Inorganics						
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00053	8838877	<0.00050	0.00050	8838877
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8838880	<0.00050	0.00050	8838880
Fluoride (F)	mg/L	0.076	8821940	0.011	0.010	8821940
Dissolved Organic Carbon (C)	mg/L	1.51	8822648	<0.50	0.50	8822648
Acidity (pH 4.5)	mg/L	<1.0	8821203	<1.0	1.0	8821203
Alkalinity (Total as CaCO3)	mg/L	163	8822336	0.69	0.50	8822348
Acidity (pH 8.3)	mg/L	4.5	8821203	<1.0	1.0	8821203
Alkalinity (PP as CaCO3)	mg/L	<0.50	8822336	<0.50	0.50	8822348
Bicarbonate (HCO3)	mg/L	199	8822336	0.84	0.50	8822348
Carbonate (CO3)	mg/L	<0.50	8822336	<0.50	0.50	8822348
Hydroxide (OH)	mg/L	<0.50	8822336	<0.50	0.50	8822348
Anions						
Dissolved Sulphate (SO4)	mg/L	34.5	8823449	<0.50	0.50	8823449
Dissolved Chloride (Cl)	mg/L	0.73	8823441	0.51	0.50	8823441
Nutrients						
Dissolved Phosphorus (P)	mg/L	0.0082	8822826	<0.0020	0.0020	8822826
Total Ammonia (N)	mg/L	0.011	8822186	<0.0050	0.0050	8822186
Nitrate plus Nitrite (N)	mg/L	0.172	8823528	<0.0020	0.0020	8823528
Nitrite (N)	mg/L	<0.0020	8823532	<0.0020	0.0020	8823532
Total Phosphorus (P)	mg/L	0.0094	8822827	<0.0020 (1)	0.0020	8826021
Physical Properties						
Conductivity	uS/cm	370	8822334	1.1	1.0	8822347

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Sample was originally analysed within hold time. Data quality required investigation. Re-analysis was completed past recommended hold time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SK5721		SK5722		
Sampling Date		2017/11/03 09:35		2017/11/06 13:19		
COC Number		08446303		08446303		
	UNITS	KZ-37	QC Batch	TRIP BLANK	RDL	QC Batch
pH	pH	8.06	8822281	5.77		8822342
Physical Properties						
Total Suspended Solids	mg/L	<1.0	8822383	<1.0	1.0	8822383
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SK5689	SK5690	SK5691	SK5692	SK5693		
Sampling Date		2017/11/02 16:50	2017/11/02 15:35	2017/11/03 10:15	2017/11/02 14:30	2017/11/02 12:00		
COC Number		08446304	08446304	08446304	08446304	08446304		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Misc. Inorganics								
Dissolved Hardness (CaCO3)	mg/L	125	159	182	69.5	229	0.50	8820684
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8822203
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00223	0.00217	0.00200	0.00548	0.00122	0.00050	8821643
Dissolved Antimony (Sb)	mg/L	0.000023	<0.000020	0.000036	0.000020	0.000033	0.000020	8821643
Dissolved Arsenic (As)	mg/L	0.000066	0.000074	0.000180	0.000150	0.000396	0.000020	8821643
Dissolved Barium (Ba)	mg/L	0.0698	0.0420	0.0825	0.110	0.0773	0.000020	8821643
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8821643
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8821643
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8821643
Dissolved Cadmium (Cd)	mg/L	0.000225	0.0000140	0.0000760	0.0000210	0.0000340	0.0000050	8821643
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00011	<0.00010	0.00011	<0.00010	0.00010	8821643
Dissolved Cobalt (Co)	mg/L	0.0000050	0.0000070	0.0000960	0.0000340	0.0000280	0.0000050	8821643
Dissolved Copper (Cu)	mg/L	0.000535	0.000148	0.000290	0.000327	0.000269	0.000050	8821643
Dissolved Iron (Fe)	mg/L	<0.0010	0.0087	0.247	0.0507	0.0132	0.0010	8821643
Dissolved Lead (Pb)	mg/L	0.0000130	0.0000200	<0.0000050	0.000190 (1)	<0.0000050	0.0000050	8821643
Dissolved Lithium (Li)	mg/L	0.00124	0.00071	0.00329	0.00109	0.00334	0.00050	8821643
Dissolved Manganese (Mn)	mg/L	<0.000050	0.000246	0.0728	0.0443	0.0278	0.000050	8821643
Dissolved Molybdenum (Mo)	mg/L	0.000648	0.000521	0.000600	0.000640	0.00124	0.000050	8821643
Dissolved Nickel (Ni)	mg/L	0.000320	0.000143	0.000398	0.000354	0.000642	0.000020	8821643
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0023	0.0043	<0.0020	0.0032	0.0020	8821643
Dissolved Selenium (Se)	mg/L	0.00196	0.000907	0.00120	0.000191	0.00131	0.000040	8821643
Dissolved Silicon (Si)	mg/L	2.44	2.87	3.40	3.21	3.40	0.050	8821643
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000070	<0.0000050	0.0000050	8821643
Dissolved Strontium (Sr)	mg/L	0.132	0.151	0.190	0.0662	0.204	0.000050	8821643
Dissolved Thallium (Tl)	mg/L	0.0000040	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8821643
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8821643
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8821643
Dissolved Uranium (U)	mg/L	0.00354	0.00101	0.00138	0.000504	0.00373	0.0000020	8821643

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SK5689	SK5690	SK5691	SK5692	SK5693		
Sampling Date		2017/11/02 16:50	2017/11/02 15:35	2017/11/03 10:15	2017/11/02 14:30	2017/11/02 12:00		
COC Number		08446304	08446304	08446304	08446304	08446304		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8821643
Dissolved Zinc (Zn)	mg/L	0.0265	0.00069	0.0198	0.00241	0.00459	0.00010	8821643
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8821643
Dissolved Calcium (Ca)	mg/L	41.3	53.2	61.3	23.8	67.5	0.050	8820688
Dissolved Magnesium (Mg)	mg/L	5.28	6.24	7.14	2.47	14.8	0.050	8820688
Dissolved Potassium (K)	mg/L	1.92	0.757	1.40	1.60	1.28	0.050	8820688
Dissolved Sodium (Na)	mg/L	0.842	0.703	1.27	0.948	1.32	0.050	8820688
Dissolved Sulphur (S)	mg/L	20.3	6.7	11.8	4.7	11.5	3.0	8820688

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SK5694	SK5695		SK5696		
Sampling Date		2017/11/02 12:40	2017/11/02 13:18		2017/11/03 10:40		
COC Number		08446304	08446304		08446304		
	UNITS	KZ-16	KZ-17	QC Batch	KZ-18	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	237	181	8820684	200	0.50	8820684
Elements							
Dissolved Mercury (Hg)	mg/L	0.0000031	<0.0000020	8822203	<0.0000020	0.0000020	8822203
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00099	0.00100	8821643	0.00380	0.00050	8821643
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000024	8821643	0.000122 (1)	0.000020	8826117
Dissolved Arsenic (As)	mg/L	0.000206	0.000229	8821643	0.000631	0.000020	8821643
Dissolved Barium (Ba)	mg/L	0.0805	0.0636	8821643	0.0494	0.000020	8821643
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	8821643	<0.000010	0.000010	8821643
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8821643	<0.0000050	0.0000050	8821643
Dissolved Boron (B)	mg/L	<0.010	<0.010	8821643	<0.010	0.010	8821643
Dissolved Cadmium (Cd)	mg/L	0.0000200	0.0000160	8821643	0.0000320	0.0000050	8821643
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	8821643	0.00013	0.00010	8821643
Dissolved Cobalt (Co)	mg/L	0.0000190	0.0000050	8821643	0.0000150	0.0000050	8821643
Dissolved Copper (Cu)	mg/L	0.000238	0.000297	8821643	0.000129	0.000050	8821643
Dissolved Iron (Fe)	mg/L	0.0064	<0.0010	8821643	0.0143	0.0010	8821643
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	8821643	<0.0000050	0.0000050	8821643
Dissolved Lithium (Li)	mg/L	0.00324	0.00247	8821643	0.00173	0.00050	8821643
Dissolved Manganese (Mn)	mg/L	0.00663	0.000092	8821643	0.00690	0.000050	8821643
Dissolved Molybdenum (Mo)	mg/L	0.000451	0.000743	8821643	0.00149	0.000050	8821643
Dissolved Nickel (Ni)	mg/L	0.000480	0.000361	8821643	0.000349	0.000020	8821643
Dissolved Phosphorus (P)	mg/L	0.0027	<0.0020	8821643	0.0388	0.0020	8821643
Dissolved Selenium (Se)	mg/L	0.00116	0.00105	8821643	0.00133	0.000040	8821643
Dissolved Silicon (Si)	mg/L	3.37	3.19	8821643	3.29	0.050	8821643
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	8821643	<0.0000050	0.0000050	8821643
Dissolved Strontium (Sr)	mg/L	0.221	0.180	8821643	0.172	0.000050	8821643
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8821643	<0.0000020	0.0000020	8821643
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	8821643	<0.00020	0.00020	8821643
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	8821643	<0.00050	0.00050	8821643
Dissolved Uranium (U)	mg/L	0.00246	0.00252	8821643	0.00268	0.0000020	8821643

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SK5694	SK5695		SK5696		
Sampling Date		2017/11/02 12:40	2017/11/02 13:18		2017/11/03 10:40		
COC Number		08446304	08446304		08446304		
	UNITS	KZ-16	KZ-17	QC Batch	KZ-18	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	8821643	<0.00020	0.00020	8821643
Dissolved Zinc (Zn)	mg/L	0.00078	0.00067	8821643	0.00108	0.00010	8821643
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	8821643	<0.00010	0.00010	8821643
Dissolved Calcium (Ca)	mg/L	72.1	54.3	8820688	51.9	0.050	8820688
Dissolved Magnesium (Mg)	mg/L	13.8	11.1	8820688	17.1	0.050	8820688
Dissolved Potassium (K)	mg/L	1.14	1.08	8820688	0.565	0.050	8820688
Dissolved Sodium (Na)	mg/L	1.35	1.13	8820688	0.881	0.050	8820688
Dissolved Sulphur (S)	mg/L	11.5	10.1	8820688	7.8	3.0	8820688

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SK5697	SK5717		SK5718		
Sampling Date		2017/11/02 14:00	2017/11/02 10:45		2017/11/02 09:20		
COC Number		08446304	08446303		08446303		
	UNITS	KZ-19	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	69.0	290	8820684	315	0.50	8826035
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8822203	<0.0000020	0.0000020	8822203
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00580	0.00142	8821643	0.00152	0.00050	8821643
Dissolved Antimony (Sb)	mg/L	0.000023	0.000083	8821643	0.000066	0.000020	8821643
Dissolved Arsenic (As)	mg/L	0.000158	0.000713	8821643	0.000800	0.000020	8821643
Dissolved Barium (Ba)	mg/L	0.112	0.0661	8821643	0.0731	0.000020	8821643
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	8821643	<0.000010	0.000010	8821643
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8821643	<0.0000050	0.0000050	8821643
Dissolved Boron (B)	mg/L	<0.010	<0.010	8821643	<0.010	0.010	8821643
Dissolved Cadmium (Cd)	mg/L	0.0000210	0.0000100	8821643	0.0000150	0.0000050	8821643
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	8821643	<0.00010	0.00010	8821643
Dissolved Cobalt (Co)	mg/L	0.0000310	0.000103	8821643	0.000108 (1)	0.0000050	8826117
Dissolved Copper (Cu)	mg/L	0.000325	0.000272	8821643	0.000332	0.000050	8826117
Dissolved Iron (Fe)	mg/L	0.0522	0.0816	8821643	0.0923	0.0010	8821643
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	8821643	<0.0000050	0.0000050	8821643
Dissolved Lithium (Li)	mg/L	0.00106	0.00684	8821643	0.00733	0.00050	8821643
Dissolved Manganese (Mn)	mg/L	0.0445	0.110	8821643	0.0881	0.000050	8821643
Dissolved Molybdenum (Mo)	mg/L	0.000656	0.00169	8821643	0.00153	0.000050	8821643
Dissolved Nickel (Ni)	mg/L	0.000318	0.00212	8821643	0.00181	0.000020	8821643
Dissolved Phosphorus (P)	mg/L	0.0021	0.0043	8821643	0.0062	0.0020	8821643
Dissolved Selenium (Se)	mg/L	0.000174	0.000716	8821643	0.000994	0.000040	8821643
Dissolved Silicon (Si)	mg/L	3.12	4.99	8821643	5.33	0.050	8821643
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	8821643	<0.0000050	0.0000050	8821643
Dissolved Strontium (Sr)	mg/L	0.0676	0.202	8821643	0.264	0.000050	8821643
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8821643	<0.0000020	0.0000020	8821643
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	8821643	<0.00020	0.00020	8821643
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	8821643	<0.00050	0.00050	8821643
Dissolved Uranium (U)	mg/L	0.000505	0.00343	8821643	0.00379	0.0000020	8821643

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SK5697	SK5717		SK5718		
Sampling Date		2017/11/02 14:00	2017/11/02 10:45		2017/11/02 09:20		
COC Number		08446304	08446303		08446303		
	UNITS	KZ-19	KZ-21	QC Batch	KZ-22	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	8821643	<0.00020	0.00020	8821643
Dissolved Zinc (Zn)	mg/L	0.00246	0.00125	8821643	0.00217 (1)	0.00010	8821643
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00011	8821643	0.00021	0.00010	8821643
Dissolved Calcium (Ca)	mg/L	23.6	73.4	8820688	81.3	0.050	8825265
Dissolved Magnesium (Mg)	mg/L	2.42	26.0	8820688	27.2	0.050	8825265
Dissolved Potassium (K)	mg/L	1.59	1.62	8820688	1.75	0.050	8825265
Dissolved Sodium (Na)	mg/L	0.977	1.89	8820688	2.20	0.050	8825265
Dissolved Sulphur (S)	mg/L	4.6	15.2	8820688	18.4	3.0	8825265

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SK5719	SK5720	SK5721	SK5722		
Sampling Date		2017/11/01 15:40	2017/11/01 15:00	2017/11/03 09:35	2017/11/06 13:19		
COC Number		08446303	08446303	08446303	08446303		
	UNITS	KZ-26	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Misc. Inorganics							
Dissolved Hardness (CaCO3)	mg/L	251	<0.50	184	<0.50	0.50	8820684
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8822203
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00110	<0.00050	0.00188	<0.00050	0.00050	8821643
Dissolved Antimony (Sb)	mg/L	0.000083	<0.000020	0.000037	<0.000020	0.000020	8821643
Dissolved Arsenic (As)	mg/L	0.000517	<0.000020	0.000265	<0.000020	0.000020	8821643
Dissolved Barium (Ba)	mg/L	0.0715	<0.000020	0.0790	0.000060	0.000020	8821643
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8821643
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8821643
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8821643
Dissolved Cadmium (Cd)	mg/L	0.0000130	<0.0000050	0.0000650	<0.0000050	0.0000050	8821643
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8821643
Dissolved Cobalt (Co)	mg/L	0.0000210	<0.0000050	0.0000790	<0.0000050	0.0000050	8821643
Dissolved Copper (Cu)	mg/L	0.000414	<0.000050	0.000241	<0.000050	0.000050	8821643
Dissolved Iron (Fe)	mg/L	0.0152	<0.0010	0.168	<0.0010	0.0010	8821643
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000180 (1)	<0.0000050	<0.0000050	0.0000050	8821643
Dissolved Lithium (Li)	mg/L	0.00546	<0.00050	0.00315	<0.00050	0.00050	8821643
Dissolved Manganese (Mn)	mg/L	0.0111	<0.000050	0.0626	<0.000050	0.000050	8821643
Dissolved Molybdenum (Mo)	mg/L	0.00111	<0.000050	0.000824	<0.000050	0.000050	8821643
Dissolved Nickel (Ni)	mg/L	0.000861	<0.000020	0.000392	<0.000020	0.000020	8821643
Dissolved Phosphorus (P)	mg/L	0.0028	<0.0020	0.0078	<0.0020	0.0020	8821643
Dissolved Selenium (Se)	mg/L	0.000920	<0.000040	0.00118	<0.000040	0.000040	8821643
Dissolved Silicon (Si)	mg/L	3.96	<0.050	3.45	<0.050	0.050	8821643
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8821643
Dissolved Strontium (Sr)	mg/L	0.211	<0.000050	0.191	<0.000050	0.000050	8821643
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8821643
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8821643
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8821643
Dissolved Uranium (U)	mg/L	0.00303	<0.0000020	0.00167	<0.0000020	0.0000020	8821643

RDL = Reportable Detection Limit
(1) test repeated

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SK5719	SK5720	SK5721	SK5722		
Sampling Date		2017/11/01 15:40	2017/11/01 15:00	2017/11/03 09:35	2017/11/06 13:19		
COC Number		08446303	08446303	08446303	08446303		
	UNITS	KZ-26	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8821643
Dissolved Zinc (Zn)	mg/L	0.00049	0.00012 (1)	0.0152	<0.00010	0.00010	8821643
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8821643
Dissolved Calcium (Ca)	mg/L	66.4	<0.050	58.2	<0.050	0.050	8820688
Dissolved Magnesium (Mg)	mg/L	20.6	<0.050	9.30	<0.050	0.050	8820688
Dissolved Potassium (K)	mg/L	1.31	<0.050	1.23	<0.050	0.050	8820688
Dissolved Sodium (Na)	mg/L	1.70	<0.050	1.18	<0.050	0.050	8820688
Dissolved Sulphur (S)	mg/L	13.4	<3.0	10.8	<3.0	3.0	8820688

RDL = Reportable Detection Limit
(1) test repeated

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SK5689	SK5690	SK5691	SK5692	SK5693		
Sampling Date		2017/11/02 16:50	2017/11/02 15:35	2017/11/03 10:15	2017/11/02 14:30	2017/11/02 12:00		
COC Number		08446304	08446304	08446304	08446304	08446304		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-13	KZ-15	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	120	161	176	67.2	218	0.50	8820642
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8822364
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00285	0.00378	0.00799	0.00948	0.00464	0.00050	8822285
Total Antimony (Sb)	mg/L	0.000023	<0.000020	0.000039	<0.000020	0.000031	0.000020	8822285
Total Arsenic (As)	mg/L	0.000065	0.000070	0.000228	0.000145	0.000433	0.000020	8822285
Total Barium (Ba)	mg/L	0.0715	0.0430	0.0856	0.107	0.0769	0.000020	8822285
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8822285
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8822285
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8822285
Total Cadmium (Cd)	mg/L	0.000216	0.0000160	0.0000940	0.0000210	0.0000400	0.0000050	8822285
Total Chromium (Cr)	mg/L	<0.00010	0.00021	<0.00010	<0.00010	<0.00010	0.00010	8822285
Total Cobalt (Co)	mg/L	0.0000060	0.0000070	0.0000930	0.0000320	0.0000350	0.0000050	8822285
Total Copper (Cu)	mg/L	0.000524	0.000176	0.000412	0.000323	0.000286	0.000050	8822285
Total Iron (Fe)	mg/L	0.0017	0.0240	0.456	0.0803	0.0472	0.0010	8822285
Total Lead (Pb)	mg/L	0.000104	0.000262	0.0000720	0.0000090	0.0000380	0.0000050	8822285
Total Lithium (Li)	mg/L	0.00126	0.00069	0.00335	0.00106	0.00324	0.00050	8822285
Total Manganese (Mn)	mg/L	<0.000050	0.00253	0.0740	0.0476	0.0310	0.000050	8822285
Total Molybdenum (Mo)	mg/L	0.000622	0.000522	0.000579	0.000620	0.00123	0.000050	8822285
Total Nickel (Ni)	mg/L	0.000311	0.000156	0.000412	0.000341	0.000660	0.000020	8822285
Total Phosphorus (P)	mg/L	0.0025	0.0030	0.0060	0.0037	0.0052	0.0020	8822285
Total Selenium (Se)	mg/L	0.00178	0.000939	0.00118	0.000199	0.00125	0.000040	8822285
Total Silicon (Si)	mg/L	2.27	3.04	3.55	3.16	3.71	0.050	8822285
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8822285
Total Strontium (Sr)	mg/L	0.131	0.155	0.187	0.0679	0.200	0.000050	8822285
Total Thallium (Tl)	mg/L	0.0000030	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8822285
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8822285
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8822285
Total Uranium (U)	mg/L	0.00331	0.000974	0.00136	0.000484	0.00374	0.0000020	8822285
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8822285

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SK5689	SK5690	SK5691	SK5692	SK5693		
Sampling Date		2017/11/02 16:50	2017/11/02 15:35	2017/11/03 10:15	2017/11/02 14:30	2017/11/02 12:00		
COC Number		08446304	08446304	08446304	08446304	08446304		
	UNITS	**KZ-2**	**KZ-6**	**KZ-9**	**KZ-13**	**KZ-15**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.0249	0.00050	0.0194	0.00261	0.00449	0.00010	8822285
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8822285
Total Calcium (Ca)	mg/L	39.3	53.3	58.3	22.8	63.5	0.050	8820689
Total Magnesium (Mg)	mg/L	5.21	6.88	7.29	2.47	14.5	0.050	8820689
Total Potassium (K)	mg/L	1.88	0.812	1.42	1.60	1.25	0.050	8820689
Total Sodium (Na)	mg/L	0.803	0.722	1.26	0.933	1.26	0.050	8820689
Total Sulphur (S)	mg/L	20.1	7.8	12.6	4.6	11.6	3.0	8820689

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SK5694	SK5695	SK5696	SK5697	SK5717		
Sampling Date		2017/11/02 12:40	2017/11/02 13:18	2017/11/03 10:40	2017/11/02 14:00	2017/11/02 10:45		
COC Number		08446304	08446304	08446304	08446304	08446303		
	UNITS	KZ-16	KZ-17	KZ-18	KZ-19	KZ-21	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	222	181	186	67.1	277	0.50	8820642
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8822364
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00132	0.00131	0.00621	0.00948	0.00254	0.00050	8822285
Total Antimony (Sb)	mg/L	<0.000020	0.000027	0.000031	<0.000020	0.000076	0.000020	8822285
Total Arsenic (As)	mg/L	0.000192	0.000201	0.000574	0.000169	0.00119	0.000020	8822285
Total Barium (Ba)	mg/L	0.0817	0.0658	0.0485	0.110	0.0652	0.000020	8822285
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8822285
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8822285
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8822285
Total Cadmium (Cd)	mg/L	0.0000210	0.0000200	0.0000330	0.0000240	0.0000100	0.0000050	8822285
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8822285
Total Cobalt (Co)	mg/L	0.0000190	<0.0000050	0.0000140	0.0000330	0.000104	0.0000050	8822285
Total Copper (Cu)	mg/L	0.000205	0.000285	0.000089	0.000337	0.000273	0.000050	8822285
Total Iron (Fe)	mg/L	0.0076	0.0026	0.0183	0.0810	0.230	0.0010	8822285
Total Lead (Pb)	mg/L	<0.0000050	0.0000860	<0.0000050	0.0000100	<0.0000050	0.0000050	8822285
Total Lithium (Li)	mg/L	0.00319	0.00267	0.00162	0.00112	0.00645	0.00050	8822285
Total Manganese (Mn)	mg/L	0.00588	0.00127	0.00631	0.0475	0.113	0.000050	8822285
Total Molybdenum (Mo)	mg/L	0.000438	0.000798	0.00142	0.000633	0.00159	0.000050	8822285
Total Nickel (Ni)	mg/L	0.000434	0.000373	0.000296	0.000355	0.00207	0.000020	8822285
Total Phosphorus (P)	mg/L	0.0026	0.0029	0.0326	0.0030	0.0118	0.0020	8822285
Total Selenium (Se)	mg/L	0.00125	0.00112	0.00142	0.000166	0.000663	0.000040	8822285
Total Silicon (Si)	mg/L	3.63	3.17	3.47	3.45	5.33	0.050	8822285
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8822285
Total Strontium (Sr)	mg/L	0.190	0.178	0.145	0.0678	0.212	0.000050	8822285
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8822285
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8822285
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8822285
Total Uranium (U)	mg/L	0.00234	0.00229	0.00254	0.000499	0.00325	0.0000020	8822285
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8822285

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SK5694	SK5695	SK5696	SK5697	SK5717		
Sampling Date		2017/11/02 12:40	2017/11/02 13:18	2017/11/03 10:40	2017/11/02 14:00	2017/11/02 10:45		
COC Number		08446304	08446304	08446304	08446304	08446303		
	UNITS	**KZ-16**	**KZ-17**	**KZ-18**	**KZ-19**	**KZ-21**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.00056	0.00108	0.00089	0.00267	0.00121	0.00010	8822285
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00015	0.00010	8822285
Total Calcium (Ca)	mg/L	68.0	54.3	49.8	22.8	67.0	0.050	8820689
Total Magnesium (Mg)	mg/L	12.6	11.1	15.0	2.50	26.7	0.050	8820689
Total Potassium (K)	mg/L	0.997	1.13	0.468	1.60	1.66	0.050	8820689
Total Sodium (Na)	mg/L	1.13	1.11	0.725	0.945	1.85	0.050	8820689
Total Sulphur (S)	mg/L	10.2	10.7	6.4	4.7	16.2	3.0	8820689

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SK5718	SK5719		SK5720		
Sampling Date		2017/11/02 09:20	2017/11/01 15:40		2017/11/01 15:00		
COC Number		08446303	08446303		08446303		
	UNITS	KZ-22	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	276	253	8820642	<0.50	0.50	8820642
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8822364	<0.0000020	0.0000020	8822364
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00185	0.00538	8822285	0.00057	0.00050	8822285
Total Antimony (Sb)	mg/L	0.000064	0.000075	8822285	<0.000020	0.000020	8822285
Total Arsenic (As)	mg/L	0.00108	0.000634	8822285	<0.000020	0.000020	8822285
Total Barium (Ba)	mg/L	0.0690	0.0719	8822285	0.000144 (1)	0.000020	8826118
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	8822285	<0.000010	0.000010	8822285
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8822285	<0.0000050	0.0000050	8822285
Total Boron (B)	mg/L	<0.010	<0.010	8822285	<0.010	0.010	8822285
Total Cadmium (Cd)	mg/L	0.0000130	0.0000110	8822285	<0.0000050	0.0000050	8822285
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	8822285	<0.00010	0.00010	8822285
Total Cobalt (Co)	mg/L	0.0000850	0.0000280	8822285	<0.0000050	0.0000050	8822285
Total Copper (Cu)	mg/L	0.000285	0.000444	8822285	<0.000050	0.000050	8822285
Total Iron (Fe)	mg/L	0.248	0.0578	8822285	<0.0010	0.0010	8822285
Total Lead (Pb)	mg/L	<0.0000050	0.0000110	8822285	<0.0000050	0.0000050	8822285
Total Lithium (Li)	mg/L	0.00700	0.00529	8822285	<0.00050	0.00050	8822285
Total Manganese (Mn)	mg/L	0.0732	0.0124	8822285	<0.000050	0.000050	8822285
Total Molybdenum (Mo)	mg/L	0.00138	0.00104	8822285	<0.000050	0.000050	8822285
Total Nickel (Ni)	mg/L	0.00154	0.000858	8822285	<0.000020	0.000020	8822285
Total Phosphorus (P)	mg/L	0.0085	0.0039	8822285	0.0032	0.0020	8822285
Total Selenium (Se)	mg/L	0.000844	0.000891	8822285	<0.000040	0.000040	8822285
Total Silicon (Si)	mg/L	5.27	4.57	8822285	<0.050	0.050	8822285
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	8822285	<0.0000050	0.0000050	8822285
Total Strontium (Sr)	mg/L	0.221	0.214	8822285	0.000227 (1)	0.000050	8826118
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8822285	<0.0000020	0.0000020	8822285
Total Tin (Sn)	mg/L	<0.00020	<0.00020	8822285	<0.00020	0.00020	8822285
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	8822285	<0.00050	0.00050	8822285
Total Uranium (U)	mg/L	0.00349	0.00301	8822285	<0.0000020	0.0000020	8822285

RDL = Reportable Detection Limit
(1) Test repeated

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SK5718	SK5719		SK5720		
Sampling Date		2017/11/02 09:20	2017/11/01 15:40		2017/11/01 15:00		
COC Number		08446303	08446303		08446303		
	UNITS	KZ-22	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Total Vanadium (V)	mg/L	<0.00020	<0.00020	8822285	<0.00020	0.00020	8822285
Total Zinc (Zn)	mg/L	0.00132	0.00069	8822285	<0.00010	0.00010	8822285
Total Zirconium (Zr)	mg/L	0.00020	<0.00010	8822285	<0.00010	0.00010	8822285
Total Calcium (Ca)	mg/L	70.9	66.9	8820689	<0.050	0.050	8820689
Total Magnesium (Mg)	mg/L	24.1	20.8	8820689	<0.050	0.050	8820689
Total Potassium (K)	mg/L	1.51	1.34	8820689	<0.050	0.050	8820689
Total Sodium (Na)	mg/L	1.86	1.65	8820689	<0.050	0.050	8820689
Total Sulphur (S)	mg/L	15.4	14.1	8820689	<3.0	3.0	8820689

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SK5721		SK5722		
Sampling Date		2017/11/03 09:35		2017/11/06 13:19		
COC Number		08446303		08446303		
	UNITS	KZ-37	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters						
Total Hardness (CaCO3)	mg/L	181	8820642	<0.50	0.50	8820642
Elements						
Total Mercury (Hg)	mg/L	<0.0000020	8822364	<0.0000020	0.0000020	8822364
Total Metals by ICPMS						
Total Aluminum (Al)	mg/L	0.00636	8822285	<0.00050	0.00050	8822285
Total Antimony (Sb)	mg/L	0.000036	8822285	<0.000020	0.000020	8822285
Total Arsenic (As)	mg/L	0.000317	8822285	<0.000020	0.000020	8822285
Total Barium (Ba)	mg/L	0.0764	8822285	<0.000020	0.000020	8822285
Total Beryllium (Be)	mg/L	<0.000010	8822285	<0.000010	0.000010	8822285
Total Bismuth (Bi)	mg/L	<0.0000050	8822285	<0.0000050	0.0000050	8822285
Total Boron (B)	mg/L	<0.010	8822285	<0.010	0.010	8822285
Total Cadmium (Cd)	mg/L	0.0000790	8822285	<0.0000050	0.0000050	8822285
Total Chromium (Cr)	mg/L	<0.00010	8822285	<0.00010	0.00010	8822285
Total Cobalt (Co)	mg/L	0.0000830	8822285	<0.0000050	0.0000050	8822285
Total Copper (Cu)	mg/L	0.000265	8822285	<0.000050	0.000050	8822285
Total Iron (Fe)	mg/L	0.318	8822285	<0.0010	0.0010	8822285
Total Lead (Pb)	mg/L	0.0000240	8822285	<0.0000050	0.0000050	8822285
Total Lithium (Li)	mg/L	0.00299	8822285	<0.00050	0.00050	8822285
Total Manganese (Mn)	mg/L	0.0635	8822285	<0.000050	0.000050	8822285
Total Molybdenum (Mo)	mg/L	0.000793	8822285	<0.000050	0.000050	8822285
Total Nickel (Ni)	mg/L	0.000397	8822285	<0.000020	0.000020	8822285
Total Phosphorus (P)	mg/L	0.0141	8822285	<0.0020	0.0020	8828440
Total Selenium (Se)	mg/L	0.00121	8822285	<0.000040	0.000040	8822285
Total Silicon (Si)	mg/L	3.58	8822285	<0.050	0.050	8822285
Total Silver (Ag)	mg/L	<0.0000050	8822285	<0.0000050	0.0000050	8822285
Total Strontium (Sr)	mg/L	0.184	8822285	<0.000050	0.000050	8822285
Total Thallium (Tl)	mg/L	<0.0000020	8822285	<0.0000020	0.0000020	8822285
Total Tin (Sn)	mg/L	<0.00020	8822285	<0.00020	0.00020	8822285
Total Titanium (Ti)	mg/L	<0.00050	8822285	<0.00050	0.00050	8822285
Total Uranium (U)	mg/L	0.00161	8822285	<0.0000020	0.0000020	8822285
Total Vanadium (V)	mg/L	<0.00020	8822285	<0.00020	0.00020	8822285
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SK5721		SK5722		
Sampling Date		2017/11/03 09:35		2017/11/06 13:19		
COC Number		08446303		08446303		
	UNITS	KZ-37	QC Batch	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0150	8822285	<0.00010	0.00010	8822285
Total Zirconium (Zr)	mg/L	<0.00010	8822285	<0.00010	0.00010	8822285
Total Calcium (Ca)	mg/L	57.3	8820689	<0.050	0.050	8820689
Total Magnesium (Mg)	mg/L	9.26	8820689	<0.050	0.050	8820689
Total Potassium (K)	mg/L	1.22	8820689	<0.050	0.050	8820689
Total Sodium (Na)	mg/L	1.19	8820689	<0.050	0.050	8820689
Total Sulphur (S)	mg/L	11.1	8820689	<3.0	3.0	8820689
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SK5689
Sample ID: KZ-2
Matrix: Water

Collected: 2017/11/02
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8821203	2017/11/06	2017/11/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8822336	2017/11/07	2017/11/07	
Chloride - Low Level	KONE/COL	8823441	N/A	2017/11/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8838877	N/A	2017/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8838880	N/A	2017/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8822648	N/A	2017/11/07	
Conductance - Low Level	AT/ALK	8822334	2017/11/07	2017/11/07	
Fluoride - Low Level	ISE/ISE	8821940	N/A	2017/11/07	
Hardness Total (calculated as CaCO3)	CALC	8820642	N/A	2017/11/07	
Hardness (calculated as CaCO3)	CALC	8820684	N/A	2017/11/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8822203	N/A	2017/11/07	
Mercury (Total-LowLevel) by CVAF	CV/AF	8822364	2017/11/07	2017/11/07	
Ion Balance (as Cations/Anions Ratio)	CALC	8822798	N/A	2017/11/08	
Ion Balance	CALC	8822799	N/A	2017/11/08	
Sum of cations, anions	CALC	8822801	N/A	2017/11/08	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8820688	N/A	2017/11/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8821643	N/A	2017/11/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8820689	N/A	2017/11/07	
Elements by ICPMS Low Level (total)	ICP/CRCM	8822285	N/A	2017/11/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8822186	N/A	2017/11/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8823528	N/A	2017/11/07	
Nitrite (N) (low level)	TRAA/COL	8823532	N/A	2017/11/07	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8820711	N/A	2017/11/08	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/11/06	
pH Water	AT/ALK	8822281	2017/11/07	2017/11/07	
Sulphate - Low Level	KONE/COL	8823449	N/A	2017/11/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8822826	2017/11/07	2017/11/07	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8822827	2017/11/07	2017/11/07	
Total Suspended Solids-Low Level	BAL/BAL	8821283	2017/11/06	2017/11/07	

Maxxam ID: SK5689 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2017/11/02
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8838877	N/A	2017/11/22	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8838880	N/A	2017/11/22	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8822203	N/A	2017/11/07	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8821643	N/A	2017/11/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8822285	N/A	2017/11/07	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SK5690
Sample ID: KZ-6
Matrix: Water

Collected: 2017/11/02
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8821203	2017/11/06	2017/11/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8822336	2017/11/07	2017/11/07	
Chloride - Low Level	KONE/COL	8823441	N/A	2017/11/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8838877	N/A	2017/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8838880	N/A	2017/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8822648	N/A	2017/11/07	
Conductance - Low Level	AT/ALK	8822334	2017/11/07	2017/11/07	
Fluoride - Low Level	ISE/ISE	8821940	N/A	2017/11/07	
Hardness Total (calculated as CaCO3)	CALC	8820642	N/A	2017/11/07	
Hardness (calculated as CaCO3)	CALC	8820684	N/A	2017/11/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8822203	N/A	2017/11/07	
Mercury (Total-LowLevel) by CVAF	CV/AF	8822364	2017/11/07	2017/11/07	
Ion Balance (as Cations/Anions Ratio)	CALC	8822798	N/A	2017/11/08	
Ion Balance	CALC	8822799	N/A	2017/11/08	
Sum of cations, anions	CALC	8822801	N/A	2017/11/08	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8820688	N/A	2017/11/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8821643	N/A	2017/11/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8820689	N/A	2017/11/07	
Elements by ICPMS Low Level (total)	ICP/CRCM	8822285	N/A	2017/11/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8822186	N/A	2017/11/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8823528	N/A	2017/11/07	
Nitrite (N) (low level)	TRAA/COL	8823532	N/A	2017/11/07	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8820711	N/A	2017/11/08	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/11/06	
pH Water	AT/ALK	8822281	2017/11/07	2017/11/07	
Sulphate - Low Level	KONE/COL	8823449	N/A	2017/11/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8822826	2017/11/07	2017/11/07	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8822827	2017/11/07	2017/11/07	
Total Suspended Solids-Low Level	BAL/BAL	8821283	2017/11/06	2017/11/07	

Maxxam ID: SK5690 Dup
Sample ID: KZ-6
Matrix: Water

Collected: 2017/11/02
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8822648	N/A	2017/11/07	Name Redacted
Fluoride - Low Level	ISE/ISE	8821940	N/A	2017/11/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8822186	N/A	2017/11/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8822826	2017/11/07	2017/11/07	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8822827	2017/11/07	2017/11/07	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SK5691
Sample ID: KZ-9
Matrix: Water

Collected: 2017/11/03
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8821203	2017/11/06	2017/11/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8822348	2017/11/07	2017/11/07	
Chloride - Low Level	KONE/COL	8823441	N/A	2017/11/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8838877	N/A	2017/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8838880	N/A	2017/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8822648	N/A	2017/11/07	
Conductance - Low Level	AT/ALK	8822347	2017/11/07	2017/11/07	
Fluoride - Low Level	ISE/ISE	8821940	N/A	2017/11/07	
Hardness Total (calculated as CaCO3)	CALC	8820642	N/A	2017/11/07	
Hardness (calculated as CaCO3)	CALC	8820684	N/A	2017/11/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8822203	N/A	2017/11/07	
Mercury (Total-LowLevel) by CVAF	CV/AF	8822364	2017/11/07	2017/11/07	
Ion Balance (as Cations/Anions Ratio)	CALC	8822798	N/A	2017/11/08	
Ion Balance	CALC	8822799	N/A	2017/11/08	
Sum of cations, anions	CALC	8822801	N/A	2017/11/08	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8820688	N/A	2017/11/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8821643	N/A	2017/11/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8820689	N/A	2017/11/07	
Elements by ICPMS Low Level (total)	ICP/CRCM	8822285	N/A	2017/11/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8822186	N/A	2017/11/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8823528	N/A	2017/11/07	
Nitrite (N) (low level)	TRAA/COL	8823532	N/A	2017/11/07	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8820711	N/A	2017/11/08	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/11/06	
pH Water	AT/ALK	8822342	2017/11/07	2017/11/07	
Sulphate - Low Level	KONE/COL	8823449	N/A	2017/11/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8822826	2017/11/07	2017/11/07	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8822827	2017/11/07	2017/11/07	
Total Suspended Solids-Low Level	BAL/BAL	8821283	2017/11/06	2017/11/07	

Maxxam ID: SK5692
Sample ID: KZ-13
Matrix: Water

Collected: 2017/11/02
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8821203	2017/11/06	2017/11/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8822348	2017/11/07	2017/11/07	
Chloride - Low Level	KONE/COL	8823441	N/A	2017/11/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8838877	N/A	2017/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8838880	N/A	2017/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8822648	N/A	2017/11/07	
Conductance - Low Level	AT/ALK	8822347	2017/11/07	2017/11/07	
Fluoride - Low Level	ISE/ISE	8821940	N/A	2017/11/07	
Hardness Total (calculated as CaCO3)	CALC	8820642	N/A	2017/11/07	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SK5692
Sample ID: KZ-13
Matrix: Water

Collected: 2017/11/02
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8820684	N/A	2017/11/08	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8822203	N/A	2017/11/07	
Mercury (Total-LowLevel) by CVAF	CV/AF	8822364	2017/11/07	2017/11/07	
Ion Balance (as Cations/Anions Ratio)	CALC	8822798	N/A	2017/11/08	
Ion Balance	CALC	8822799	N/A	2017/11/08	
Sum of cations, anions	CALC	8822801	N/A	2017/11/07	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8820688	N/A	2017/11/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8821643	N/A	2017/11/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8820689	N/A	2017/11/07	
Elements by ICPMS Low Level (total)	ICP/CRCM	8822285	N/A	2017/11/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8822186	N/A	2017/11/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8823528	N/A	2017/11/07	
Nitrite (N) (low level)	TRAA/COL	8823532	N/A	2017/11/07	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8820711	N/A	2017/11/08	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/11/06	
pH Water	AT/ALK	8822342	2017/11/07	2017/11/07	
Sulphate - Low Level	KONE/COL	8823449	N/A	2017/11/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8822826	2017/11/07	2017/11/07	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8822827	2017/11/07	2017/11/07	
Total Suspended Solids-Low Level	BAL/BAL	8821283	2017/11/06	2017/11/07	

Maxxam ID: SK5693
Sample ID: KZ-15
Matrix: Water

Collected: 2017/11/02
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8821203	2017/11/06	2017/11/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8822348	2017/11/07	2017/11/07	
Chloride - Low Level	KONE/COL	8823441	N/A	2017/11/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8838877	N/A	2017/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8838880	N/A	2017/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8822648	N/A	2017/11/07	
Conductance - Low Level	AT/ALK	8822347	2017/11/07	2017/11/07	
Fluoride - Low Level	ISE/ISE	8821940	N/A	2017/11/07	
Hardness Total (calculated as CaCO3)	CALC	8820642	N/A	2017/11/07	
Hardness (calculated as CaCO3)	CALC	8820684	N/A	2017/11/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8822203	N/A	2017/11/07	
Mercury (Total-LowLevel) by CVAF	CV/AF	8822364	2017/11/07	2017/11/07	
Ion Balance (as Cations/Anions Ratio)	CALC	8822798	N/A	2017/11/08	
Ion Balance	CALC	8822799	N/A	2017/11/08	
Sum of cations, anions	CALC	8822801	N/A	2017/11/07	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8820688	N/A	2017/11/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8821643	N/A	2017/11/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8820689	N/A	2017/11/07	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SK5693
Sample ID: KZ-15
Matrix: Water

Collected: 2017/11/02
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8822285	N/A	2017/11/07	Name Redacted
Ammonia-N Low Level (Preserved)	KONE/COL	8822186	N/A	2017/11/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8823528	N/A	2017/11/07	
Nitrite (N) (low level)	TRAA/COL	8823532	N/A	2017/11/07	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8820711	N/A	2017/11/08	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/11/06	
pH Water	AT/ALK	8822342	2017/11/07	2017/11/07	
Sulphate - Low Level	KONE/COL	8823449	N/A	2017/11/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8824275	2017/11/08	2017/11/08	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8824281	2017/11/08	2017/11/08	
Total Suspended Solids-Low Level	BAL/BAL	8821283	2017/11/06	2017/11/07	

Maxxam ID: SK5694
Sample ID: KZ-16
Matrix: Water

Collected: 2017/11/02
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8821203	2017/11/06	2017/11/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8822348	2017/11/07	2017/11/07	
Chloride - Low Level	KONE/COL	8823441	N/A	2017/11/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8838877	N/A	2017/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8838880	N/A	2017/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8822648	N/A	2017/11/07	
Conductance - Low Level	AT/ALK	8822347	2017/11/07	2017/11/07	
Fluoride - Low Level	ISE/ISE	8821940	N/A	2017/11/07	
Hardness Total (calculated as CaCO3)	CALC	8820642	N/A	2017/11/07	
Hardness (calculated as CaCO3)	CALC	8820684	N/A	2017/11/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8822203	N/A	2017/11/07	
Mercury (Total-LowLevel) by CVAF	CV/AF	8822364	2017/11/07	2017/11/07	
Ion Balance (as Cations/Anions Ratio)	CALC	8822798	N/A	2017/11/08	
Ion Balance	CALC	8822799	N/A	2017/11/08	
Sum of cations, anions	CALC	8822801	N/A	2017/11/07	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8820688	N/A	2017/11/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8821643	N/A	2017/11/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8820689	N/A	2017/11/07	
Elements by ICPMS Low Level (total)	ICP/CRCM	8822285	N/A	2017/11/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8822186	N/A	2017/11/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8823528	N/A	2017/11/07	
Nitrite (N) (low level)	TRAA/COL	8823532	N/A	2017/11/07	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8820711	N/A	2017/11/08	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/11/06	
pH Water	AT/ALK	8822342	2017/11/07	2017/11/07	
Sulphate - Low Level	KONE/COL	8823449	N/A	2017/11/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8827323	2017/11/10	2017/11/10	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SK5694
Sample ID: KZ-16
Matrix: Water

Collected: 2017/11/02
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - Low Level Unpreserved	KONE/COL	8822827	2017/11/07	2017/11/07	Name Redacted
Total Suspended Solids-Low Level	BAL/BAL	8821283	2017/11/06	2017/11/07	

Maxxam ID: SK5694 Dup
Sample ID: KZ-16
Matrix: Water

Collected: 2017/11/02
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride - Low Level	KONE/COL	8823441	N/A	2017/11/07	Name Redacted
Sulphate - Low Level	KONE/COL	8823449	N/A	2017/11/07	

Maxxam ID: SK5695
Sample ID: KZ-17
Matrix: Water

Collected: 2017/11/02
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8821203	2017/11/06	2017/11/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8822348	2017/11/07	2017/11/07	
Chloride - Low Level	KONE/COL	8823441	N/A	2017/11/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8838877	N/A	2017/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8838880	N/A	2017/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8822648	N/A	2017/11/07	
Conductance - Low Level	AT/ALK	8822347	2017/11/07	2017/11/07	
Fluoride - Low Level	ISE/ISE	8821940	N/A	2017/11/07	
Hardness Total (calculated as CaCO3)	CALC	8820642	N/A	2017/11/07	
Hardness (calculated as CaCO3)	CALC	8820684	N/A	2017/11/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8822203	N/A	2017/11/07	
Mercury (Total-LowLevel) by CVAF	CV/AF	8822364	2017/11/07	2017/11/07	
Ion Balance (as Cations/Anions Ratio)	CALC	8822798	N/A	2017/11/08	
Ion Balance	CALC	8822799	N/A	2017/11/08	
Sum of cations, anions	CALC	8822801	N/A	2017/11/07	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8820688	N/A	2017/11/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8821643	N/A	2017/11/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8820689	N/A	2017/11/07	
Elements by ICPMS Low Level (total)	ICP/CRCM	8822285	N/A	2017/11/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8822186	N/A	2017/11/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8823528	N/A	2017/11/07	
Nitrite (N) (low level)	TRAA/COL	8823532	N/A	2017/11/07	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8820711	N/A	2017/11/08	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/11/06	
pH Water	AT/ALK	8822342	2017/11/07	2017/11/07	
Sulphate - Low Level	KONE/COL	8823449	N/A	2017/11/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8822826	2017/11/07	2017/11/07	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8822827	2017/11/07	2017/11/07	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SK5695
Sample ID: KZ-17
Matrix: Water

Collected: 2017/11/02
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Suspended Solids-Low Level	BAL/BAL	8821283	2017/11/06	2017/11/07	Name Redacted

Maxxam ID: SK5696
Sample ID: KZ-18
Matrix: Water

Collected: 2017/11/03
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8821203	2017/11/06	2017/11/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8822336	2017/11/07	2017/11/07	
Chloride - Low Level	KONE/COL	8823441	N/A	2017/11/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8838877	N/A	2017/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8838880	N/A	2017/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8822648	N/A	2017/11/07	
Conductance - Low Level	AT/ALK	8822334	2017/11/07	2017/11/07	
Fluoride - Low Level	ISE/ISE	8821940	N/A	2017/11/07	
Hardness Total (calculated as CaCO3)	CALC	8820642	N/A	2017/11/07	
Hardness (calculated as CaCO3)	CALC	8820684	N/A	2017/11/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8822203	N/A	2017/11/07	
Mercury (Total-LowLevel) by CVAF	CV/AF	8822364	2017/11/07	2017/11/07	
Ion Balance (as Cations/Anions Ratio)	CALC	8822798	N/A	2017/11/08	
Ion Balance	CALC	8822799	N/A	2017/11/08	
Sum of cations, anions	CALC	8822801	N/A	2017/11/07	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8820688	N/A	2017/11/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8821643	N/A	2017/11/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8820689	N/A	2017/11/07	
Elements by ICPMS Low Level (total)	ICP/CRCM	8822285	N/A	2017/11/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8822186	N/A	2017/11/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8823528	N/A	2017/11/07	
Nitrite (N) (low level)	TRAA/COL	8823532	N/A	2017/11/07	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8820711	N/A	2017/11/08	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/11/06	
pH Water	AT/ALK	8822281	2017/11/07	2017/11/07	
Sulphate - Low Level	KONE/COL	8823449	N/A	2017/11/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8822826	2017/11/07	2017/11/07	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8822827	2017/11/07	2017/11/07	
Total Suspended Solids-Low Level	BAL/BAL	8821283	2017/11/06	2017/11/07	

Maxxam ID: SK5697
Sample ID: KZ-19
Matrix: Water

Collected: 2017/11/02
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8821203	2017/11/06	2017/11/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8822348	2017/11/07	2017/11/07	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SK5697
Sample ID: KZ-19
Matrix: Water

Collected: 2017/11/02
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride - Low Level	KONE/COL	8823441	N/A	2017/11/07	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8838877	N/A	2017/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8838880	N/A	2017/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8822648	N/A	2017/11/07	
Conductance - Low Level	AT/ALK	8822347	2017/11/07	2017/11/07	
Fluoride - Low Level	ISE/ISE	8821940	N/A	2017/11/07	
Hardness Total (calculated as CaCO3)	CALC	8820642	N/A	2017/11/07	
Hardness (calculated as CaCO3)	CALC	8820684	N/A	2017/11/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8822203	N/A	2017/11/07	
Mercury (Total-LowLevel) by CVAF	CV/AF	8822364	2017/11/07	2017/11/07	
Ion Balance (as Cations/Anions Ratio)	CALC	8822798	N/A	2017/11/08	
Ion Balance	CALC	8822799	N/A	2017/11/08	
Sum of cations, anions	CALC	8822801	N/A	2017/11/07	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8820688	N/A	2017/11/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8821643	N/A	2017/11/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8820689	N/A	2017/11/07	
Elements by ICPMS Low Level (total)	ICP/CRCM	8822285	N/A	2017/11/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8822186	N/A	2017/11/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8823528	N/A	2017/11/07	
Nitrite (N) (low level)	TRAA/COL	8823532	N/A	2017/11/07	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8820711	N/A	2017/11/08	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/11/06	
pH Water	AT/ALK	8822342	2017/11/07	2017/11/07	
Sulphate - Low Level	KONE/COL	8823449	N/A	2017/11/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8822826	2017/11/07	2017/11/07	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8822827	2017/11/07	2017/11/07	
Total Suspended Solids-Low Level	BAL/BAL	8821283	2017/11/06	2017/11/07	

Maxxam ID: SK5717
Sample ID: KZ-21
Matrix: Water

Collected: 2017/11/02
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8821203	2017/11/06	2017/11/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8822336	2017/11/07	2017/11/07	
Chloride - Low Level	KONE/COL	8823441	N/A	2017/11/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8838877	N/A	2017/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8838880	N/A	2017/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8822648	N/A	2017/11/07	
Conductance - Low Level	AT/ALK	8822334	2017/11/07	2017/11/07	
Fluoride - Low Level	ISE/ISE	8821940	N/A	2017/11/07	
Hardness Total (calculated as CaCO3)	CALC	8820642	N/A	2017/11/07	
Hardness (calculated as CaCO3)	CALC	8820684	N/A	2017/11/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8822203	N/A	2017/11/07	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SK5717
Sample ID: KZ-21
Matrix: Water

Collected: 2017/11/02
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8822364	2017/11/07	2017/11/07	Name Redacted
Ion Balance (as Cations/Anions Ratio)	CALC	8822798	N/A	2017/11/08	
Ion Balance	CALC	8822799	N/A	2017/11/08	
Sum of cations, anions	CALC	8822801	N/A	2017/11/07	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8820688	N/A	2017/11/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8821643	N/A	2017/11/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8820689	N/A	2017/11/07	
Elements by ICPMS Low Level (total)	ICP/CRCM	8822285	N/A	2017/11/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8822186	N/A	2017/11/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8823528	N/A	2017/11/07	
Nitrite (N) (low level)	TRAA/COL	8823532	N/A	2017/11/07	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8820711	N/A	2017/11/08	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/11/06	
pH Water	AT/ALK	8822281	2017/11/07	2017/11/07	
Sulphate - Low Level	KONE/COL	8823449	N/A	2017/11/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8822826	2017/11/07	2017/11/07	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8822827	2017/11/07	2017/11/07	
Total Suspended Solids-Low Level	BAL/BAL	8821283	2017/11/06	2017/11/07	

Maxxam ID: SK5718
Sample ID: KZ-22
Matrix: Water

Collected: 2017/11/02
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8821203	2017/11/06	2017/11/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8822348	2017/11/07	2017/11/07	
Chloride - Low Level	KONE/COL	8823441	N/A	2017/11/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8838877	N/A	2017/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8838880	N/A	2017/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8822648	N/A	2017/11/07	
Conductance - Low Level	AT/ALK	8822347	2017/11/07	2017/11/07	
Fluoride - Low Level	ISE/ISE	8821940	N/A	2017/11/07	
Hardness Total (calculated as CaCO3)	CALC	8820642	N/A	2017/11/07	
Hardness (calculated as CaCO3)	CALC	8826035	N/A	2017/11/10	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8822203	N/A	2017/11/07	
Mercury (Total-LowLevel) by CVAF	CV/AF	8822364	2017/11/07	2017/11/07	
Ion Balance (as Cations/Anions Ratio)	CALC	8822798	N/A	2017/11/08	
Ion Balance	CALC	8822799	N/A	2017/11/08	
Sum of cations, anions	CALC	8822801	N/A	2017/11/07	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8825265	N/A	2017/11/10	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8821643	N/A	2017/11/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8820689	N/A	2017/11/07	
Elements by ICPMS Low Level (total)	ICP/CRCM	8822285	N/A	2017/11/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8822186	N/A	2017/11/07	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SK5718
Sample ID: KZ-22
Matrix: Water

Collected: 2017/11/02
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8823528	N/A	2017/11/07	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8823532	N/A	2017/11/07	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8820711	N/A	2017/11/08	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/11/06	
pH Water	AT/ALK	8822342	2017/11/07	2017/11/07	
Sulphate - Low Level	KONE/COL	8823449	N/A	2017/11/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8822826	2017/11/07	2017/11/07	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8822827	2017/11/07	2017/11/07	
Total Suspended Solids-Low Level	BAL/BAL	8821283	2017/11/06	2017/11/07	

Maxxam ID: SK5718 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2017/11/02
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8821203	2017/11/06	2017/11/06	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8823528	N/A	2017/11/07	
Nitrite (N) (low level)	TRAA/COL	8823532	N/A	2017/11/07	

Maxxam ID: SK5719
Sample ID: KZ-26
Matrix: Water

Collected: 2017/11/01
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8821203	2017/11/06	2017/11/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8822336	2017/11/07	2017/11/07	
Chloride - Low Level	KONE/COL	8823441	N/A	2017/11/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8838877	N/A	2017/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8838880	N/A	2017/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8822648	N/A	2017/11/07	
Conductance - Low Level	AT/ALK	8822334	2017/11/07	2017/11/07	
Fluoride - Low Level	ISE/ISE	8821940	N/A	2017/11/07	
Hardness Total (calculated as CaCO3)	CALC	8820642	N/A	2017/11/07	
Hardness (calculated as CaCO3)	CALC	8820684	N/A	2017/11/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8822203	N/A	2017/11/07	
Mercury (Total-LowLevel) by CVAF	CV/AF	8822364	2017/11/07	2017/11/07	
Ion Balance (as Cations/Anions Ratio)	CALC	8822798	N/A	2017/11/08	
Ion Balance	CALC	8822799	N/A	2017/11/08	
Sum of cations, anions	CALC	8822801	N/A	2017/11/07	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8820688	N/A	2017/11/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8821643	N/A	2017/11/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8820689	N/A	2017/11/07	
Elements by ICPMS Low Level (total)	ICP/CRCM	8822285	N/A	2017/11/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8822186	N/A	2017/11/07	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SK5719
Sample ID: KZ-26
Matrix: Water

Collected: 2017/11/01
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8823528	N/A	2017/11/07	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8823532	N/A	2017/11/07	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8820711	N/A	2017/11/08	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/11/06	
pH Water	AT/ALK	8822281	2017/11/07	2017/11/07	
Sulphate - Low Level	KONE/COL	8823449	N/A	2017/11/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8822826	2017/11/07	2017/11/07	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8822827	2017/11/07	2017/11/07	
Total Suspended Solids-Low Level	BAL/BAL	8821283	2017/11/06	2017/11/07	

Maxxam ID: SK5720
Sample ID: KZ-28
Matrix: Water

Collected: 2017/11/01
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8821203	2017/11/06	2017/11/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8822348	2017/11/07	2017/11/07	
Chloride - Low Level	KONE/COL	8823441	N/A	2017/11/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8838877	N/A	2017/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8838880	N/A	2017/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8822648	N/A	2017/11/07	
Conductance - Low Level	AT/ALK	8822347	2017/11/07	2017/11/07	
Fluoride - Low Level	ISE/ISE	8821940	N/A	2017/11/07	
Hardness Total (calculated as CaCO3)	CALC	8820642	N/A	2017/11/07	
Hardness (calculated as CaCO3)	CALC	8820684	N/A	2017/11/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8822203	N/A	2017/11/07	
Mercury (Total-LowLevel) by CVAF	CV/AF	8822364	2017/11/07	2017/11/07	
Ion Balance (as Cations/Anions Ratio)	CALC	8822798	N/A	2017/11/08	
Ion Balance	CALC	8822799	N/A	2017/11/08	
Sum of cations, anions	CALC	8822801	N/A	2017/11/07	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8820688	N/A	2017/11/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8821643	N/A	2017/11/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8820689	N/A	2017/11/07	
Elements by ICPMS Low Level (total)	ICP/CRCM	8822285	N/A	2017/11/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8822186	N/A	2017/11/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8823528	N/A	2017/11/07	
Nitrite (N) (low level)	TRAA/COL	8823532	N/A	2017/11/07	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8820711	N/A	2017/11/08	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/11/06	
pH Water	AT/ALK	8822342	2017/11/07	2017/11/07	
Sulphate - Low Level	KONE/COL	8823449	N/A	2017/11/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8822826	2017/11/07	2017/11/07	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8822827	2017/11/07	2017/11/07	
Total Suspended Solids-Low Level	BAL/BAL	8822383	2017/11/07	2017/11/08	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SK5720 Dup
Sample ID: KZ-28
Matrix: Water

Collected: 2017/11/01
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8826118	N/A	2017/11/10	Name Redacted

Maxxam ID: SK5721
Sample ID: KZ-37
Matrix: Water

Collected: 2017/11/03
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8821203	2017/11/06	2017/11/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8822336	2017/11/07	2017/11/07	
Chloride - Low Level	KONE/COL	8823441	N/A	2017/11/07	
Cyanide SAD (strong acid dissociable)	TECH/COL	8838877	N/A	2017/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8838880	N/A	2017/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8822648	N/A	2017/11/07	
Conductance - Low Level	AT/ALK	8822334	2017/11/07	2017/11/07	
Fluoride - Low Level	ISE/ISE	8821940	N/A	2017/11/07	
Hardness Total (calculated as CaCO3)	CALC	8820642	N/A	2017/11/07	
Hardness (calculated as CaCO3)	CALC	8820684	N/A	2017/11/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8822203	N/A	2017/11/07	
Mercury (Total-LowLevel) by CVAF	CV/AF	8822364	2017/11/07	2017/11/07	
Ion Balance (as Cations/Anions Ratio)	CALC	8822798	N/A	2017/11/08	
Ion Balance	CALC	8822799	N/A	2017/11/08	
Sum of cations, anions	CALC	8822801	N/A	2017/11/07	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8820688	N/A	2017/11/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8821643	N/A	2017/11/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8820689	N/A	2017/11/07	
Elements by ICPMS Low Level (total)	ICP/CRCM	8822285	N/A	2017/11/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8822186	N/A	2017/11/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8823528	N/A	2017/11/07	
Nitrite (N) (low level)	TRAA/COL	8823532	N/A	2017/11/07	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8820711	N/A	2017/11/08	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/11/06	
pH Water	AT/ALK	8822281	2017/11/07	2017/11/07	
Sulphate - Low Level	KONE/COL	8823449	N/A	2017/11/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8822826	2017/11/07	2017/11/07	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8822827	2017/11/07	2017/11/07	
Total Suspended Solids-Low Level	BAL/BAL	8822383	2017/11/07	2017/11/08	

Maxxam ID: SK5722
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8821203	2017/11/06	2017/11/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8822348	2017/11/07	2017/11/07	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SK5722
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride - Low Level	KONE/COL	8823441	N/A	2017/11/07	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8838877	N/A	2017/11/22	
Cyanide WAD (weak acid dissociable)	TECH/COL	8838880	N/A	2017/11/22	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8822648	N/A	2017/11/07	
Conductance - Low Level	AT/ALK	8822347	2017/11/07	2017/11/07	
Fluoride - Low Level	ISE/ISE	8821940	N/A	2017/11/07	
Hardness Total (calculated as CaCO3)	CALC	8820642	N/A	2017/11/07	
Hardness (calculated as CaCO3)	CALC	8820684	N/A	2017/11/08	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8822203	N/A	2017/11/07	
Mercury (Total-LowLevel) by CVAF	CV/AF	8822364	2017/11/07	2017/11/07	
Ion Balance (as Cations/Anions Ratio)	CALC	8822798	N/A	2017/11/08	
Ion Balance	CALC	8822799	N/A	2017/11/08	
Sum of cations, anions	CALC	8822801	N/A	2017/11/07	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	ICP/CRCM	8820688	N/A	2017/11/08	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8821643	N/A	2017/11/08	
Na, K, Ca, Mg, S by CRC ICPMS (total)	ICP/CRCM	8820689	N/A	2017/11/07	
Elements by ICPMS Low Level (total)	ICP/CRCM	8822285	N/A	2017/11/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8822186	N/A	2017/11/07	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8823528	N/A	2017/11/07	
Nitrite (N) (low level)	TRAA/COL	8823532	N/A	2017/11/07	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8820711	N/A	2017/11/08	
pH Water	AT/ALK	8822342	2017/11/07	2017/11/07	
Sulphate - Low Level	KONE/COL	8823449	N/A	2017/11/07	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8822826	2017/11/07	2017/11/07	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8826021	2017/11/09	2017/11/10	
Total Suspended Solids-Low Level	BAL/BAL	8822383	2017/11/07	2017/11/08	

Maxxam ID: SK5722 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/11/06
Shipped:
Received: 2017/11/06

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8822364	2017/11/07	2017/11/07	Name Redacted
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8821643	N/A	2017/11/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8822285	N/A	2017/11/07	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.0°C
Package 2	4.3°C
Package 3	2.0°C

Revised Reprot V2 (M_S): Reportable detection limits lowered due to re-analysis by regular method to be in line with program

Sample SK5689 [KZ-2] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). Sample received past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Cyanide SAD (strong acid dissociable). Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable).

Sample SK5690 [KZ-6] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). Sample received past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Cyanide SAD (strong acid dissociable). Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable).

Sample SK5691 [KZ-9] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Cyanide SAD (strong acid dissociable). Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable).

Sample SK5692 [KZ-13] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). Sample received past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Cyanide SAD (strong acid dissociable). Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable).

Sample SK5693 [KZ-15] : Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Cyanide SAD (strong acid dissociable). Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable).

Sample SK5694 [KZ-16] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). Sample received past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Cyanide SAD (strong acid dissociable). Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable).

Sample SK5695 [KZ-17] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). Sample received past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Cyanide SAD (strong acid dissociable). Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable).

Sample SK5696 [KZ-18] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Cyanide SAD (strong acid dissociable). Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable).

Sample SK5697 [KZ-19] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). Sample received past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Cyanide SAD (strong acid dissociable). Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable).

Sample SK5717 [KZ-21] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). Sample received past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Cyanide SAD (strong acid dissociable). Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable).

Sample SK5718 [KZ-22] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). Sample received past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Cyanide SAD (strong acid dissociable). Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable).

Sample SK5719 [KZ-26] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). Sample received past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Cyanide SAD (strong acid dissociable). Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

Sample SK5720 [KZ-28] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). Sample received past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Cyanide SAD (strong acid dissociable). Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable).

Sample SK5721 [KZ-37] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Cyanide SAD (strong acid dissociable). Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable).

Sample SK5722 [TRIP BLANK] : Sample was analyzed past method specified hold time for Cyanide SAD (strong acid dissociable). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Cyanide WAD (weak acid dissociable).

Sample SK5696, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample SK5718, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample SK5720, Elements by ICPMS Low Level (total): Test repeated.
Sample SK5722, Elements by ICPMS Low Level (total): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8821203	Acidity (pH 4.5)	2017/11/06					<1.0	mg/L	NC	20
8821203	Acidity (pH 8.3)	2017/11/06			104	80 - 120	<1.0	mg/L	8.7	20
8821283	Total Suspended Solids	2017/11/07			99	80 - 120	<1.0	mg/L		
8821643	Dissolved Aluminum (Al)	2017/11/08	106	80 - 120	110	80 - 120	<0.00050	mg/L	NC	20
8821643	Dissolved Antimony (Sb)	2017/11/08	95	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8821643	Dissolved Arsenic (As)	2017/11/08	99	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8821643	Dissolved Barium (Ba)	2017/11/08	NC	80 - 120	101	80 - 120	<0.000020	mg/L	3.3	20
8821643	Dissolved Beryllium (Be)	2017/11/08	96	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8821643	Dissolved Bismuth (Bi)	2017/11/08	92	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8821643	Dissolved Boron (B)	2017/11/08	97	80 - 120	100	80 - 120	<0.010	mg/L	NC	20
8821643	Dissolved Cadmium (Cd)	2017/11/08	93	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8821643	Dissolved Chromium (Cr)	2017/11/08	93	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8821643	Dissolved Cobalt (Co)	2017/11/08	94	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8821643	Dissolved Copper (Cu)	2017/11/08	92	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
8821643	Dissolved Iron (Fe)	2017/11/08	93	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20
8821643	Dissolved Lead (Pb)	2017/11/08	94	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8821643	Dissolved Lithium (Li)	2017/11/08	97	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8821643	Dissolved Manganese (Mn)	2017/11/08	93	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8821643	Dissolved Molybdenum (Mo)	2017/11/08	98	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8821643	Dissolved Nickel (Ni)	2017/11/08	93	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8821643	Dissolved Phosphorus (P)	2017/11/08					<0.0020	mg/L	NC	20
8821643	Dissolved Selenium (Se)	2017/11/08	94	80 - 120	107	80 - 120	<0.000040	mg/L	NC	20
8821643	Dissolved Silicon (Si)	2017/11/08					<0.050	mg/L	NC	20
8821643	Dissolved Silver (Ag)	2017/11/08	104	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8821643	Dissolved Strontium (Sr)	2017/11/08	NC	80 - 120	93	80 - 120	<0.000050	mg/L	NC	20
8821643	Dissolved Thallium (Tl)	2017/11/08	93	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8821643	Dissolved Tin (Sn)	2017/11/08	93	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8821643	Dissolved Titanium (Ti)	2017/11/08	101	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8821643	Dissolved Uranium (U)	2017/11/08	96	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8821643	Dissolved Vanadium (V)	2017/11/08	97	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8821643	Dissolved Zinc (Zn)	2017/11/08	NC	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8821643	Dissolved Zirconium (Zr)	2017/11/08	90	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8821940	Fluoride (F)	2017/11/07	100	80 - 120	102	80 - 120	0.013, RDL=0.010	mg/L	2.9	20
8822186	Total Ammonia (N)	2017/11/07	96	80 - 120	100	80 - 120	<0.0050	mg/L	NC	20
8822203	Dissolved Mercury (Hg)	2017/11/07	99	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8822281	pH	2017/11/07			102	97 - 103			0.24	20
8822285	Total Aluminum (Al)	2017/11/07	107	80 - 120	107	80 - 120	<0.00050	mg/L	NC	20
8822285	Total Antimony (Sb)	2017/11/07	98	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8822285	Total Arsenic (As)	2017/11/07	100	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8822285	Total Barium (Ba)	2017/11/07	NC	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8822285	Total Beryllium (Be)	2017/11/07	99	80 - 120	99	80 - 120	<0.000010	mg/L	NC	20
8822285	Total Bismuth (Bi)	2017/11/07	92	80 - 120	91	80 - 120	<0.0000050	mg/L	NC	20
8822285	Total Boron (B)	2017/11/07	99	80 - 120	100	80 - 120	<0.010	mg/L	NC	20
8822285	Total Cadmium (Cd)	2017/11/07	94	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8822285	Total Chromium (Cr)	2017/11/07	98	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8822285	Total Cobalt (Co)	2017/11/07	95	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8822285	Total Copper (Cu)	2017/11/07	93	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8822285	Total Iron (Fe)	2017/11/07	98	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20
8822285	Total Lead (Pb)	2017/11/07	92	80 - 120	93	80 - 120	<0.0000050	mg/L	NC	20
8822285	Total Lithium (Li)	2017/11/07	100	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8822285	Total Manganese (Mn)	2017/11/07	97	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8822285	Total Molybdenum (Mo)	2017/11/07	99	80 - 120	94	80 - 120	<0.000050	mg/L	NC	20
8822285	Total Nickel (Ni)	2017/11/07	96	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8822285	Total Phosphorus (P)	2017/11/07					<0.0020	mg/L	NC	20
8822285	Total Selenium (Se)	2017/11/07	103	80 - 120	103	80 - 120	<0.000040	mg/L	NC	20
8822285	Total Silicon (Si)	2017/11/07					<0.050	mg/L	NC	20
8822285	Total Silver (Ag)	2017/11/07	100	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8822285	Total Strontium (Sr)	2017/11/07	NC	80 - 120	94	80 - 120	<0.000050	mg/L	NC	20
8822285	Total Thallium (Tl)	2017/11/07	94	80 - 120	93	80 - 120	<0.0000020	mg/L	NC	20
8822285	Total Tin (Sn)	2017/11/07	94	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
8822285	Total Titanium (Ti)	2017/11/07	92	80 - 120	93	80 - 120	<0.00050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8822285	Total Uranium (U)	2017/11/07	97	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8822285	Total Vanadium (V)	2017/11/07	97	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
8822285	Total Zinc (Zn)	2017/11/07	NC	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8822285	Total Zirconium (Zr)	2017/11/07	101	80 - 120	93	80 - 120	<0.00010	mg/L	NC	20
8822334	Conductivity	2017/11/07			99	80 - 120	<1.0	uS/cm		
8822336	Alkalinity (PP as CaCO3)	2017/11/07					<0.50	mg/L		
8822336	Alkalinity (Total as CaCO3)	2017/11/07			98	80 - 120	0.72, RDL=0.50	mg/L		
8822336	Bicarbonate (HCO3)	2017/11/07					0.88, RDL=0.50	mg/L		
8822336	Carbonate (CO3)	2017/11/07					<0.50	mg/L		
8822336	Hydroxide (OH)	2017/11/07					<0.50	mg/L		
8822342	pH	2017/11/07			102	97 - 103			1.2	20
8822347	Conductivity	2017/11/07			99	80 - 120	<1.0	uS/cm		
8822348	Alkalinity (PP as CaCO3)	2017/11/07					<0.50	mg/L		
8822348	Alkalinity (Total as CaCO3)	2017/11/07	NC	80 - 120	100	80 - 120	0.57, RDL=0.50	mg/L		
8822348	Bicarbonate (HCO3)	2017/11/07					0.70, RDL=0.50	mg/L		
8822348	Carbonate (CO3)	2017/11/07					<0.50	mg/L		
8822348	Hydroxide (OH)	2017/11/07					<0.50	mg/L		
8822364	Total Mercury (Hg)	2017/11/07	96	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8822383	Total Suspended Solids	2017/11/08			101	80 - 120	<1.0	mg/L		
8822648	Dissolved Organic Carbon (C)	2017/11/07	107	80 - 120	109	80 - 120	<0.50	mg/L	2.1	20
8822826	Dissolved Phosphorus (P)	2017/11/07	92	80 - 120	95	80 - 120	<0.0020	mg/L	13	20
8822827	Total Phosphorus (P)	2017/11/07	96	80 - 120	93	80 - 120	<0.0020	mg/L	2.0	20
8823441	Dissolved Chloride (Cl)	2017/11/07	96	80 - 120	100	80 - 120	0.56, RDL=0.50	mg/L	6.9	20
8823449	Dissolved Sulphate (SO4)	2017/11/07	NC	80 - 120	98	80 - 120	<0.50	mg/L	0.054	20
8823528	Nitrate plus Nitrite (N)	2017/11/07	104	80 - 120	107	80 - 120	<0.0020	mg/L	1.0	25
8823532	Nitrite (N)	2017/11/07	100	80 - 120	106	80 - 120	<0.0020	mg/L	NC	25
8824275	Dissolved Phosphorus (P)	2017/11/08	95	80 - 120	95	80 - 120	<0.0020	mg/L	0.92	20
8824281	Total Phosphorus (P)	2017/11/08			95	80 - 120	<0.0020	mg/L		
8826021	Total Phosphorus (P)	2017/11/10	99	80 - 120	97	80 - 120	<0.0020	mg/L	3.5	20
8826117	Dissolved Antimony (Sb)	2017/11/10	101	80 - 120	103	80 - 120	<0.000020	mg/L		
8826117	Dissolved Cobalt (Co)	2017/11/10	100	80 - 120	102	80 - 120	<0.0000050	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8826117	Dissolved Copper (Cu)	2017/11/10	97	80 - 120	102	80 - 120	<0.000050	mg/L		
8826118	Total Barium (Ba)	2017/11/10	107	80 - 120	106	80 - 120	<0.000020	mg/L	5.0	20
8826118	Total Strontium (Sr)	2017/11/10	99	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8827323	Dissolved Phosphorus (P)	2017/11/10			102	80 - 120	<0.0020	mg/L		
8828440	Total Phosphorus (P)	2017/11/14					<0.0020	mg/L		
8838877	Strong Acid Dissoc. Cyanide (CN)	2017/11/22	99	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8838880	Weak Acid Dissoc. Cyanide (CN)	2017/11/22	101	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B798759
Report Date: 2017/11/24

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Andy Lu, Ph.D., P.Chem., Scientific Specialist

Signature Redacted

David Huang, M.Sc., P.Chem., QP, Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

08446304

BBY FCD-00077/05

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #:

Invoice Information	Report Information (if differs from invoice)	Project Information (where applicable)	Turnaround Time (TAT) Required
Company Name: BMC MINERALS LTD.	Company Name: ALEXCO ENVIRONMENTAL	Quotation #: B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:	Contact Name: KAI WOLOSHYN	P.O. #/ AFE#:	PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address: 530-1130 WEST PENDER ST	Address: UNIT 3 151 INDUSTRIAL RD	Project #: BMC-15-01	Rush TAT (Surcharges will be applied)
Vancouver, BC PC: V6E 4A4	Whitehorse, YK PC: V1A 2V3	Site Location: Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:	Phone: (867) 668-6463	Site #:	
Email:	Email: kwoloshyn@alexcoresource.com	Sampled By: Signature	Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		02-Nov-17	16:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3	KZ-6		02-Nov-17	15:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
4	KZ-9		03-Nov-17	10:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	KZ-13		02-Nov-17	14:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6	KZ-15		02-Nov-17	12:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
7	KZ-16		02-Nov-17	12:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
8	KZ-17		02-Nov-17	13:18	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
9	KZ-18		03-Nov-17	10:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
10	KZ-19		02-Nov-17	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
		2,1,6
N/A		7,1,5
		2,2,2

COOLING MEDIA PRESENT (Y) / N

COMMENTS

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	04/11/2017	10:45	Signature Redacted	2017/11/06	13:19

B798759_COC

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY

08446303

BBY FCD-00077/05

COC #:

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Catherine Henry	Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-21		02-Nov-17	10:45	Water	x	x	x	x	x	x	x	x	x	x	x	x				11		
2	KZ-22		02-Nov-17	9:20	Water	x	x	x	x	x	x	x	x	x	x	x	x				11		
3	KZ-26		01-Nov-17	15:40	Water	x	x	x	x	x	x	x	x	x	x	x	x				11		
4	KZ-28		01-Nov-17	15:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				11		
5	KZ-37		03-Nov-17	9:35	Water	x	x	x	x	x	x	x	x	x	x	x	x				11		
6	Trip Blank		n/a	n/a	Water	x	x	x	x	x	x	x	x	x	x	x	x				11		
7																							
8																							
9																							
10																							

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
		2, 1, 6
N	/A	7, 1, 5
		2, 2, 2

COOLING MEDIA PRESENT (Y) / N

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	04/11/2017	10:45	Signature Redacted	2017/11/06	13:19

B798759_COC

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08448899, 08448900

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/12/15
Report #: R2492139
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7A9078
Received: 2017/12/07, 11:20

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	15	2017/12/12	2017/12/11	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Low Level	15	2017/12/11	2017/12/11	BBY6SOP-00026	SM 22 2320 B m
Chloride - Low Level	14	N/A	2017/12/11	BBY6SOP-00011	SM 22 4500-Cl- E m
Chloride - Low Level	1	N/A	2017/12/12	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	15	N/A	2017/12/11	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	15	N/A	2017/12/11	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	15	N/A	2017/12/11	BBY6SOP-00003	SM 22 5310 C m
Conductance - Low Level	15	2017/12/11	2017/12/11	BBY6SOP-00026	SM 22 2510 B m
Fluoride - Low Level	15	N/A	2017/12/11	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3) (2)	15	N/A	2017/12/13	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	14	N/A	2017/12/13	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	1	N/A	2017/12/15	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	15	N/A	2017/12/11	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	15	2017/12/11	2017/12/11	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance (as Cations/Anions Ratio)	15	N/A	2017/12/13	BBY WI-00033	Auto Calc
Ion Balance	15	N/A	2017/12/13	BBY WI-00033	Auto Calc
Sum of cations, anions	15	N/A	2017/12/13	BBY WI-00033	Auto Calc
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	14	N/A	2017/12/13	BBY WI-00033	Auto Calc
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2017/12/15	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (dissolved)	3	N/A	2017/12/12	BBY7SOP-00002	EPA 6020B R2 m
Elements by ICPMS Low Level (dissolved)	12	N/A	2017/12/13	BBY7SOP-00002	EPA 6020B R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	15	N/A	2017/12/13	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (total)	15	N/A	2017/12/13	BBY7SOP-00003,	BCLM2005,EPA6020bR2m
Ammonia-N Low Level (Preserved)	15	N/A	2017/12/11	BBY6SOP-00009	EPA 350.1 m
Nitrate+Nitrite (N) (low level)	15	N/A	2017/12/08	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	15	N/A	2017/12/08	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N) Low Level Calc	15	N/A	2017/12/09	BBY WI-00033	Auto Calc
Filter and HNO3 Preserve for Metals	14	N/A	2017/12/13	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (3)	15	2017/12/11	2017/12/11	BBY6SOP-00026	SM 22 4500-H+ B m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08448899, 08448900

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/12/15
Report #: R2492139
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7A9078
Received: 2017/12/07, 11:20

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Sulphate - Low Level	12	N/A	2017/12/11	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate - Low Level	3	N/A	2017/12/12	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	14	2017/12/09	2017/12/09	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2017/12/14	2017/12/14	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	15	2017/12/09	2017/12/09	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	15	2017/12/08	2017/12/11	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(3) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08448899, 08448900

Attention:KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2017/12/15
Report #: R2492139
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B7A9078
Received: 2017/12/07, 11:20

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name,Phone,Fax
Redacted

===

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SQ3747		SQ3748		SQ3749	SQ3750		
Sampling Date		2017/12/06 10:30		2017/12/05 14:15		2017/12/05 13:05	2017/12/06 11:15		
COC Number		08448899		08448899		08448899	08448899		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	KZ-13	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	2.9	8856942	3.6	8856942	4.1	1.6	N/A	8856942
Cation Sum	meq/L	2.9	8856942	3.6	8856942	4.2	1.6	N/A	8856942
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD	FIELD		ONSITE
Ion Balance	N/A	1.0	8856939	1.0	8856939	1.0	0.99	0.010	8856939
Ion Balance (% Difference)	%	0.015	8856940	0.44	8856940	0.48	0.37	N/A	8856940
Nitrate (N)	mg/L	0.162	8856675	0.164	8856675	0.164	0.138	0.0020	8856675
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8858638	<0.00050	8858638	<0.00050	<0.00050	0.00050	8858638
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8858641	<0.00050	8858641	<0.00050	<0.00050	0.00050	8858641
Fluoride (F)	mg/L	0.045	8858847	0.069	8858847	0.083	0.044	0.010	8858847
Dissolved Organic Carbon (C)	mg/L	0.69	8858514	1.29	8858514	1.78	2.53	0.50	8858514
Acidity (pH 4.5)	mg/L	<1.0	8859931	<1.0	8859931	<1.0	<1.0	1.0	8859931
Alkalinity (Total as CaCO3)	mg/L	73.9	8858829	151	8858829	167	63.0	0.50	8858829
Acidity (pH 8.3)	mg/L	<1.0	8859931	<1.0	8859931	3.5	<1.0	1.0	8859931
Alkalinity (PP as CaCO3)	mg/L	<0.50	8858829	<0.50	8858829	<0.50	<0.50	0.50	8858829
Bicarbonate (HCO3)	mg/L	90.2	8858829	184	8858829	203	76.8	0.50	8858829
Carbonate (CO3)	mg/L	<0.50	8858829	<0.50	8858829	<0.50	<0.50	0.50	8858829
Hydroxide (OH)	mg/L	<0.50	8858829	<0.50	8858829	<0.50	<0.50	0.50	8858829
Anions									
Dissolved Sulphate (SO4)	mg/L	67.0	8860654	23.6	8859186	35.6	16.2	0.50	8859181
Dissolved Chloride (Cl)	mg/L	0.90	8860653	0.96	8859185	0.72	0.67	0.50	8859180
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0029	8857688	0.0049	8857688	0.0070	0.0037	0.0020	8857688
Total Ammonia (N)	mg/L	<0.0050	8858838	<0.0050	8858838	0.0050	<0.0050	0.0050	8858838
Nitrate plus Nitrite (N)	mg/L	0.162	8857576	0.164	8857576	0.164	0.138	0.0020	8857576
Nitrite (N)	mg/L	<0.0020	8857577	<0.0020	8857577	<0.0020	<0.0020	0.0020	8857577
Total Phosphorus (P)	mg/L	<0.0020	8857690	0.0039	8857690	0.0038	0.0038	0.0020	8857690
Physical Properties									
Conductivity	uS/cm	274	8858824	323	8858824	380	156	1.0	8858824
pH	pH	7.91	8858822	8.24	8858822	8.13	7.95		8858822

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SQ3747		SQ3748		SQ3749	SQ3750		
Sampling Date		2017/12/06 10:30		2017/12/05 14:15		2017/12/05 13:05	2017/12/06 11:15		
COC Number		08448899		08448899		08448899	08448899		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	KZ-13	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8857174	1.2	8857174	1.1	<1.0	1.0	8857174
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SQ3751		SQ3752	SQ3753	SQ3754	SQ3755		
Sampling Date		2017/12/05 10:30		2017/12/05 11:30	2017/12/05 11:35	2017/12/05 13:20	2017/12/05 14:00		
COC Number		08448899		08448899	08448899	08448899	08448899		
	UNITS	KZ-15	QC Batch	KZ-16	KZ-17	KZ-18	KZ-19	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	5.2	8856942	5.2	4.7	4.5	0.037	N/A	8856942
Cation Sum	meq/L	5.2	8856942	5.6	4.9	4.7	0.0051	N/A	8856942
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	FIELD	FIELD	FIELD		ONSITE
Ion Balance	N/A	1.0	8856939	1.1	1.0	1.0	0.14	0.010	8856939
Ion Balance (% Difference)	%	0.71	8856940	3.5	2.1	2.6	75	N/A	8856940
Nitrate (N)	mg/L	0.205	8856675	0.255	0.257	0.218	<0.0020	0.0020	8856675
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8858638	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8858638
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8858641	0.00059	0.00059	<0.00050	<0.00050	0.00050	8858641
Fluoride (F)	mg/L	0.100	8858847	0.080	0.081	0.074	<0.010	0.010	8858847
Dissolved Organic Carbon (C)	mg/L	1.66	8858514	1.83	2.08	1.68	0.88	0.50	8858514
Acidity (pH 4.5)	mg/L	<1.0	8859931	<1.0	<1.0	<1.0	<1.0	1.0	8859931
Alkalinity (Total as CaCO3)	mg/L	218	8858829	221	198	198	0.82	0.50	8858829
Acidity (pH 8.3)	mg/L	<1.0	8859931	3.5	<1.0	<1.0	<1.0	1.0	8859931
Alkalinity (PP as CaCO3)	mg/L	<0.50	8858829	<0.50	<0.50	<0.50	<0.50	0.50	8858829
Bicarbonate (HCO3)	mg/L	266	8858829	270	241	241	1.00	0.50	8858829
Carbonate (CO3)	mg/L	<0.50	8858829	<0.50	<0.50	<0.50	<0.50	0.50	8858829
Hydroxide (OH)	mg/L	<0.50	8858829	<0.50	<0.50	<0.50	<0.50	0.50	8858829
Anions									
Dissolved Sulphate (SO4)	mg/L	37.4	8859186	36.6	34.9	23.9	<0.50	0.50	8859181
Dissolved Chloride (Cl)	mg/L	<0.50	8859185	0.75	0.80	0.80	0.71	0.50	8859180
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0059	8857688	0.0044	0.0041	0.0487	0.0034	0.0020	8857688
Total Ammonia (N)	mg/L	<0.0050	8858838	<0.0050	<0.0050	<0.0050	<0.0050	0.0050	8858838
Nitrate plus Nitrite (N)	mg/L	0.205	8857576	0.255	0.257	0.218	<0.0020	0.0020	8857576
Nitrite (N)	mg/L	<0.0020	8857577	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	8857577
Total Phosphorus (P)	mg/L	0.0044	8857690	0.0024	0.0034	0.0488	0.0021	0.0020	8857690
Physical Properties									
Conductivity	uS/cm	455	8858824	466	425	400	1.5	1.0	8858824
pH	pH	8.28	8858822	8.17	8.18	8.24	5.61		8858822

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SQ3751		SQ3752	SQ3753	SQ3754	SQ3755		
Sampling Date		2017/12/05 10:30		2017/12/05 11:30	2017/12/05 11:35	2017/12/05 13:20	2017/12/05 14:00		
COC Number		08448899		08448899	08448899	08448899	08448899		
	UNITS	**KZ-15**	**QC Batch**	**KZ-16**	**KZ-17**	**KZ-18**	**KZ-19**	**RDL**	**QC Batch**
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8857174	<1.0	<1.0	<1.0	<1.0	1.0	8857174
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SQ3756			SQ3757		SQ3758		
Sampling Date		2017/12/04 14:30			2017/12/04 13:55		2017/12/04 12:15		
COC Number		08448900			08448900		08448900		
	UNITS	KZ-21	RDL	QC Batch	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	6.8	N/A	8856942	6.3	8856942	6.1	N/A	8856942
Cation Sum	meq/L	7.4	N/A	8856942	6.7	8856942	6.4	N/A	8856942
Filter and HNO3 Preservation	N/A	FIELD		ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	1.1	0.010	8856939	1.1	8856939	1.1	0.010	8856939
Ion Balance (% Difference)	%	4.3	N/A	8856940	2.9	8856940	2.4	N/A	8856940
Nitrate (N)	mg/L	0.125	0.0020	8856675	0.184	8856675	0.200	0.0020	8856675
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00060	0.00050	8858638	0.00057	8858638	0.00054	0.00050	8858638
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8858641	<0.00050	8858641	<0.00050	0.00050	8858641
Fluoride (F)	mg/L	0.200	0.010	8858847	0.150	8858847	0.130	0.010	8858847
Dissolved Organic Carbon (C)	mg/L	3.11	0.50	8858514	1.79	8858514	2.28	0.50	8858514
Acidity (pH 4.5)	mg/L	<1.0	1.0	8859931	<1.0	8859931	<1.0	1.0	8859931
Alkalinity (Total as CaCO3)	mg/L	293	0.50	8858829	264	8858829	256	0.50	8858829
Acidity (pH 8.3)	mg/L	7.5	1.0	8859931	<1.0	8859931	<1.0	1.0	8859931
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8858829	<0.50	8858829	3.70	0.50	8858829
Bicarbonate (HCO3)	mg/L	357	0.50	8858829	322	8858829	304	0.50	8858829
Carbonate (CO3)	mg/L	<0.50	0.50	8858829	<0.50	8858829	4.44	0.50	8858829
Hydroxide (OH)	mg/L	<0.50	0.50	8858829	<0.50	8858829	<0.50	0.50	8858829
Anions									
Dissolved Sulphate (SO4)	mg/L	43.7	0.50	8860654	46.8	8860654	43.2	0.50	8859186
Dissolved Chloride (Cl)	mg/L	1.3	0.50	8859180	0.67	8859185	0.71	0.50	8859185
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0113	0.0020	8857688	0.0063	8857688	0.0048	0.0020	8857688
Total Ammonia (N)	mg/L	0.097	0.0050	8858838	0.040	8858838	0.010	0.0050	8858838
Nitrate plus Nitrite (N)	mg/L	0.125	0.0020	8857576	0.184	8857576	0.200	0.0020	8857576
Nitrite (N)	mg/L	<0.0020	0.0020	8857577	<0.0020	8857577	<0.0020	0.0020	8857577
Total Phosphorus (P)	mg/L	0.0099	0.0020	8857690	0.0064	8857690	0.0044	0.0020	8857690
Physical Properties									
Conductivity	uS/cm	600	1.0	8858824	545	8858824	530	1.0	8858824
pH	pH	7.99		8858822	8.30	8858822	8.37		8858822

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SQ3756			SQ3757		SQ3758		
Sampling Date		2017/12/04 14:30			2017/12/04 13:55		2017/12/04 12:15		
COC Number		08448900			08448900		08448900		
	UNITS	KZ-21	RDL	QC Batch	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	1.6 (1)	1.2	8857174	1.3	8857174	4.8	1.0	8857174

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SQ3759		SQ3760		SQ3761		
Sampling Date		2017/12/04 12:30		2017/12/05 12:30		2017/12/07 11:20		
COC Number		08448900		08448900		08448900		
	UNITS	KZ-28	QC Batch	KZ-37	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	6.0	8856942	4.2	8856942	0.028	N/A	8856942
Cation Sum	meq/L	6.4	8856942	4.5	8856942	0.0023	N/A	8856942
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE			
Ion Balance	N/A	1.1	8856939	1.1	8856939	0.083	0.010	8856939
Ion Balance (% Difference)	%	2.6	8856940	3.6	8856940	85	N/A	8856940
Nitrate (N)	mg/L	0.186	8856675	0.173	8856675	<0.0020	0.0020	8856675
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00056	8858638	0.00051	8858638	<0.00050	0.00050	8858638
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8858641	<0.00050	8858641	<0.00050	0.00050	8858641
Fluoride (F)	mg/L	0.120	8858847	0.081	8858847	<0.010	0.010	8858847
Dissolved Organic Carbon (C)	mg/L	3.11	8858514	0.95	8858514	<0.50	0.50	8858514
Acidity (pH 4.5)	mg/L	<1.0	8859931	<1.0	8859931	<1.0	1.0	8859931
Alkalinity (Total as CaCO3)	mg/L	254	8858829	174	8858829	0.60	0.50	8858829
Acidity (pH 8.3)	mg/L	<1.0	8859931	<1.0	8859931	<1.0	1.0	8859931
Alkalinity (PP as CaCO3)	mg/L	2.84	8858829	<0.50	8858829	<0.50	0.50	8858829
Bicarbonate (HCO3)	mg/L	303	8858829	213	8858829	0.73	0.50	8858829
Carbonate (CO3)	mg/L	3.41	8858829	<0.50	8858829	<0.50	0.50	8858829
Hydroxide (OH)	mg/L	<0.50	8858829	<0.50	8858829	<0.50	0.50	8858829
Anions								
Dissolved Sulphate (SO4)	mg/L	44.3	8859181	32.6	8859186	<0.50	0.50	8859186
Dissolved Chloride (Cl)	mg/L	0.66	8859180	0.62	8859185	0.56	0.50	8859185
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0035	8857688	0.0046 (1)	8862738	0.0024	0.0020	8857689
Total Ammonia (N)	mg/L	0.0070	8858838	<0.0050	8858838	<0.0050	0.0050	8858838
Nitrate plus Nitrite (N)	mg/L	0.186	8857576	0.173	8857576	<0.0020	0.0020	8857576
Nitrite (N)	mg/L	<0.0020	8857577	<0.0020	8857577	<0.0020	0.0020	8857577
Total Phosphorus (P)	mg/L	0.0053	8857690	0.0094	8857690	0.0025	0.0020	8857690
Physical Properties								
Conductivity	uS/cm	534	8858824	383	8858824	1.7	1.0	8858824
pH	pH	8.35	8858822	8.24	8858822	5.64		8858822

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) test repeated

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SQ3759		SQ3760		SQ3761		
Sampling Date		2017/12/04 12:30		2017/12/05 12:30		2017/12/07 11:20		
COC Number		08448900		08448900		08448900		
	UNITS	KZ-28	QC Batch	KZ-37	QC Batch	TRIP BLANK	RDL	QC Batch
Physical Properties								
Total Suspended Solids	mg/L	4.1	8857174	1.2	8857174	<1.0	1.0	8857174
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SQ3747		SQ3748		SQ3749		
Sampling Date		2017/12/06 10:30		2017/12/05 14:15		2017/12/05 13:05		
COC Number		08448899		08448899		08448899		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO3)	mg/L	141	8856492	176	8856492	202	0.50	8856492
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8858297	<0.0000020	8858297	<0.0000020	0.0000020	8858297
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00216	8857519	0.00174	8857519	0.00210	0.00050	8857519
Dissolved Antimony (Sb)	mg/L	0.000031	8857519	0.000023	8857519	0.000034	0.000020	8857519
Dissolved Arsenic (As)	mg/L	0.000079	8857519	0.000073	8857519	0.000190	0.000020	8857519
Dissolved Barium (Ba)	mg/L	0.0764	8857519	0.0475	8857519	0.0967	0.000020	8857519
Dissolved Beryllium (Be)	mg/L	<0.000010	8857519	<0.000010	8857519	<0.000010	0.000010	8857519
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8857519	<0.0000050	8857519	<0.0000050	0.0000050	8857519
Dissolved Boron (B)	mg/L	<0.010	8857519	<0.010	8857519	<0.010	0.010	8857519
Dissolved Cadmium (Cd)	mg/L	0.000258	8857519	0.0000339	8857519	0.0000797	0.0000050	8857519
Dissolved Chromium (Cr)	mg/L	<0.00010	8857519	0.00028	8857519	0.00032	0.00010	8857519
Dissolved Cobalt (Co)	mg/L	0.0000089	8857519	0.0000076	8857519	0.000106	0.0000050	8857519
Dissolved Copper (Cu)	mg/L	0.000633	8857519	0.000315	8857519	0.000282	0.000050	8857519
Dissolved Iron (Fe)	mg/L	0.0011	8857519	0.0092	8857519	0.211	0.0010	8857519
Dissolved Lead (Pb)	mg/L	0.0000402 (1)	8862534	0.0000387	8857519	0.0000105	0.0000050	8857519
Dissolved Lithium (Li)	mg/L	0.00144	8857519	0.00080	8857519	0.00387	0.00050	8857519
Dissolved Manganese (Mn)	mg/L	0.000217	8857519	0.000894	8857519	0.0920	0.000050	8857519
Dissolved Molybdenum (Mo)	mg/L	0.000733	8857519	0.000594	8857519	0.000654	0.000050	8857519
Dissolved Nickel (Ni)	mg/L	0.000331	8857519	0.000248	8857519	0.000486	0.000020	8857519
Dissolved Phosphorus (P)	mg/L	0.0048	8857519	0.0033	8857519	0.0050	0.0020	8857519
Dissolved Selenium (Se)	mg/L	0.00213	8857519	0.00111	8857519	0.00111	0.000040	8857519
Dissolved Silicon (Si)	mg/L	2.37	8857519	3.02	8857519	3.69	0.050	8857519
Dissolved Silver (Ag)	mg/L	<0.0000050	8857519	<0.0000050	8857519	<0.0000050	0.0000050	8857519
Dissolved Strontium (Sr)	mg/L	0.155	8857519	0.185	8857519	0.238	0.000050	8857519
Dissolved Thallium (Tl)	mg/L	0.0000042	8857519	<0.0000020	8857519	<0.0000020	0.0000020	8857519
Dissolved Tin (Sn)	mg/L	<0.00020	8857519	<0.00020	8857519	<0.00020	0.00020	8857519
Dissolved Titanium (Ti)	mg/L	<0.00050	8857519	<0.00050	8857519	<0.00050	0.00050	8857519
Dissolved Uranium (U)	mg/L	0.00411	8857519	0.00110	8857519	0.00147	0.0000020	8857519

RDL = Reportable Detection Limit

(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SQ3747		SQ3748		SQ3749		
Sampling Date		2017/12/06 10:30		2017/12/05 14:15		2017/12/05 13:05		
COC Number		08448899		08448899		08448899		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	8857519	<0.00020	8857519	<0.00020	0.00020	8857519
Dissolved Zinc (Zn)	mg/L	0.0290	8857519	0.00307 (1)	8862534	0.0197	0.00010	8857519
Dissolved Zirconium (Zr)	mg/L	<0.00010	8857519	<0.00010	8857519	<0.00010	0.00010	8857519
Dissolved Calcium (Ca)	mg/L	45.7	8856511	58.5	8856511	67.4	0.050	8856511
Dissolved Magnesium (Mg)	mg/L	6.45	8856511	7.24	8856511	8.15	0.050	8856511
Dissolved Potassium (K)	mg/L	2.26	8856511	0.991	8856511	1.66	0.050	8856511
Dissolved Sodium (Na)	mg/L	1.02	8856511	0.944	8856511	1.42	0.050	8856511
Dissolved Sulphur (S)	mg/L	22.6	8856511	8.0	8856511	12.9	3.0	8856511

RDL = Reportable Detection Limit
(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SQ3750		SQ3751		SQ3752		
Sampling Date		2017/12/06 11:15		2017/12/05 10:30		2017/12/05 11:30		
COC Number		08448899		08448899		08448899		
	UNITS	KZ-13	QC Batch	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO3)	mg/L	75.5	8856492	256	8856492	275	0.50	8856492
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8858297	<0.0000020	8858297	<0.0000020	0.0000020	8858297
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00473	8857519	0.00117	8857519	0.00190	0.00050	8857519
Dissolved Antimony (Sb)	mg/L	<0.000020	8857519	0.000033	8857519	0.000026	0.000020	8857519
Dissolved Arsenic (As)	mg/L	0.000134	8857519	0.000307	8857519	0.000201	0.000020	8857519
Dissolved Barium (Ba)	mg/L	0.135	8857519	0.0897	8857519	0.0949	0.000020	8857519
Dissolved Beryllium (Be)	mg/L	<0.000010	8857519	<0.000010	8857519	<0.000010	0.000010	8857519
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8857519	<0.0000050	8857519	<0.0000050	0.0000050	8857519
Dissolved Boron (B)	mg/L	<0.010	8857519	<0.010	8857519	<0.010	0.010	8857519
Dissolved Cadmium (Cd)	mg/L	0.0000347	8857519	0.0000474	8857519	0.0000317 (1)	0.0000050	8862534
Dissolved Chromium (Cr)	mg/L	0.00013	8857519	<0.00010	8857519	<0.00010	0.00010	8857519
Dissolved Cobalt (Co)	mg/L	0.0000352	8857519	0.0000337	8857519	0.0000274	0.0000050	8857519
Dissolved Copper (Cu)	mg/L	0.000477 (1)	8862534	0.000287	8857519	0.000363 (1)	0.000050	8862534
Dissolved Iron (Fe)	mg/L	0.0435	8857519	0.0100	8857519	0.0073	0.0010	8857519
Dissolved Lead (Pb)	mg/L	0.0000489 (1)	8862534	0.0000122	8857519	0.0000420 (1)	0.0000050	8862534
Dissolved Lithium (Li)	mg/L	0.00108	8857519	0.00382	8857519	0.00388	0.00050	8857519
Dissolved Manganese (Mn)	mg/L	0.0579	8857519	0.0373	8857519	0.0104	0.000050	8857519
Dissolved Molybdenum (Mo)	mg/L	0.000728	8857519	0.00117	8857519	0.000486	0.000050	8857519
Dissolved Nickel (Ni)	mg/L	0.000395	8857519	0.000830	8857519	0.000692	0.000020	8857519
Dissolved Phosphorus (P)	mg/L	0.0050	8857519	0.0054	8857519	0.0040	0.0020	8857519
Dissolved Selenium (Se)	mg/L	0.000241	8857519	0.00142	8857519	0.00143	0.000040	8857519
Dissolved Silicon (Si)	mg/L	3.37	8857519	3.74	8857519	3.98	0.050	8857519
Dissolved Silver (Ag)	mg/L	<0.0000050	8857519	<0.0000050	8857519	<0.0000050	0.0000050	8857519
Dissolved Strontium (Sr)	mg/L	0.0777	8857519	0.257	8857519	0.283	0.000050	8857519
Dissolved Thallium (Tl)	mg/L	<0.0000020	8857519	<0.0000020	8857519	<0.0000020	0.0000020	8857519
Dissolved Tin (Sn)	mg/L	<0.00020	8857519	<0.00020	8857519	<0.00020	0.00020	8857519
Dissolved Titanium (Ti)	mg/L	<0.00050	8857519	<0.00050	8857519	<0.00050	0.00050	8857519
Dissolved Uranium (U)	mg/L	0.000407	8857519	0.00385	8857519	0.00264	0.0000020	8857519

RDL = Reportable Detection Limit

(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SQ3750		SQ3751		SQ3752		
Sampling Date		2017/12/06 11:15		2017/12/05 10:30		2017/12/05 11:30		
COC Number		08448899		08448899		08448899		
	UNITS	KZ-13	QC Batch	KZ-15	QC Batch	KZ-16	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	8857519	<0.00020	8857519	<0.00020	0.00020	8857519
Dissolved Zinc (Zn)	mg/L	0.00467 (1)	8862534	0.00636	8857519	0.00206 (1)	0.00010	8862534
Dissolved Zirconium (Zr)	mg/L	<0.00010	8857519	<0.00010	8857519	<0.00010	0.00010	8857519
Dissolved Calcium (Ca)	mg/L	25.7	8856511	74.8	8856511	82.2	0.050	8856511
Dissolved Magnesium (Mg)	mg/L	2.76	8856511	16.9	8856511	17.0	0.050	8856511
Dissolved Potassium (K)	mg/L	1.98	8856511	1.37	8856511	1.39	0.050	8856511
Dissolved Sodium (Na)	mg/L	1.19	8856511	1.49	8856511	1.57	0.050	8856511
Dissolved Sulphur (S)	mg/L	5.6	8856511	13.2	8856511	13.4	3.0	8856511

RDL = Reportable Detection Limit
(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SQ3753		SQ3754		SQ3755		
Sampling Date		2017/12/05 11:35		2017/12/05 13:20		2017/12/05 14:00		
COC Number		08448899		08448899		08448899		
	UNITS	KZ-17	QC Batch	KZ-18	QC Batch	KZ-19	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO3)	mg/L	241	8861163	233	8856492	<0.50	0.50	8856492
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8858297	<0.0000020	8858297	<0.0000020	0.0000020	8858297
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00090	8857519	0.00315	8857519	<0.00050	0.00050	8862534
Dissolved Antimony (Sb)	mg/L	0.000027	8857519	0.000042	8857519	<0.000020	0.000020	8857519
Dissolved Arsenic (As)	mg/L	0.000224	8857519	0.000781	8857519	<0.000020	0.000020	8857519
Dissolved Barium (Ba)	mg/L	0.0843	8857519	0.0564	8857519	<0.000020	0.000020	8857519
Dissolved Beryllium (Be)	mg/L	<0.000010	8857519	<0.000010	8857519	<0.000010	0.000010	8857519
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8857519	<0.0000050	8857519	<0.0000050	0.0000050	8857519
Dissolved Boron (B)	mg/L	<0.010	8857519	<0.010	8857519	<0.010	0.010	8857519
Dissolved Cadmium (Cd)	mg/L	0.0000273	8857519	0.0000447	8857519	<0.0000050 (1)	0.0000050	8862534
Dissolved Chromium (Cr)	mg/L	<0.00010	8857519	0.00016	8857519	<0.00010	0.00010	8857519
Dissolved Cobalt (Co)	mg/L	0.0000064	8857519	0.0000197	8857519	<0.0000050	0.0000050	8857519
Dissolved Copper (Cu)	mg/L	0.000326	8857519	0.000154	8857519	0.000077	0.000050	8857519
Dissolved Iron (Fe)	mg/L	<0.0010	8857519	0.0217	8857519	<0.0010	0.0010	8857519
Dissolved Lead (Pb)	mg/L	0.0000135	8857519	0.0000124	8857519	0.0000074	0.0000050	8857519
Dissolved Lithium (Li)	mg/L	0.00316	8857519	0.00199	8857519	<0.00050	0.00050	8857519
Dissolved Manganese (Mn)	mg/L	0.000127	8857519	0.00994	8857519	0.000072	0.000050	8857519
Dissolved Molybdenum (Mo)	mg/L	0.000894	8857519	0.00172	8857519	<0.000050	0.000050	8857519
Dissolved Nickel (Ni)	mg/L	0.000478	8857519	0.000350	8857519	0.000023	0.000020	8857519
Dissolved Phosphorus (P)	mg/L	0.0042	8857519	0.0508	8857519	0.0022	0.0020	8857519
Dissolved Selenium (Se)	mg/L	0.00130	8857519	0.00146	8857519	<0.000040	0.000040	8857519
Dissolved Silicon (Si)	mg/L	3.41	8857519	3.37	8857519	<0.050	0.050	8857519
Dissolved Silver (Ag)	mg/L	<0.0000050	8857519	<0.0000050	8857519	<0.0000050	0.0000050	8857519
Dissolved Strontium (Sr)	mg/L	0.254	8857519	0.212	8857519	<0.000050	0.000050	8857519
Dissolved Thallium (Tl)	mg/L	<0.0000020	8857519	<0.0000020	8857519	<0.0000020	0.0000020	8857519
Dissolved Tin (Sn)	mg/L	<0.00020	8857519	<0.00020	8857519	<0.00020	0.00020	8857519
Dissolved Titanium (Ti)	mg/L	<0.00050	8857519	<0.00050	8857519	<0.00050	0.00050	8857519
Dissolved Uranium (U)	mg/L	0.00297	8857519	0.00294	8857519	<0.0000020	0.0000020	8857519

RDL = Reportable Detection Limit
(1) Test repeated.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SQ3753		SQ3754		SQ3755		
Sampling Date		2017/12/05 11:35		2017/12/05 13:20		2017/12/05 14:00		
COC Number		08448899		08448899		08448899		
	UNITS	KZ-17	QC Batch	KZ-18	QC Batch	KZ-19	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	8857519	<0.00020	8857519	<0.00020	0.00020	8857519
Dissolved Zinc (Zn)	mg/L	0.00187	8857519	0.00178	8857519	0.00066 (1)	0.00010	8857519
Dissolved Zirconium (Zr)	mg/L	<0.00010	8857519	<0.00010	8857519	<0.00010	0.00010	8857519
Dissolved Calcium (Ca)	mg/L	72.4	8861165	60.2	8856511	<0.050	0.050	8856511
Dissolved Magnesium (Mg)	mg/L	14.7	8861165	20.0	8856511	<0.050	0.050	8856511
Dissolved Potassium (K)	mg/L	1.40	8861165	0.662	8856511	<0.050	0.050	8856511
Dissolved Sodium (Na)	mg/L	1.41	8861165	1.03	8856511	0.059	0.050	8856511
Dissolved Sulphur (S)	mg/L	16.0 (1)	8861165	8.7	8856511	<3.0	3.0	8856511

RDL = Reportable Detection Limit
(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SQ3756		SQ3757		SQ3758		
Sampling Date		2017/12/04 14:30		2017/12/04 13:55		2017/12/04 12:15		
COC Number		08448900		08448900		08448900		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO3)	mg/L	361	8856492	326	8856492	312	0.50	8856492
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8858297	<0.0000020	8858297	<0.0000020	0.0000020	8858297
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00255	8857519	0.00105	8857519	0.00110	0.00050	8857519
Dissolved Antimony (Sb)	mg/L	0.000033	8857519	0.000037	8857519	0.000067	0.000020	8857519
Dissolved Arsenic (As)	mg/L	0.000646	8857519	0.000604	8857519	0.000411	0.000020	8857519
Dissolved Barium (Ba)	mg/L	0.0888	8857519	0.0905	8857519	0.0894	0.000020	8857519
Dissolved Beryllium (Be)	mg/L	<0.000010	8857519	<0.000010	8857519	<0.000010	0.000010	8857519
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8857519	<0.0000050	8857519	<0.0000050	0.0000050	8857519
Dissolved Boron (B)	mg/L	<0.010	8857519	<0.010	8857519	<0.010	0.010	8857519
Dissolved Cadmium (Cd)	mg/L	0.0000210	8857519	0.0000249	8857519	0.0000178	0.0000050	8857519
Dissolved Chromium (Cr)	mg/L	<0.00010	8857519	<0.00010	8857519	<0.00010	0.00010	8857519
Dissolved Cobalt (Co)	mg/L	0.000151	8857519	0.0000853	8857519	0.0000171	0.0000050	8857519
Dissolved Copper (Cu)	mg/L	0.000281	8857519	0.000346 (1)	8862534	0.000459	0.000050	8857519
Dissolved Iron (Fe)	mg/L	0.0663	8857519	0.0323	8857519	0.0079	0.0010	8857519
Dissolved Lead (Pb)	mg/L	0.0000091	8857519	0.0000100	8857519	0.0000093	0.0000050	8857519
Dissolved Lithium (Li)	mg/L	0.0104	8857519	0.00767	8857519	0.00707	0.00050	8857519
Dissolved Manganese (Mn)	mg/L	0.204	8857519	0.0821	8857519	0.00972	0.000050	8857519
Dissolved Molybdenum (Mo)	mg/L	0.00161	8857519	0.00129	8857519	0.000977	0.000050	8857519
Dissolved Nickel (Ni)	mg/L	0.00220	8857519	0.00139	8857519	0.000855	0.000020	8857519
Dissolved Phosphorus (P)	mg/L	0.0043	8857519	0.0054	8857519	0.0027	0.0020	8857519
Dissolved Selenium (Se)	mg/L	0.000580	8857519	0.00106	8857519	0.000909	0.000040	8857519
Dissolved Silicon (Si)	mg/L	6.82	8857519	5.31	8857519	4.84	0.050	8857519
Dissolved Silver (Ag)	mg/L	<0.0000050	8857519	<0.0000050	8857519	<0.0000050	0.0000050	8857519
Dissolved Strontium (Sr)	mg/L	0.294	8857519	0.297	8857519	0.289	0.000050	8857519
Dissolved Thallium (Tl)	mg/L	<0.0000020	8857519	<0.0000020	8857519	<0.0000020	0.0000020	8857519
Dissolved Tin (Sn)	mg/L	<0.00020	8857519	<0.00020	8857519	<0.00020	0.00020	8857519
Dissolved Titanium (Ti)	mg/L	<0.00050	8857519	<0.00050	8857519	<0.00050	0.00050	8857519
Dissolved Uranium (U)	mg/L	0.00305	8857519	0.00373	8857519	0.00332	0.0000020	8857519

RDL = Reportable Detection Limit

(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SQ3756		SQ3757		SQ3758		
Sampling Date		2017/12/04 14:30		2017/12/04 13:55		2017/12/04 12:15		
COC Number		08448900		08448900		08448900		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	8857519	<0.00020	8857519	<0.00020	0.00020	8857519
Dissolved Zinc (Zn)	mg/L	0.00175	8857519	0.00247	8857519	0.00125	0.00010	8857519
Dissolved Zirconium (Zr)	mg/L	0.00026	8857519	0.00014	8857519	0.00010	0.00010	8857519
Dissolved Calcium (Ca)	mg/L	88.9	8856511	85.5	8856511	82.3	0.050	8856511
Dissolved Magnesium (Mg)	mg/L	33.8	8856511	27.4	8856511	25.8	0.050	8856511
Dissolved Potassium (K)	mg/L	2.31	8856511	1.86	8856511	1.65	0.050	8856511
Dissolved Sodium (Na)	mg/L	2.57	8856511	2.16	8856511	2.15	0.050	8856511
Dissolved Sulphur (S)	mg/L	16.0	8856511	17.1	8856511	16.4	3.0	8856511

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SQ3759	SQ3760	SQ3761		
Sampling Date		2017/12/04 12:30	2017/12/05 12:30	2017/12/07 11:20		
COC Number		08448900	08448900	08448900		
	UNITS	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Calculated Parameters						
Dissolved Hardness (CaCO3)	mg/L	312	220	<0.50	0.50	8856492
Elements						
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8858297
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	0.00128	0.00228	<0.00050	0.00050	8857519
Dissolved Antimony (Sb)	mg/L	0.000062	0.000035	<0.000020	0.000020	8857519
Dissolved Arsenic (As)	mg/L	0.000422	0.000328	<0.000020	0.000020	8857519
Dissolved Barium (Ba)	mg/L	0.0894	0.0928	<0.000020	0.000020	8857519
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8857519
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8857519
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	8857519
Dissolved Cadmium (Cd)	mg/L	0.0000154	0.0000731	<0.0000050	0.0000050	8857519
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8857519
Dissolved Cobalt (Co)	mg/L	0.0000180	0.0000973	<0.0000050	0.0000050	8857519
Dissolved Copper (Cu)	mg/L	0.000404	0.000251	<0.000050	0.000050	8857519
Dissolved Iron (Fe)	mg/L	0.0084	0.157	<0.0010	0.0010	8857519
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000124	<0.0000050	0.0000050	8857519
Dissolved Lithium (Li)	mg/L	0.00705	0.00382	<0.00050	0.00050	8857519
Dissolved Manganese (Mn)	mg/L	0.00965	0.0750	<0.000050	0.000050	8857519
Dissolved Molybdenum (Mo)	mg/L	0.000991	0.000924	<0.000050	0.000050	8857519
Dissolved Nickel (Ni)	mg/L	0.000846	0.000454	<0.000020	0.000020	8857519
Dissolved Phosphorus (P)	mg/L	0.0030	0.0137	0.0035	0.0020	8857519
Dissolved Selenium (Se)	mg/L	0.000943	0.00124	<0.000040	0.000040	8857519
Dissolved Silicon (Si)	mg/L	4.93	3.78	<0.050	0.050	8857519
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8857519
Dissolved Strontium (Sr)	mg/L	0.286	0.247	<0.000050	0.000050	8857519
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8857519
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8857519
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8857519
Dissolved Uranium (U)	mg/L	0.00332	0.00186	<0.0000020	0.0000020	8857519
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8857519
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SQ3759	SQ3760	SQ3761		
Sampling Date		2017/12/04 12:30	2017/12/05 12:30	2017/12/07 11:20		
COC Number		08448900	08448900	08448900		
	UNITS	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00101	0.0163	<0.00010	0.00010	8857519
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8857519
Dissolved Calcium (Ca)	mg/L	82.7	69.5	<0.050	0.050	8856511
Dissolved Magnesium (Mg)	mg/L	25.6	11.4	<0.050	0.050	8856511
Dissolved Potassium (K)	mg/L	1.62	1.53	<0.050	0.050	8856511
Dissolved Sodium (Na)	mg/L	2.09	1.46	<0.050	0.050	8856511
Dissolved Sulphur (S)	mg/L	16.4	13.2	<3.0	3.0	8856511
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SQ3747		SQ3748	SQ3749	SQ3750		
Sampling Date		2017/12/06 10:30		2017/12/05 14:15	2017/12/05 13:05	2017/12/06 11:15		
COC Number		08448899		08448899	08448899	08448899		
	UNITS	KZ-2	QC Batch	KZ-6	KZ-9	KZ-13	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	141	8856168	180	209	76.9	0.50	8856168
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	8858530	<0.0000020	<0.0000020	<0.0000020	0.0000020	8858606
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.0243	8857517	0.0285	0.00839	0.0130	0.00050	8857517
Total Antimony (Sb)	mg/L	0.000031	8857517	<0.000020	0.000049	<0.000020	0.000020	8857517
Total Arsenic (As)	mg/L	0.000083	8857517	0.000105	0.000242	0.000153	0.000020	8857517
Total Barium (Ba)	mg/L	0.0766	8857517	0.0505	0.100	0.135	0.000020	8857517
Total Beryllium (Be)	mg/L	<0.000010	8857517	<0.000010	<0.000010	<0.000010	0.000010	8857517
Total Bismuth (Bi)	mg/L	<0.0000050	8857517	<0.0000050	<0.0000050	<0.0000050	0.0000050	8857517
Total Boron (B)	mg/L	<0.010	8857517	<0.010	<0.010	<0.010	0.010	8857517
Total Cadmium (Cd)	mg/L	0.000249	8857517	0.0000512	0.0000867	0.0000306	0.0000050	8857517
Total Chromium (Cr)	mg/L	<0.00010	8857517	0.00016	<0.00010	<0.00010	0.00010	8857517
Total Cobalt (Co)	mg/L	0.0000167	8857517	0.0000454	0.000117	0.0000413	0.0000050	8857517
Total Copper (Cu)	mg/L	0.000545	8857517	0.000290	0.000312	0.000326	0.000050	8857517
Total Iron (Fe)	mg/L	0.0327	8857517	0.166	0.431	0.0942	0.0010	8857517
Total Lead (Pb)	mg/L	0.0000264	8857517	0.0000738	0.0000328	0.0000151	0.0000050	8857517
Total Lithium (Li)	mg/L	0.00151	8857517	0.00088	0.00402	0.00110	0.00050	8857517
Total Manganese (Mn)	mg/L	0.000427	8857517	0.0259	0.0945	0.0625	0.000050	8857517
Total Molybdenum (Mo)	mg/L	0.000754	8857517	0.000602	0.000650	0.000717	0.000050	8857517
Total Nickel (Ni)	mg/L	0.000350	8857517	0.000275	0.000496	0.000358	0.000020	8857517
Total Phosphorus (P)	mg/L	0.0186	8857517	0.0084	0.0070	0.0038	0.0020	8857517
Total Selenium (Se)	mg/L	0.00213	8857517	0.00109	0.00109	0.000239	0.000040	8857517
Total Silicon (Si)	mg/L	2.33	8857517	3.04	3.69	3.26	0.050	8857517
Total Silver (Ag)	mg/L	<0.0000050	8857517	<0.0000050	<0.0000050	<0.0000050	0.0000050	8857517
Total Strontium (Sr)	mg/L	0.154	8857517	0.190	0.241	0.0780	0.000050	8857517
Total Thallium (Tl)	mg/L	0.0000036	8857517	<0.0000020	<0.0000020	<0.0000020	0.0000020	8857517
Total Tin (Sn)	mg/L	<0.00020	8857517	<0.00020	<0.00020	<0.00020	0.00020	8857517
Total Titanium (Ti)	mg/L	0.00218	8857517	0.00152	<0.00050	0.00050	0.00050	8857517
Total Uranium (U)	mg/L	0.00409	8857517	0.00111	0.00149	0.000407	0.0000020	8857517
Total Vanadium (V)	mg/L	<0.00020	8857517	<0.00020	<0.00020	<0.00020	0.00020	8857517
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SQ3747		SQ3748	SQ3749	SQ3750		
Sampling Date		2017/12/06 10:30		2017/12/05 14:15	2017/12/05 13:05	2017/12/06 11:15		
COC Number		08448899		08448899	08448899	08448899		
	UNITS	KZ-2	QC Batch	KZ-6	KZ-9	KZ-13	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0282	8857517	0.00202	0.0201	0.00375	0.00010	8857517
Total Zirconium (Zr)	mg/L	<0.00010	8857517	<0.00010	<0.00010	<0.00010	0.00010	8857517
Total Calcium (Ca)	mg/L	45.9	8856674	60.0	69.9	26.1	0.050	8856674
Total Magnesium (Mg)	mg/L	6.37	8856674	7.35	8.42	2.85	0.050	8856674
Total Potassium (K)	mg/L	2.15	8856674	0.904	1.69	1.87	0.050	8856674
Total Sodium (Na)	mg/L	0.986	8856674	0.795	1.45	1.04	0.050	8856674
Total Sulphur (S)	mg/L	22.4	8856674	8.2	13.2	5.8	3.0	8856674
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SQ3751	SQ3752	SQ3753	SQ3754	SQ3755		
Sampling Date		2017/12/05 10:30	2017/12/05 11:30	2017/12/05 11:35	2017/12/05 13:20	2017/12/05 14:00		
COC Number		08448899	08448899	08448899	08448899	08448899		
	UNITS	KZ-15	KZ-16	KZ-17	KZ-18	KZ-19	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	254	263	240	232	<0.50	0.50	8856168
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8858606
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00457	0.00154	0.00266	0.0131	<0.00050	0.00050	8857517
Total Antimony (Sb)	mg/L	0.000030	<0.000020	0.000023	0.000109	<0.000020	0.000020	8857517
Total Arsenic (As)	mg/L	0.000396	0.000190	0.000224	0.000783	<0.000020	0.000020	8857517
Total Barium (Ba)	mg/L	0.0900	0.0924	0.0831	0.0553	<0.000020	0.000020	8857517
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8857517
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8857517
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8857517
Total Cadmium (Cd)	mg/L	0.0000463	0.0000248	0.0000306	0.0000488	<0.0000050	0.0000050	8857517
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00021	<0.00010	0.00010	8857517
Total Cobalt (Co)	mg/L	0.0000389	0.0000271	0.0000108	0.0000255	<0.0000050	0.0000050	8857517
Total Copper (Cu)	mg/L	0.000263	0.000236	0.000300	0.000203	<0.000050	0.000050	8857517
Total Iron (Fe)	mg/L	0.0430	0.0068	0.0069	0.0433	<0.0010	0.0010	8857517
Total Lead (Pb)	mg/L	0.0000103	<0.0000050	0.0000162	0.0000333	<0.0000050	0.0000050	8857517
Total Lithium (Li)	mg/L	0.00377	0.00365	0.00313	0.00201	<0.00050	0.00050	8857517
Total Manganese (Mn)	mg/L	0.0418	0.00996	0.00248	0.0123	<0.000050	0.000050	8857517
Total Molybdenum (Mo)	mg/L	0.00118	0.000466	0.000904	0.00167	<0.000050	0.000050	8857517
Total Nickel (Ni)	mg/L	0.000769	0.000639	0.000473	0.000400	<0.000020	0.000020	8857517
Total Phosphorus (P)	mg/L	0.0051	0.0042	0.0040	0.0548	0.0031	0.0020	8857517
Total Selenium (Se)	mg/L	0.00139	0.00136	0.00123	0.00140	<0.000040	0.000040	8857517
Total Silicon (Si)	mg/L	3.70	3.68	3.35	3.33	<0.050	0.050	8857517
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8857517
Total Strontium (Sr)	mg/L	0.263	0.274	0.250	0.207	<0.000050	0.000050	8857517
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8857517
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00078	<0.00020	0.00020	8857517
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00051	<0.00050	0.00050	8857517
Total Uranium (U)	mg/L	0.00380	0.00251	0.00289	0.00288	<0.0000020	0.0000020	8857517
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8857517

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SQ3751	SQ3752	SQ3753	SQ3754	SQ3755		
Sampling Date		2017/12/05 10:30	2017/12/05 11:30	2017/12/05 11:35	2017/12/05 13:20	2017/12/05 14:00		
COC Number		08448899	08448899	08448899	08448899	08448899		
	UNITS	KZ-15	KZ-16	KZ-17	KZ-18	KZ-19	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00596	0.00097	0.00158	0.00184	<0.00010	0.00010	8857517
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8857517
Total Calcium (Ca)	mg/L	74.1	78.0	71.8	60.8	<0.050	0.050	8856674
Total Magnesium (Mg)	mg/L	16.8	16.7	14.7	19.5	<0.050	0.050	8856674
Total Potassium (K)	mg/L	1.29	1.26	1.26	0.633	<0.050	0.050	8856674
Total Sodium (Na)	mg/L	1.43	1.47	1.36	0.996	<0.050	0.050	8856674
Total Sulphur (S)	mg/L	13.1	13.2	12.2	8.2	<3.0	3.0	8856674

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SQ3756	SQ3757	SQ3758	SQ3759	SQ3760		
Sampling Date		2017/12/04 14:30	2017/12/04 13:55	2017/12/04 12:15	2017/12/04 12:30	2017/12/05 12:30		
COC Number		08448900	08448900	08448900	08448900	08448900		
	UNITS	KZ-21	KZ-22	KZ-26	KZ-28	KZ-37	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	349	314	308	314	220	0.50	8856168
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8858606
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00750	0.00459	0.0523	0.0472	0.00760	0.00050	8857517
Total Antimony (Sb)	mg/L	0.000033	0.000036	0.000071	0.000073	0.000040	0.000020	8857517
Total Arsenic (As)	mg/L	0.00162	0.00105	0.000661	0.000690	0.000365	0.000020	8857517
Total Barium (Ba)	mg/L	0.0835	0.0875	0.0915	0.0967	0.0887	0.000020	8857517
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8857517
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8857517
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8857517
Total Cadmium (Cd)	mg/L	0.0000184	0.0000242	0.0000212	0.0000251	0.0000724	0.0000050	8857517
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00015	0.00015	<0.00010	0.00010	8857517
Total Cobalt (Co)	mg/L	0.000171	0.0000990	0.0000985	0.0000859	0.0000989	0.0000050	8857517
Total Copper (Cu)	mg/L	0.000230	0.000267	0.000587	0.000635	0.000260	0.000050	8857517
Total Iron (Fe)	mg/L	0.395	0.188	0.167	0.157	0.317	0.0010	8857517
Total Lead (Pb)	mg/L	0.0000093	0.0000111	0.0000947	0.0000916	0.0000192	0.0000050	8857517
Total Lithium (Li)	mg/L	0.00981	0.00713	0.00702	0.00712	0.00357	0.00050	8857517
Total Manganese (Mn)	mg/L	0.204	0.0871	0.0223	0.0228	0.0758	0.000050	8857517
Total Molybdenum (Mo)	mg/L	0.00155	0.00124	0.000971	0.00104	0.000894	0.000050	8857517
Total Nickel (Ni)	mg/L	0.00222	0.00137	0.00112	0.00112	0.000475	0.000020	8857517
Total Phosphorus (P)	mg/L	0.0160	0.0070	0.0142	0.0099	0.0151	0.0020	8857517
Total Selenium (Se)	mg/L	0.000560	0.00102	0.000921	0.000930	0.00117	0.000040	8857517
Total Silicon (Si)	mg/L	6.62	4.96	4.78	4.79	3.67	0.050	8857517
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8857517
Total Strontium (Sr)	mg/L	0.284	0.281	0.284	0.302	0.235	0.000050	8857517
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8857517
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8857517
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00160	0.00124	<0.00050	0.00050	8857517
Total Uranium (U)	mg/L	0.00292	0.00361	0.00327	0.00345	0.00184	0.0000020	8857517
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00020	<0.00020	<0.00020	0.00020	8857517

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SQ3756	SQ3757	SQ3758	SQ3759	SQ3760		
Sampling Date		2017/12/04 14:30	2017/12/04 13:55	2017/12/04 12:15	2017/12/04 12:30	2017/12/05 12:30		
COC Number		08448900	08448900	08448900	08448900	08448900		
	UNITS	KZ-21	KZ-22	KZ-26	KZ-28	KZ-37	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00157	0.00229	0.00182	0.00177	0.0154	0.00010	8857517
Total Zirconium (Zr)	mg/L	0.00026	0.00011	0.00010	0.00011	<0.00010	0.00010	8857517
Total Calcium (Ca)	mg/L	86.8	82.1	81.8	81.5	70.0	0.050	8856674
Total Magnesium (Mg)	mg/L	32.2	26.3	25.2	26.8	11.1	0.050	8856674
Total Potassium (K)	mg/L	2.17	1.78	1.60	1.68	1.37	0.050	8856674
Total Sodium (Na)	mg/L	2.45	2.01	2.99	2.15	1.30	0.050	8856674
Total Sulphur (S)	mg/L	14.9	15.6	16.0	16.9	11.8	3.0	8856674

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SQ3761		
Sampling Date		2017/12/07 11:20		
COC Number		08448900		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	<0.50	0.50	8856168
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8858606
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	<0.00050	0.00050	8857517
Total Antimony (Sb)	mg/L	<0.000020	0.000020	8857517
Total Arsenic (As)	mg/L	<0.000020	0.000020	8857517
Total Barium (Ba)	mg/L	<0.000020	0.000020	8857517
Total Beryllium (Be)	mg/L	<0.000010	0.000010	8857517
Total Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8857517
Total Boron (B)	mg/L	<0.010	0.010	8857517
Total Cadmium (Cd)	mg/L	<0.0000050	0.0000050	8857517
Total Chromium (Cr)	mg/L	<0.00010	0.00010	8857517
Total Cobalt (Co)	mg/L	<0.0000050	0.0000050	8857517
Total Copper (Cu)	mg/L	<0.000050	0.000050	8857517
Total Iron (Fe)	mg/L	<0.0010	0.0010	8857517
Total Lead (Pb)	mg/L	<0.0000050	0.0000050	8857517
Total Lithium (Li)	mg/L	<0.00050	0.00050	8857517
Total Manganese (Mn)	mg/L	<0.000050	0.000050	8857517
Total Molybdenum (Mo)	mg/L	<0.000050	0.000050	8857517
Total Nickel (Ni)	mg/L	<0.000020	0.000020	8857517
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8857517
Total Selenium (Se)	mg/L	<0.000040	0.000040	8857517
Total Silicon (Si)	mg/L	<0.050	0.050	8857517
Total Silver (Ag)	mg/L	<0.0000050	0.0000050	8857517
Total Strontium (Sr)	mg/L	<0.000050	0.000050	8857517
Total Thallium (Tl)	mg/L	<0.0000020	0.0000020	8857517
Total Tin (Sn)	mg/L	<0.00020	0.00020	8857517
Total Titanium (Ti)	mg/L	<0.00050	0.00050	8857517
Total Uranium (U)	mg/L	<0.0000020	0.0000020	8857517
Total Vanadium (V)	mg/L	<0.00020	0.00020	8857517
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SQ3761		
Sampling Date		2017/12/07 11:20		
COC Number		08448900		
	UNITS	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	<0.00010	0.00010	8857517
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8857517
Total Calcium (Ca)	mg/L	<0.050	0.050	8856674
Total Magnesium (Mg)	mg/L	<0.050	0.050	8856674
Total Potassium (K)	mg/L	<0.050	0.050	8856674
Total Sodium (Na)	mg/L	<0.050	0.050	8856674
Total Sulphur (S)	mg/L	<3.0	3.0	8856674
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SQ3747
Sample ID: KZ-2
Matrix: Water

Collected: 2017/12/06
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8859931	2017/12/11	2017/12/11	Name Redacted
Alkalinity - Low Level	AT/ALK	8858829	2017/12/11	2017/12/11	
Chloride - Low Level	KONE/COL	8860653	N/A	2017/12/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8858638	N/A	2017/12/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8858641	N/A	2017/12/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8858514	N/A	2017/12/11	
Conductance - Low Level	AT/ALK	8858824	2017/12/11	2017/12/11	
Fluoride - Low Level	ISE/ISE	8858847	N/A	2017/12/11	
Hardness Total (calculated as CaCO3)	CALC	8856168	N/A	2017/12/13	
Hardness (calculated as CaCO3)	CALC	8856492	N/A	2017/12/13	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8858297	N/A	2017/12/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8858530	2017/12/11	2017/12/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8856939	N/A	2017/12/13	
Ion Balance	CALC	8856940	N/A	2017/12/13	
Sum of cations, anions	CALC	8856942	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8856511	N/A	2017/12/13	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8857519	N/A	2017/12/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8856674	N/A	2017/12/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8857517	N/A	2017/12/13	
Ammonia-N Low Level (Preserved)	KONE/COL	8858838	N/A	2017/12/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8857576	N/A	2017/12/08	
Nitrite (N) (low level)	TRAA/COL	8857577	N/A	2017/12/08	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8856675	N/A	2017/12/09	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/12/08	
pH Water	AT/ALK	8858822	2017/12/11	2017/12/11	
Sulphate - Low Level	KONE/COL	8860654	N/A	2017/12/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8857688	2017/12/09	2017/12/09	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8857690	2017/12/09	2017/12/09	
Total Suspended Solids-Low Level	BAL/BAL	8857174	2017/12/08	2017/12/11	

Maxxam ID: SQ3747 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2017/12/06
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Low Level	AT/ALK	8858829	2017/12/11	2017/12/11	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8858638	N/A	2017/12/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8858641	N/A	2017/12/11	
Conductance - Low Level	AT/ALK	8858824	2017/12/11	2017/12/11	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8858297	N/A	2017/12/11	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8857519	N/A	2017/12/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8857517	N/A	2017/12/13	
Ammonia-N Low Level (Preserved)	KONE/COL	8858838	N/A	2017/12/11	
pH Water	AT/ALK	8858822	2017/12/11	2017/12/11	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SQ3748
Sample ID: KZ-6
Matrix: Water

Collected: 2017/12/05
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8859931	2017/12/11	2017/12/11	Name Redacted
Alkalinity - Low Level	AT/ALK	8858829	2017/12/11	2017/12/11	
Chloride - Low Level	KONE/COL	8859185	N/A	2017/12/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8858638	N/A	2017/12/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8858641	N/A	2017/12/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8858514	N/A	2017/12/11	
Conductance - Low Level	AT/ALK	8858824	2017/12/11	2017/12/11	
Fluoride - Low Level	ISE/ISE	8858847	N/A	2017/12/11	
Hardness Total (calculated as CaCO3)	CALC	8856168	N/A	2017/12/13	
Hardness (calculated as CaCO3)	CALC	8856492	N/A	2017/12/13	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8858297	N/A	2017/12/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8858606	2017/12/11	2017/12/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8856939	N/A	2017/12/13	
Ion Balance	CALC	8856940	N/A	2017/12/13	
Sum of cations, anions	CALC	8856942	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8856511	N/A	2017/12/13	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8857519	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8856674	N/A	2017/12/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8857517	N/A	2017/12/13	
Ammonia-N Low Level (Preserved)	KONE/COL	8858838	N/A	2017/12/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8857576	N/A	2017/12/08	
Nitrite (N) (low level)	TRAA/COL	8857577	N/A	2017/12/08	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8856675	N/A	2017/12/09	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/12/08	
pH Water	AT/ALK	8858822	2017/12/11	2017/12/11	
Sulphate - Low Level	KONE/COL	8859186	N/A	2017/12/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8857688	2017/12/09	2017/12/09	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8857690	2017/12/09	2017/12/09	
Total Suspended Solids-Low Level	BAL/BAL	8857174	2017/12/08	2017/12/11	

Maxxam ID: SQ3748 Dup
Sample ID: KZ-6
Matrix: Water

Collected: 2017/12/05
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride - Low Level	KONE/COL	8859185	N/A	2017/12/11	Name Redacted
Fluoride - Low Level	ISE/ISE	8858847	N/A	2017/12/11	
Sulphate - Low Level	KONE/COL	8859186	N/A	2017/12/11	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SQ3749
Sample ID: KZ-9
Matrix: Water

Collected: 2017/12/05
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8859931	2017/12/11	2017/12/11	Name Redacted
Alkalinity - Low Level	AT/ALK	8858829	2017/12/11	2017/12/11	
Chloride - Low Level	KONE/COL	8859180	N/A	2017/12/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8858638	N/A	2017/12/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8858641	N/A	2017/12/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8858514	N/A	2017/12/11	
Conductance - Low Level	AT/ALK	8858824	2017/12/11	2017/12/11	
Fluoride - Low Level	ISE/ISE	8858847	N/A	2017/12/11	
Hardness Total (calculated as CaCO3)	CALC	8856168	N/A	2017/12/13	
Hardness (calculated as CaCO3)	CALC	8856492	N/A	2017/12/13	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8858297	N/A	2017/12/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8858606	2017/12/11	2017/12/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8856939	N/A	2017/12/13	
Ion Balance	CALC	8856940	N/A	2017/12/13	
Sum of cations, anions	CALC	8856942	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8856511	N/A	2017/12/13	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8857519	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8856674	N/A	2017/12/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8857517	N/A	2017/12/13	
Ammonia-N Low Level (Preserved)	KONE/COL	8858838	N/A	2017/12/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8857576	N/A	2017/12/08	
Nitrite (N) (low level)	TRAA/COL	8857577	N/A	2017/12/08	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8856675	N/A	2017/12/09	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/12/08	
pH Water	AT/ALK	8858822	2017/12/11	2017/12/11	
Sulphate - Low Level	KONE/COL	8859181	N/A	2017/12/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8857688	2017/12/09	2017/12/09	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8857690	2017/12/09	2017/12/09	
Total Suspended Solids-Low Level	BAL/BAL	8857174	2017/12/08	2017/12/11	

Maxxam ID: SQ3750
Sample ID: KZ-13
Matrix: Water

Collected: 2017/12/06
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8859931	2017/12/11	2017/12/11	Name Redacted
Alkalinity - Low Level	AT/ALK	8858829	2017/12/11	2017/12/11	
Chloride - Low Level	KONE/COL	8859180	N/A	2017/12/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8858638	N/A	2017/12/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8858641	N/A	2017/12/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8858514	N/A	2017/12/11	
Conductance - Low Level	AT/ALK	8858824	2017/12/11	2017/12/11	
Fluoride - Low Level	ISE/ISE	8858847	N/A	2017/12/11	
Hardness Total (calculated as CaCO3)	CALC	8856168	N/A	2017/12/13	

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SQ3750
Sample ID: KZ-13
Matrix: Water

Collected: 2017/12/06
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8856492	N/A	2017/12/13	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8858297	N/A	2017/12/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8858606	2017/12/11	2017/12/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8856939	N/A	2017/12/13	
Ion Balance	CALC	8856940	N/A	2017/12/13	
Sum of cations, anions	CALC	8856942	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8856511	N/A	2017/12/13	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8857519	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8856674	N/A	2017/12/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8857517	N/A	2017/12/13	
Ammonia-N Low Level (Preserved)	KONE/COL	8858838	N/A	2017/12/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8857576	N/A	2017/12/08	
Nitrite (N) (low level)	TRAA/COL	8857577	N/A	2017/12/08	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8856675	N/A	2017/12/09	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/12/08	
pH Water	AT/ALK	8858822	2017/12/11	2017/12/11	
Sulphate - Low Level	KONE/COL	8859181	N/A	2017/12/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8857688	2017/12/09	2017/12/09	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8857690	2017/12/09	2017/12/09	
Total Suspended Solids-Low Level	BAL/BAL	8857174	2017/12/08	2017/12/11	

Maxxam ID: SQ3751
Sample ID: KZ-15
Matrix: Water

Collected: 2017/12/05
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8859931	2017/12/11	2017/12/11	Name Redacted
Alkalinity - Low Level	AT/ALK	8858829	2017/12/11	2017/12/11	
Chloride - Low Level	KONE/COL	8859185	N/A	2017/12/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8858638	N/A	2017/12/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8858641	N/A	2017/12/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8858514	N/A	2017/12/11	
Conductance - Low Level	AT/ALK	8858824	2017/12/11	2017/12/11	
Fluoride - Low Level	ISE/ISE	8858847	N/A	2017/12/11	
Hardness Total (calculated as CaCO3)	CALC	8856168	N/A	2017/12/13	
Hardness (calculated as CaCO3)	CALC	8856492	N/A	2017/12/13	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8858297	N/A	2017/12/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8858606	2017/12/11	2017/12/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8856939	N/A	2017/12/13	
Ion Balance	CALC	8856940	N/A	2017/12/13	
Sum of cations, anions	CALC	8856942	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8856511	N/A	2017/12/13	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8857519	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8856674	N/A	2017/12/13	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SQ3751
Sample ID: KZ-15
Matrix: Water

Collected: 2017/12/05
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8857517	N/A	2017/12/13	Name Redacted
Ammonia-N Low Level (Preserved)	KONE/COL	8858838	N/A	2017/12/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8857576	N/A	2017/12/08	
Nitrite (N) (low level)	TRAA/COL	8857577	N/A	2017/12/08	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8856675	N/A	2017/12/09	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/12/08	
pH Water	AT/ALK	8858822	2017/12/11	2017/12/11	
Sulphate - Low Level	KONE/COL	8859186	N/A	2017/12/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8857688	2017/12/09	2017/12/09	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8857690	2017/12/09	2017/12/09	
Total Suspended Solids-Low Level	BAL/BAL	8857174	2017/12/08	2017/12/11	

Maxxam ID: SQ3752
Sample ID: KZ-16
Matrix: Water

Collected: 2017/12/05
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8859931	2017/12/11	2017/12/11	Name Redacted
Alkalinity - Low Level	AT/ALK	8858829	2017/12/11	2017/12/11	
Chloride - Low Level	KONE/COL	8859180	N/A	2017/12/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8858638	N/A	2017/12/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8858641	N/A	2017/12/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8858514	N/A	2017/12/11	
Conductance - Low Level	AT/ALK	8858824	2017/12/11	2017/12/11	
Fluoride - Low Level	ISE/ISE	8858847	N/A	2017/12/11	
Hardness Total (calculated as CaCO3)	CALC	8856168	N/A	2017/12/13	
Hardness (calculated as CaCO3)	CALC	8856492	N/A	2017/12/13	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8858297	N/A	2017/12/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8858606	2017/12/11	2017/12/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8856939	N/A	2017/12/13	
Ion Balance	CALC	8856940	N/A	2017/12/13	
Sum of cations, anions	CALC	8856942	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8856511	N/A	2017/12/13	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8857519	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8856674	N/A	2017/12/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8857517	N/A	2017/12/13	
Ammonia-N Low Level (Preserved)	KONE/COL	8858838	N/A	2017/12/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8857576	N/A	2017/12/08	
Nitrite (N) (low level)	TRAA/COL	8857577	N/A	2017/12/08	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8856675	N/A	2017/12/09	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/12/08	
pH Water	AT/ALK	8858822	2017/12/11	2017/12/11	
Sulphate - Low Level	KONE/COL	8859181	N/A	2017/12/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8857688	2017/12/09	2017/12/09	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SQ3752
Sample ID: KZ-16
Matrix: Water

Collected: 2017/12/05
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - Low Level Unpreserved	KONE/COL	8857690	2017/12/09	2017/12/09	Name Redacted
Total Suspended Solids-Low Level	BAL/BAL	8857174	2017/12/08	2017/12/11	

Maxxam ID: SQ3752 Dup
Sample ID: KZ-16
Matrix: Water

Collected: 2017/12/05
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8859931	2017/12/11	2017/12/11	Name Redacted

Maxxam ID: SQ3753
Sample ID: KZ-17
Matrix: Water

Collected: 2017/12/05
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8859931	2017/12/11	2017/12/11	Name Redacted
Alkalinity - Low Level	AT/ALK	8858829	2017/12/11	2017/12/11	
Chloride - Low Level	KONE/COL	8859180	N/A	2017/12/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8858638	N/A	2017/12/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8858641	N/A	2017/12/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8858514	N/A	2017/12/11	
Conductance - Low Level	AT/ALK	8858824	2017/12/11	2017/12/11	
Fluoride - Low Level	ISE/ISE	8858847	N/A	2017/12/11	
Hardness Total (calculated as CaCO3)	CALC	8856168	N/A	2017/12/13	
Hardness (calculated as CaCO3)	CALC	8861163	N/A	2017/12/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8858297	N/A	2017/12/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8858606	2017/12/11	2017/12/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8856939	N/A	2017/12/13	
Ion Balance	CALC	8856940	N/A	2017/12/13	
Sum of cations, anions	CALC	8856942	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8861165	N/A	2017/12/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8857519	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8856674	N/A	2017/12/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8857517	N/A	2017/12/13	
Ammonia-N Low Level (Preserved)	KONE/COL	8858838	N/A	2017/12/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8857576	N/A	2017/12/08	
Nitrite (N) (low level)	TRAA/COL	8857577	N/A	2017/12/08	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8856675	N/A	2017/12/09	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/12/08	
pH Water	AT/ALK	8858822	2017/12/11	2017/12/11	
Sulphate - Low Level	KONE/COL	8859181	N/A	2017/12/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8857688	2017/12/09	2017/12/09	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8857690	2017/12/09	2017/12/09	
Total Suspended Solids-Low Level	BAL/BAL	8857174	2017/12/08	2017/12/11	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SQ3754
Sample ID: KZ-18
Matrix: Water

Collected: 2017/12/05
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8859931	2017/12/11	2017/12/11	Name Redacted
Alkalinity - Low Level	AT/ALK	8858829	2017/12/11	2017/12/11	
Chloride - Low Level	KONE/COL	8859180	N/A	2017/12/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8858638	N/A	2017/12/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8858641	N/A	2017/12/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8858514	N/A	2017/12/11	
Conductance - Low Level	AT/ALK	8858824	2017/12/11	2017/12/11	
Fluoride - Low Level	ISE/ISE	8858847	N/A	2017/12/11	
Hardness Total (calculated as CaCO3)	CALC	8856168	N/A	2017/12/13	
Hardness (calculated as CaCO3)	CALC	8856492	N/A	2017/12/13	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8858297	N/A	2017/12/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8858606	2017/12/11	2017/12/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8856939	N/A	2017/12/13	
Ion Balance	CALC	8856940	N/A	2017/12/13	
Sum of cations, anions	CALC	8856942	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8856511	N/A	2017/12/13	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8857519	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8856674	N/A	2017/12/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8857517	N/A	2017/12/13	
Ammonia-N Low Level (Preserved)	KONE/COL	8858838	N/A	2017/12/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8857576	N/A	2017/12/08	
Nitrite (N) (low level)	TRAA/COL	8857577	N/A	2017/12/08	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8856675	N/A	2017/12/09	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/12/08	
pH Water	AT/ALK	8858822	2017/12/11	2017/12/11	
Sulphate - Low Level	KONE/COL	8859181	N/A	2017/12/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8857688	2017/12/09	2017/12/09	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8857690	2017/12/09	2017/12/09	
Total Suspended Solids-Low Level	BAL/BAL	8857174	2017/12/08	2017/12/11	

Maxxam ID: SQ3755
Sample ID: KZ-19
Matrix: Water

Collected: 2017/12/05
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8859931	2017/12/11	2017/12/11	Name Redacted
Alkalinity - Low Level	AT/ALK	8858829	2017/12/11	2017/12/11	
Chloride - Low Level	KONE/COL	8859180	N/A	2017/12/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8858638	N/A	2017/12/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8858641	N/A	2017/12/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8858514	N/A	2017/12/11	
Conductance - Low Level	AT/ALK	8858824	2017/12/11	2017/12/11	
Fluoride - Low Level	ISE/ISE	8858847	N/A	2017/12/11	
Hardness Total (calculated as CaCO3)	CALC	8856168	N/A	2017/12/13	

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SQ3755
Sample ID: KZ-19
Matrix: Water

Collected: 2017/12/05
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)	CALC	8856492	N/A	2017/12/13	Name Redacted
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8858297	N/A	2017/12/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8858606	2017/12/11	2017/12/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8856939	N/A	2017/12/13	
Ion Balance	CALC	8856940	N/A	2017/12/13	
Sum of cations, anions	CALC	8856942	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8856511	N/A	2017/12/13	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8862534	N/A	2017/12/14	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8856674	N/A	2017/12/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8857517	N/A	2017/12/13	
Ammonia-N Low Level (Preserved)	KONE/COL	8858838	N/A	2017/12/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8857576	N/A	2017/12/08	
Nitrite (N) (low level)	TRAA/COL	8857577	N/A	2017/12/08	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8856675	N/A	2017/12/09	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/12/08	
pH Water	AT/ALK	8858822	2017/12/11	2017/12/11	
Sulphate - Low Level	KONE/COL	8859181	N/A	2017/12/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8857688	2017/12/09	2017/12/09	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8857690	2017/12/09	2017/12/09	
Total Suspended Solids-Low Level	BAL/BAL	8857174	2017/12/08	2017/12/11	

Maxxam ID: SQ3756
Sample ID: KZ-21
Matrix: Water

Collected: 2017/12/04
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8859931	2017/12/11	2017/12/11	Name Redacted
Alkalinity - Low Level	AT/ALK	8858829	2017/12/11	2017/12/11	
Chloride - Low Level	KONE/COL	8859180	N/A	2017/12/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8858638	N/A	2017/12/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8858641	N/A	2017/12/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8858514	N/A	2017/12/11	
Conductance - Low Level	AT/ALK	8858824	2017/12/11	2017/12/11	
Fluoride - Low Level	ISE/ISE	8858847	N/A	2017/12/11	
Hardness Total (calculated as CaCO3)	CALC	8856168	N/A	2017/12/13	
Hardness (calculated as CaCO3)	CALC	8856492	N/A	2017/12/13	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8858297	N/A	2017/12/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8858606	2017/12/11	2017/12/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8856939	N/A	2017/12/13	
Ion Balance	CALC	8856940	N/A	2017/12/13	
Sum of cations, anions	CALC	8856942	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8856511	N/A	2017/12/13	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8857519	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8856674	N/A	2017/12/13	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SQ3756
Sample ID: KZ-21
Matrix: Water

Collected: 2017/12/04
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8857517	N/A	2017/12/13	Name Redacted
Ammonia-N Low Level (Preserved)	KONE/COL	8858838	N/A	2017/12/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8857576	N/A	2017/12/08	
Nitrite (N) (low level)	TRAA/COL	8857577	N/A	2017/12/08	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8856675	N/A	2017/12/09	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/12/08	
pH Water	AT/ALK	8858822	2017/12/11	2017/12/11	
Sulphate - Low Level	KONE/COL	8860654	N/A	2017/12/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8857688	2017/12/09	2017/12/09	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8857690	2017/12/09	2017/12/09	
Total Suspended Solids-Low Level	BAL/BAL	8857174	2017/12/08	2017/12/11	

Maxxam ID: SQ3756 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2017/12/04
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8858514	N/A	2017/12/11	Isabel Choi

Maxxam ID: SQ3757
Sample ID: KZ-22
Matrix: Water

Collected: 2017/12/04
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8859931	2017/12/11	2017/12/11	Name Redacted
Alkalinity - Low Level	AT/ALK	8858829	2017/12/11	2017/12/11	
Chloride - Low Level	KONE/COL	8859185	N/A	2017/12/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8858638	N/A	2017/12/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8858641	N/A	2017/12/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8858514	N/A	2017/12/11	
Conductance - Low Level	AT/ALK	8858824	2017/12/11	2017/12/11	
Fluoride - Low Level	ISE/ISE	8858847	N/A	2017/12/11	
Hardness Total (calculated as CaCO3)	CALC	8856168	N/A	2017/12/13	
Hardness (calculated as CaCO3)	CALC	8856492	N/A	2017/12/13	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8858297	N/A	2017/12/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8858606	2017/12/11	2017/12/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8856939	N/A	2017/12/13	
Ion Balance	CALC	8856940	N/A	2017/12/13	
Sum of cations, anions	CALC	8856942	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8856511	N/A	2017/12/13	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8857519	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8856674	N/A	2017/12/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8857517	N/A	2017/12/13	
Ammonia-N Low Level (Preserved)	KONE/COL	8858838	N/A	2017/12/11	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SQ3757
Sample ID: KZ-22
Matrix: Water

Collected: 2017/12/04
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8857576	N/A	2017/12/08	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8857577	N/A	2017/12/08	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8856675	N/A	2017/12/09	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/12/08	
pH Water	AT/ALK	8858822	2017/12/11	2017/12/11	
Sulphate - Low Level	KONE/COL	8860654	N/A	2017/12/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8857688	2017/12/09	2017/12/09	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8857690	2017/12/09	2017/12/09	
Total Suspended Solids-Low Level	BAL/BAL	8857174	2017/12/08	2017/12/11	

Maxxam ID: SQ3758
Sample ID: KZ-26
Matrix: Water

Collected: 2017/12/04
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8859931	2017/12/11	2017/12/11	Name Redacted
Alkalinity - Low Level	AT/ALK	8858829	2017/12/11	2017/12/11	
Chloride - Low Level	KONE/COL	8859185	N/A	2017/12/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8858638	N/A	2017/12/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8858641	N/A	2017/12/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8858514	N/A	2017/12/11	
Conductance - Low Level	AT/ALK	8858824	2017/12/11	2017/12/11	
Fluoride - Low Level	ISE/ISE	8858847	N/A	2017/12/11	
Hardness Total (calculated as CaCO3)	CALC	8856168	N/A	2017/12/13	
Hardness (calculated as CaCO3)	CALC	8856492	N/A	2017/12/13	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8858297	N/A	2017/12/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8858606	2017/12/11	2017/12/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8856939	N/A	2017/12/13	
Ion Balance	CALC	8856940	N/A	2017/12/13	
Sum of cations, anions	CALC	8856942	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8856511	N/A	2017/12/13	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8857519	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8856674	N/A	2017/12/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8857517	N/A	2017/12/13	
Ammonia-N Low Level (Preserved)	KONE/COL	8858838	N/A	2017/12/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8857576	N/A	2017/12/08	
Nitrite (N) (low level)	TRAA/COL	8857577	N/A	2017/12/08	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8856675	N/A	2017/12/09	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/12/08	
pH Water	AT/ALK	8858822	2017/12/11	2017/12/11	
Sulphate - Low Level	KONE/COL	8859186	N/A	2017/12/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8857688	2017/12/09	2017/12/09	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8857690	2017/12/09	2017/12/09	
Total Suspended Solids-Low Level	BAL/BAL	8857174	2017/12/08	2017/12/11	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SQ3758 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2017/12/04
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8857576	N/A	2017/12/08	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8857577	N/A	2017/12/08	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8857690	2017/12/09	2017/12/09	

Maxxam ID: SQ3759
Sample ID: KZ-28
Matrix: Water

Collected: 2017/12/04
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8859931	2017/12/11	2017/12/11	Name Redacted
Alkalinity - Low Level	AT/ALK	8858829	2017/12/11	2017/12/11	
Chloride - Low Level	KONE/COL	8859180	N/A	2017/12/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8858638	N/A	2017/12/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8858641	N/A	2017/12/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8858514	N/A	2017/12/11	
Conductance - Low Level	AT/ALK	8858824	2017/12/11	2017/12/11	
Fluoride - Low Level	ISE/ISE	8858847	N/A	2017/12/11	
Hardness Total (calculated as CaCO3)	CALC	8856168	N/A	2017/12/13	
Hardness (calculated as CaCO3)	CALC	8856492	N/A	2017/12/13	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8858297	N/A	2017/12/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8858606	2017/12/11	2017/12/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8856939	N/A	2017/12/13	
Ion Balance	CALC	8856940	N/A	2017/12/13	
Sum of cations, anions	CALC	8856942	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8856511	N/A	2017/12/13	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8857519	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8856674	N/A	2017/12/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8857517	N/A	2017/12/13	
Ammonia-N Low Level (Preserved)	KONE/COL	8858838	N/A	2017/12/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8857576	N/A	2017/12/08	
Nitrite (N) (low level)	TRAA/COL	8857577	N/A	2017/12/08	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8856675	N/A	2017/12/09	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/12/08	
pH Water	AT/ALK	8858822	2017/12/11	2017/12/11	
Sulphate - Low Level	KONE/COL	8859181	N/A	2017/12/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8857688	2017/12/09	2017/12/09	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8857690	2017/12/09	2017/12/09	
Total Suspended Solids-Low Level	BAL/BAL	8857174	2017/12/08	2017/12/11	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SQ3760
Sample ID: KZ-37
Matrix: Water

Collected: 2017/12/05
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8859931	2017/12/11	2017/12/11	Name Redacted
Alkalinity - Low Level	AT/ALK	8858829	2017/12/11	2017/12/11	
Chloride - Low Level	KONE/COL	8859185	N/A	2017/12/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8858638	N/A	2017/12/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8858641	N/A	2017/12/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8858514	N/A	2017/12/11	
Conductance - Low Level	AT/ALK	8858824	2017/12/11	2017/12/11	
Fluoride - Low Level	ISE/ISE	8858847	N/A	2017/12/11	
Hardness Total (calculated as CaCO3)	CALC	8856168	N/A	2017/12/13	
Hardness (calculated as CaCO3)	CALC	8856492	N/A	2017/12/13	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8858297	N/A	2017/12/11	
Mercury (Total-LowLevel) by CVAF	CV/AF	8858606	2017/12/11	2017/12/11	
Ion Balance (as Cations/Anions Ratio)	CALC	8856939	N/A	2017/12/13	
Ion Balance	CALC	8856940	N/A	2017/12/13	
Sum of cations, anions	CALC	8856942	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8856511	N/A	2017/12/13	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8857519	N/A	2017/12/13	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8856674	N/A	2017/12/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8857517	N/A	2017/12/13	
Ammonia-N Low Level (Preserved)	KONE/COL	8858838	N/A	2017/12/11	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8857576	N/A	2017/12/08	
Nitrite (N) (low level)	TRAA/COL	8857577	N/A	2017/12/08	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8856675	N/A	2017/12/09	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2017/12/08	
pH Water	AT/ALK	8858822	2017/12/11	2017/12/11	
Sulphate - Low Level	KONE/COL	8859186	N/A	2017/12/11	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8862738	2017/12/14	2017/12/14	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8857690	2017/12/09	2017/12/09	
Total Suspended Solids-Low Level	BAL/BAL	8857174	2017/12/08	2017/12/11	

Maxxam ID: SQ3761
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/12/07
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8859931	2017/12/11	2017/12/11	Name Redacted
Alkalinity - Low Level	AT/ALK	8858829	2017/12/11	2017/12/11	
Chloride - Low Level	KONE/COL	8859185	N/A	2017/12/11	
Cyanide SAD (strong acid dissociable)	TECH/COL	8858638	N/A	2017/12/11	
Cyanide WAD (weak acid dissociable)	TECH/COL	8858641	N/A	2017/12/11	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8858514	N/A	2017/12/11	
Conductance - Low Level	AT/ALK	8858824	2017/12/11	2017/12/11	
Fluoride - Low Level	ISE/ISE	8858847	N/A	2017/12/11	
Hardness Total (calculated as CaCO3)	CALC	8856168	N/A	2017/12/13	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

TEST SUMMARY

Maxxam ID: SQ3761
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/12/07
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst	
Hardness (calculated as CaCO3)	CALC	8856492	N/A	2017/12/13	Name Redacted	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8858297	N/A	2017/12/11		
Mercury (Total-LowLevel) by CVAF	CV/AF	8858606	2017/12/11	2017/12/11		
Ion Balance (as Cations/Anions Ratio)	CALC	8856939	N/A	2017/12/13		
Ion Balance	CALC	8856940	N/A	2017/12/13		
Sum of cations, anions	CALC	8856942	N/A	2017/12/13		
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8856511	N/A	2017/12/13		
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8857519	N/A	2017/12/12		
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8856674	N/A	2017/12/13		
Elements by ICPMS Low Level (total)	ICP/CRCM	8857517	N/A	2017/12/13		
Ammonia-N Low Level (Preserved)	KONE/COL	8858838	N/A	2017/12/11		
Nitrate+Nitrite (N) (low level)	TRAA/COL	8857576	N/A	2017/12/08		
Nitrite (N) (low level)	TRAA/COL	8857577	N/A	2017/12/08		
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8856675	N/A	2017/12/09		
pH Water	AT/ALK	8858822	2017/12/11	2017/12/11		
Sulphate - Low Level	KONE/COL	8859186	N/A	2017/12/11		
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8857689	2017/12/09	2017/12/09		
Total Phosphorus - Low Level Unpreserved	KONE/COL	8857690	2017/12/09	2017/12/09		
Total Suspended Solids-Low Level	BAL/BAL	8857174	2017/12/08	2017/12/11		

Maxxam ID: SQ3761 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2017/12/07
Shipped:
Received: 2017/12/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst	
Mercury (Total-LowLevel) by CVAF	CV/AF	8858606	2017/12/11	2017/12/11	Name Redacted	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8857519	N/A	2017/12/12		
Elements by ICPMS Low Level (total)	ICP/CRCM	8857517	N/A	2017/12/13		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	5.3°C
Package 2	3.3°C
Package 3	3.7°C

Sample SQ3748 [KZ-6] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved.

Sample SQ3749 [KZ-9] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved.

Sample SQ3751 [KZ-15] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved.

Sample SQ3752 [KZ-16] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved.

Sample SQ3753 [KZ-17] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved.

Sample SQ3754 [KZ-18] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved.

Sample SQ3755 [KZ-19] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved.

Sample SQ3756 [KZ-21] : Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved.

Sample SQ3757 [KZ-22] : Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved.

Sample SQ3758 [KZ-26] : Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved.

Sample SQ3759 [KZ-28] : Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

Sample SQ3760 [KZ-37] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved.

Sample SQ3747, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample SQ3748, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample SQ3750, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample SQ3752, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample SQ3755, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample SQ3757, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8857174	Total Suspended Solids	2017/12/11			100	80 - 120	<1.0	mg/L		
8857517	Total Aluminum (Al)	2017/12/13	113	80 - 120	112	80 - 120	<0.00050	mg/L	NC	20
8857517	Total Antimony (Sb)	2017/12/13	106	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8857517	Total Arsenic (As)	2017/12/13	109	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8857517	Total Barium (Ba)	2017/12/13	NC	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8857517	Total Beryllium (Be)	2017/12/13	110	80 - 120	108	80 - 120	<0.000010	mg/L	NC	20
8857517	Total Bismuth (Bi)	2017/12/13	102	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8857517	Total Boron (B)	2017/12/13	111	80 - 120	112	80 - 120	<0.010	mg/L	NC	20
8857517	Total Cadmium (Cd)	2017/12/13	106	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8857517	Total Chromium (Cr)	2017/12/13	102	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
8857517	Total Cobalt (Co)	2017/12/13	99	80 - 120	95	80 - 120	<0.0000050	mg/L	NC	20
8857517	Total Copper (Cu)	2017/12/13	99	80 - 120	96	80 - 120	<0.000050	mg/L	NC	20
8857517	Total Iron (Fe)	2017/12/13	104	80 - 120	106	80 - 120	<0.0010	mg/L	NC	20
8857517	Total Lead (Pb)	2017/12/13	101	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8857517	Total Lithium (Li)	2017/12/13	109	80 - 120	107	80 - 120	<0.00050	mg/L	NC	20
8857517	Total Manganese (Mn)	2017/12/13	106	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
8857517	Total Molybdenum (Mo)	2017/12/13	109	80 - 120	108	80 - 120	<0.000050	mg/L	NC	20
8857517	Total Nickel (Ni)	2017/12/13	101	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8857517	Total Phosphorus (P)	2017/12/13					<0.0020	mg/L	NC	20
8857517	Total Selenium (Se)	2017/12/13	104	80 - 120	100	80 - 120	<0.000040	mg/L	NC	20
8857517	Total Silicon (Si)	2017/12/13					<0.050	mg/L	NC	20
8857517	Total Silver (Ag)	2017/12/13	113	80 - 120	107	80 - 120	<0.0000050	mg/L	NC	20
8857517	Total Strontium (Sr)	2017/12/13	NC	80 - 120	103	80 - 120	<0.000050	mg/L	NC	20
8857517	Total Thallium (Tl)	2017/12/13	105	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8857517	Total Tin (Sn)	2017/12/13	105	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8857517	Total Titanium (Ti)	2017/12/13	102	80 - 120	95	80 - 120	<0.00050	mg/L	NC	20
8857517	Total Uranium (U)	2017/12/13	103	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8857517	Total Vanadium (V)	2017/12/13	103	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8857517	Total Zinc (Zn)	2017/12/13	NC	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
8857517	Total Zirconium (Zr)	2017/12/13	112	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8857519	Dissolved Aluminum (Al)	2017/12/12	113	80 - 120	107	80 - 120	<0.00050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8857519	Dissolved Antimony (Sb)	2017/12/12	106	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8857519	Dissolved Arsenic (As)	2017/12/12	107	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8857519	Dissolved Barium (Ba)	2017/12/12	NC	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8857519	Dissolved Beryllium (Be)	2017/12/12	107	80 - 120	103	80 - 120	<0.000010	mg/L	NC	20
8857519	Dissolved Bismuth (Bi)	2017/12/12	99	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8857519	Dissolved Boron (B)	2017/12/12	107	80 - 120	106	80 - 120	<0.010	mg/L	NC	20
8857519	Dissolved Cadmium (Cd)	2017/12/12	104	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8857519	Dissolved Chromium (Cr)	2017/12/12	100	80 - 120	97	80 - 120	<0.00010	mg/L	NC	20
8857519	Dissolved Cobalt (Co)	2017/12/12	97	80 - 120	95	80 - 120	<0.0000050	mg/L	NC	20
8857519	Dissolved Copper (Cu)	2017/12/12	97	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8857519	Dissolved Iron (Fe)	2017/12/12	102	80 - 120	101	80 - 120	<0.0010	mg/L	NC	20
8857519	Dissolved Lead (Pb)	2017/12/12	98	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8857519	Dissolved Lithium (Li)	2017/12/12	105	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8857519	Dissolved Manganese (Mn)	2017/12/12	103	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
8857519	Dissolved Molybdenum (Mo)	2017/12/12	110	80 - 120	105	80 - 120	<0.000050	mg/L	NC	20
8857519	Dissolved Nickel (Ni)	2017/12/12	99	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8857519	Dissolved Phosphorus (P)	2017/12/12					<0.0020	mg/L	NC	20
8857519	Dissolved Selenium (Se)	2017/12/12	103	80 - 120	98	80 - 120	<0.000040	mg/L	NC	20
8857519	Dissolved Silicon (Si)	2017/12/12					<0.050	mg/L	NC	20
8857519	Dissolved Silver (Ag)	2017/12/12	109	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8857519	Dissolved Strontium (Sr)	2017/12/12	NC	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8857519	Dissolved Thallium (Tl)	2017/12/12	101	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8857519	Dissolved Tin (Sn)	2017/12/12	104	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8857519	Dissolved Titanium (Ti)	2017/12/12	104	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8857519	Dissolved Uranium (U)	2017/12/12	101	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8857519	Dissolved Vanadium (V)	2017/12/12	103	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
8857519	Dissolved Zinc (Zn)	2017/12/12	NC	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8857519	Dissolved Zirconium (Zr)	2017/12/12	106	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8857576	Nitrate plus Nitrite (N)	2017/12/08	103	80 - 120	104	80 - 120	<0.0020	mg/L	3.6	25
8857577	Nitrite (N)	2017/12/08	102	80 - 120	97	80 - 120	<0.0020	mg/L	NC	25
8857688	Dissolved Phosphorus (P)	2017/12/09			103	80 - 120	<0.0020	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8857689	Dissolved Phosphorus (P)	2017/12/09			107	80 - 120	<0.0020	mg/L		
8857690	Total Phosphorus (P)	2017/12/09	106	80 - 120	107	80 - 120	<0.0020	mg/L	NC	20
8858297	Dissolved Mercury (Hg)	2017/12/11	98	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8858514	Dissolved Organic Carbon (C)	2017/12/11	104	80 - 120	110	80 - 120	<0.50	mg/L	2.6	20
8858530	Total Mercury (Hg)	2017/12/11	94	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8858606	Total Mercury (Hg)	2017/12/11	94	80 - 120	94	80 - 120	<0.0000020	mg/L	NC	20
8858638	Strong Acid Dissoc. Cyanide (CN)	2017/12/11	99	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8858641	Weak Acid Dissoc. Cyanide (CN)	2017/12/11	107	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8858822	pH	2017/12/11			101	97 - 103			0.50	20
8858824	Conductivity	2017/12/11			99	80 - 120	<1.0	uS/cm	0.74	20
8858829	Alkalinity (PP as CaCO3)	2017/12/11					<0.50	mg/L	NC	20
8858829	Alkalinity (Total as CaCO3)	2017/12/11	NC	80 - 120	102	80 - 120	0.62, RDL=0.50	mg/L	3.0	20
8858829	Bicarbonate (HCO3)	2017/12/11					0.76, RDL=0.50	mg/L	3.0	20
8858829	Carbonate (CO3)	2017/12/11					<0.50	mg/L	NC	20
8858829	Hydroxide (OH)	2017/12/11					<0.50	mg/L	NC	20
8858838	Total Ammonia (N)	2017/12/11	98	80 - 120	106	80 - 120	<0.0050	mg/L	NC	20
8858847	Fluoride (F)	2017/12/11	99	80 - 120	100	80 - 120	<0.010	mg/L	1.5	20
8859180	Dissolved Chloride (Cl)	2017/12/11			98	80 - 120	0.75, RDL=0.50	mg/L		
8859181	Dissolved Sulphate (SO4)	2017/12/11			96	80 - 120	<0.50	mg/L		
8859185	Dissolved Chloride (Cl)	2017/12/11	116	80 - 120	98	80 - 120	<0.50	mg/L	8.0	20
8859186	Dissolved Sulphate (SO4)	2017/12/11	NC	80 - 120	96	80 - 120	<0.50	mg/L	0.44	20
8859931	Acidity (pH 4.5)	2017/12/11					<1.0	mg/L	NC	20
8859931	Acidity (pH 8.3)	2017/12/11			104	80 - 120	<1.0	mg/L	10	20
8860653	Dissolved Chloride (Cl)	2017/12/12			105	80 - 120	0.57, RDL=0.50	mg/L		
8860654	Dissolved Sulphate (SO4)	2017/12/12			98	80 - 120	<0.50	mg/L		
8862534	Dissolved Aluminum (Al)	2017/12/14	101	80 - 120	108	80 - 120	<0.00050	mg/L		
8862534	Dissolved Cadmium (Cd)	2017/12/14	99	80 - 120	102	80 - 120	<0.0000050	mg/L		
8862534	Dissolved Copper (Cu)	2017/12/14	95	80 - 120	102	80 - 120	<0.000050	mg/L		
8862534	Dissolved Lead (Pb)	2017/12/14	96	80 - 120	99	80 - 120	<0.0000050	mg/L	4.4	20
8862534	Dissolved Zinc (Zn)	2017/12/14	100	80 - 120	104	80 - 120	<0.00010	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8862738	Dissolved Phosphorus (P)	2017/12/14	96	80 - 120	107	80 - 120	<0.0020	mg/L	10	20

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B7A9078
Report Date: 2017/12/15

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: CH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Signature Redacted

Name Redacted Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08448899

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	x Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	☐ Same Day ☐ 2 Days ☐ 1 Day ☐ 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature	Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
☐ BC CSR Soil ☐ BC CSR Water	☐ Return Cooler	
☐ CCME (Specify) ☐ Other (Specify)	☐ Ship Sample Bottles (Please Specify)	
☐ Drinking Water ☐ BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		6-Dec-17	10:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3	KZ-6		5-Dec-17	14:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
4	KZ-9		5-Dec-17	13:05	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	KZ-13		6-Dec-17	11:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6	KZ-15		5-Dec-17	10:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
7	KZ-16		5-Dec-17	11:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
8	KZ-17		5-Dec-17	11:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
9	KZ-18		5-Dec-17	13:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
10	KZ-19		5-Dec-17	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	

LABORATORY USE ONLY

CUSTODY SEAL (Y) N Present	CUSTODY SEAL (Y) N Intact	COOLER TEMPERATURES
✓	✓	5,6,6
✓	✓	4,5,4
✓	✓	3,5,7

COOLING MEDIA PRESENT (Y) / N

COMMENTS

RECEIVED IN WHITEHORSE

BY: Signature Redacted

2017-12-07

TEMP: 4 1 6 16
4 3 3
4 3 4

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	12/7/2017	9:00	Signature Redacted	2017/12/08	10:25

B7A9078_COC

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 08448900

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-21		4-Dec-17	14:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
2	KZ-22		4-Dec-17	13:55	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3	KZ-26		4-Dec-17	12:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
4	KZ-28		4-Dec-17	12:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	KZ-37		5-Dec-17	12:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6	Trip Blank		n/a	n/a	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
7																			
8																			
9																			
10																			

LABORATORY USE ONLY

CUSTODY SEAL (Y) N Present	CUSTODY SEAL (Y) N Intact	COOLER TEMPERATURES
✓	✓	5,6,6
✓	✓	4,5,4
✓	✓	3,7,5

COOLING MEDIA PRESENT (Y) / N

COMMENTS

RECEIVED IN WHITEHORSE

Signature Redacted

BY:

2017 -12- 07

TEMP: 4 1 6 16

4 3 3

4 3 4

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	12/7/2017	9:00	Signature Redacted	2017/12/08	10:25

B7A9078_COC

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08449372, 08449373

Attention: KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2018/01/19
Report #: R2504026
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B802746
Received: 2018/01/11, 11:00

Sample Matrix: Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	14	2018/01/12	2018/01/12	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Low Level	14	2018/01/12	2018/01/13	BBY6SOP-00026	SM 22 2320 B m
Chloride - Low Level	14	N/A	2018/01/15	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	14	N/A	2018/01/15	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	14	N/A	2018/01/15	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	13	N/A	2018/01/15	BBY6SOP-00003	SM 22 5310 C m
Carbon (DOC) - field filtered/preserved (1)	1	N/A	2018/01/18	BBY6SOP-00003	SM 22 5310 C m
Conductance - Low Level	14	2018/01/12	2018/01/13	BBY6SOP-00026	SM 22 2510 B m
Fluoride - Low Level	14	N/A	2018/01/16	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3) (2)	14	N/A	2018/01/15	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	14	N/A	2018/01/15	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	14	N/A	2018/12/01	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	14	2018/01/12	2018/12/01	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance (as Cations/Anions Ratio)	14	N/A	2018/01/16	BBY WI-00033	Auto Calc
Ion Balance	14	N/A	2018/01/16	BBY WI-00033	Auto Calc
Sum of cations, anions	14	N/A	2018/01/15	BBY WI-00033	Auto Calc
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	14	N/A	2018/01/15	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (dissolved)	14	N/A	2018/01/12	BBY7SOP-00002	EPA 6020b R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	14	N/A	2018/01/15	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (total)	14	N/A	2018/01/12	BBY7SOP-00002	EPA 6020b R2 m
Ammonia-N Low Level (Preserved)	14	N/A	2018/01/16	BBY6SOP-00009	EPA 350.1 m
Nitrate+Nitrite (N) (low level)	13	N/A	2018/01/12	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrate+Nitrite (N) (low level)	1	N/A	2018/01/19	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	14	N/A	2018/01/12	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N) Low Level Calc	14	N/A	2018/01/16	BBY WI-00033	Auto Calc
Filter and HNO3 Preserve for Metals	12	N/A	2018/01/15	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	1	N/A	2018/12/01	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (3)	14	2018/01/12	2018/01/13	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate - Low Level	14	N/A	2018/01/15	BBY6SOP-00017	SM 22 4500-SO42- E m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08449372, 08449373

Attention: KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2018/01/19
Report #: R2504026
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B802746
Received: 2018/01/11, 11:00

Sample Matrix: Water
Samples Received: 14

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Phosphorus-P (LL Tot, dissolved) - UF/UP	14	2018/01/12	2018/01/13	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	14	2018/01/12	2018/01/13	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	14	2018/01/15	2018/01/16	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(3) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08449372, 08449373

Attention: KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2018/01/19
Report #: R2504026
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B802746
Received: 2018/01/11, 11:00

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name,Phone,Fax Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SU4665			SU4666		SU4667		
Sampling Date		2018/01/09 13:50			2018/01/09 12:30		2018/01/09 11:10		
COC Number		08449372			08449372		08449372		
	UNITS	KZ-2	RDL	QC Batch	KZ-6	RDL	KZ-9	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	2.9	N/A	8883540	3.6	N/A	4.3	N/A	8883540
Cation Sum	meq/L	2.8	N/A	8883540	3.3	N/A	4.0	N/A	8883540
Filter and HNO3 Preservation	N/A	FIELD		ONSITE	FIELD		FIELD		ONSITE
Ion Balance	N/A	0.94	0.010	8883538	0.93	0.010	0.93	0.010	8883538
Ion Balance (% Difference)	%	3.0	N/A	8883539	3.8	N/A	3.9	N/A	8883539
Nitrate (N)	mg/L	0.181	0.0020	8883036	0.184	0.0020	0.182	0.0020	8883036
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8884997	<0.00050	0.00050	<0.00050	0.00050	8884997
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8884999	<0.00050	0.00050	<0.00050	0.00050	8884999
Fluoride (F)	mg/L	0.046	0.010	8885689	0.074	0.010	0.088	0.010	8885689
Dissolved Organic Carbon (C)	mg/L	1.08	0.50	8884695	1.43	0.50	1.95	0.50	8884694
Acidity (pH 4.5)	mg/L	<1.0	1.0	8883943	<1.0	1.0	<1.0	1.0	8883943
Alkalinity (Total as CaCO3)	mg/L	80.2	0.50	8884019	154	0.50	176	0.50	8884019
Acidity (pH 8.3)	mg/L	<1.0	1.0	8883943	<1.0	1.0	10.5	1.0	8883943
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8884019	<0.50	0.50	<0.50	0.50	8884019
Bicarbonate (HCO3)	mg/L	97.8	0.50	8884019	188	0.50	215	0.50	8884019
Carbonate (CO3)	mg/L	<0.50	0.50	8884019	<0.50	0.50	<0.50	0.50	8884019
Hydroxide (OH)	mg/L	<0.50	0.50	8884019	<0.50	0.50	<0.50	0.50	8884019
Anions									
Dissolved Sulphate (SO4)	mg/L	63.9	0.50	8885966	23.8	0.50	36.0	0.50	8885966
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8885963	<0.50	0.50	<0.50	0.50	8885963
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0029	0.0020	8883921	0.0032	0.0020	0.0052	0.0020	8883921
Total Ammonia (N)	mg/L	<0.0050	0.0050	8885681	<0.0050	0.0050	0.015	0.0050	8885681
Nitrate plus Nitrite (N)	mg/L	0.181	0.0020	8884301	0.184	0.0020	0.182	0.0020	8884301
Nitrite (N)	mg/L	<0.0020	0.0020	8884302	<0.0020	0.0020	<0.0020	0.0020	8884302
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8884285	0.0037	0.0020	0.0047	0.0020	8884285
Physical Properties									
Conductivity	uS/cm	293	1.0	8884732	329	1.0	396	1.0	8884732
pH	pH	8.03		8884018	8.23		7.96		8884018

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SU4665			SU4666		SU4667		
Sampling Date		2018/01/09 13:50			2018/01/09 12:30		2018/01/09 11:10		
COC Number		08449372			08449372		08449372		
	UNITS	KZ-2	RDL	QC Batch	KZ-6	RDL	KZ-9	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	<1.0	1.0	8883947	5.1 (1)	1.1	2.0	1.0	8883947

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SU4668			SU4669		SU4670		
Sampling Date		2018/01/08 14:45			2018/01/08 15:20		2018/01/08 15:00		
COC Number		08449372			08449372		08449372		
	UNITS	KZ-15	RDL	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	5.6	N/A	8883540	5.9	8883540	5.8	N/A	8883540
Cation Sum	meq/L	5.3	N/A	8883540	5.6	8883540	5.7	N/A	8883540
Filter and HNO3 Preservation	N/A	FIELD		ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.95	0.010	8883538	0.95	8883538	0.99	0.010	8883538
Ion Balance (% Difference)	%	2.7	N/A	8883539	2.8	8883539	0.68	N/A	8883539
Nitrate (N)	mg/L	0.230	0.0020	8883036	0.270	8883036	0.288	0.0020	8883036
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8884997	<0.00050	8884997	<0.00050	0.00050	8884997
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8884999	<0.00050	8884999	<0.00050	0.00050	8884999
Fluoride (F)	mg/L	0.110	0.010	8885689	0.085	8885689	0.072	0.010	8885689
Dissolved Organic Carbon (C)	mg/L	1.73	0.50	8884694	1.40	8884694	1.71	0.50	8884694
Acidity (pH 4.5)	mg/L	<1.0	1.0	8883943	<1.0	8883943	<1.0	1.0	8883943
Alkalinity (Total as CaCO3)	mg/L	237	0.50	8884023	249	8884023	249	0.50	8884019
Acidity (pH 8.3)	mg/L	7.2	1.0	8883943	14.6	8883943	8.6	1.0	8883943
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8884023	<0.50	8884023	<0.50	0.50	8884019
Bicarbonate (HCO3)	mg/L	289	0.50	8884023	304	8884023	304	0.50	8884019
Carbonate (CO3)	mg/L	<0.50	0.50	8884023	<0.50	8884023	<0.50	0.50	8884019
Hydroxide (OH)	mg/L	<0.50	0.50	8884023	<0.50	8884023	<0.50	0.50	8884019
Anions									
Dissolved Sulphate (SO4)	mg/L	38.1	0.50	8885966	41.5	8885966	38.4	0.50	8885966
Dissolved Chloride (Cl)	mg/L	0.62	0.50	8885963	<0.50	8885963	<0.50	0.50	8885963
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0049	0.0020	8883921	0.0028	8883921	0.0030	0.0020	8883921
Total Ammonia (N)	mg/L	0.029	0.0050	8885681	0.023	8885681	<0.0050	0.0050	8885681
Nitrate plus Nitrite (N)	mg/L	0.230	0.0020	8884301	0.270	8884301	0.288	0.0020	8884301
Nitrite (N)	mg/L	<0.0020	0.0020	8884302	<0.0020	8884302	<0.0020	0.0020	8884302
Total Phosphorus (P)	mg/L	0.0040	0.0020	8884285	0.0041	8883923	0.0038	0.0020	8883923
Physical Properties									
Conductivity	uS/cm	502	1.0	8884972	530	8884972	525	1.0	8884732
pH	pH	8.11		8884020	7.95	8884020	8.09		8884018

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SU4668			SU4669		SU4670		
Sampling Date		2018/01/08 14:45			2018/01/08 15:20		2018/01/08 15:00		
COC Number		08449372			08449372		08449372		
	UNITS	KZ-15	RDL	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	<1.1 (1)	1.1	8883947	<1.0	8883947	1.9	1.0	8883947

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SU4671			SU4672		SU4680		
Sampling Date		2018/01/09 11:45			2018/01/08 11:00		2018/01/07 13:45		
COC Number		08449372			08449372		08449373		
	UNITS	KZ-18	RDL	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	4.6	N/A	8883540	0.017	8883540	8.9	N/A	8883540
Cation Sum	meq/L	4.3	N/A	8883540	0.0058	8883540	8.2	N/A	8883540
Filter and HNO3 Preservation	N/A	FIELD		ONSITE	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.94	0.010	8883538	0.34	8883538	0.92	0.010	8883538
Ion Balance (% Difference)	%	3.2	N/A	8883539	49	8883539	3.9	N/A	8883539
Nitrate (N)	mg/L	0.242	0.0020	8883036	<0.0020	8883036	0.214	0.0020	8883036
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8884997	<0.00050	8884997	<0.00050	0.00050	8884997
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8884999	<0.00050	8884999	<0.00050	0.00050	8884999
Fluoride (F)	mg/L	0.077	0.010	8885689	<0.010	8885689	0.270	0.010	8885689
Dissolved Organic Carbon (C)	mg/L	2.06	0.50	8884694	0.81	8884694	2.67	0.50	8884694
Acidity (pH 4.5)	mg/L	<1.0	1.0	8883943	<1.0	8883943	<1.0	1.0	8883943
Alkalinity (Total as CaCO3)	mg/L	202	0.50	8884019	0.83	8884019	389	0.50	8884023
Acidity (pH 8.3)	mg/L	5.3	1.0	8883943	<1.0	8883943	18.1	1.0	8883943
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8884019	<0.50	8884019	<0.50	0.50	8884023
Bicarbonate (HCO3)	mg/L	247	0.50	8884019	1.01	8884019	474	0.50	8884023
Carbonate (CO3)	mg/L	<0.50	0.50	8884019	<0.50	8884019	<0.50	0.50	8884023
Hydroxide (OH)	mg/L	<0.50	0.50	8884019	<0.50	8884019	<0.50	0.50	8884023
Anions									
Dissolved Sulphate (SO4)	mg/L	23.7	0.50	8885966	<0.50	8885966	50.2	0.50	8885966
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8885963	<0.50	8885963	0.56	0.50	8885963
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0495	0.0020	8883921	0.0023	8883921	0.0069	0.0020	8883921
Total Ammonia (N)	mg/L	<0.0050	0.0050	8885681	<0.0050	8885681	0.22	0.0050	8885681
Nitrate plus Nitrite (N)	mg/L	0.242	0.0020	8884301	<0.0020	8889271	0.214	0.0020	8884301
Nitrite (N)	mg/L	<0.0020	0.0020	8884302	<0.0020	8884302	<0.0020	0.0020	8884302
Total Phosphorus (P)	mg/L	0.0507	0.0020	8884285	<0.0020	8883923	0.0131	0.0020	8883923
Physical Properties									
Conductivity	uS/cm	408	1.0	8884732	1.3	8884732	762	1.0	8884972
pH	pH	8.10		8884018	5.71	8884018	8.10		8884020

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SU4671			SU4672		SU4680		
Sampling Date		2018/01/09 11:45			2018/01/08 11:00		2018/01/07 13:45		
COC Number		08449372			08449372		08449373		
	UNITS	KZ-18	RDL	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	<1.1 (1)	1.1	8883947	<1.0	8883947	2.3	1.0	8883947

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SU4681	SU4682		SU4683		SU4684		
Sampling Date		2018/01/08 12:45	2018/01/07 15:45		2018/01/07 13:00		2018/01/09 10:50		
COC Number		08449373	08449373		08449373		08449373		
	UNITS	KZ-22	KZ-26	QC Batch	KZ-28	RDL	KZ-37	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	7.4	6.5	8883540	6.5	N/A	4.3	N/A	8883540
Cation Sum	meq/L	7.4	6.2	8883540	6.4	N/A	4.2	N/A	8883540
Filter and HNO3 Preservation	N/A	FIELD	FIELD	ONSITE	FIELD		FIELD		ONSITE
Ion Balance	N/A	1.0	0.96	8883538	1.0	0.010	0.97	0.010	8883538
Ion Balance (% Difference)	%	0.17	2.2	8883539	0.097	N/A	1.4	N/A	8883539
Nitrate (N)	mg/L	0.251	0.272	8883036	0.270	0.0020	0.197	0.0020	8883036
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	8884997	<0.00050	0.00050	<0.00050	0.00050	8884997
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	8884999	<0.00050	0.00050	<0.00050	0.00050	8884999
Fluoride (F)	mg/L	0.160	0.120	8885689	0.120	0.010	0.094	0.010	8885689
Dissolved Organic Carbon (C)	mg/L	1.87	2.37	8884694	2.53	0.50	0.60	0.50	8884695
Acidity (pH 4.5)	mg/L	<1.0	<1.0	8883943	<1.0	1.0	<1.0	1.0	8883943
Alkalinity (Total as CaCO3)	mg/L	314	275	8884019	272	0.50	178	0.50	8884019
Acidity (pH 8.3)	mg/L	16.8	<1.0	8883943	1.3	1.0	9.4	1.0	8883943
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	8884019	<0.50	0.50	<0.50	0.50	8884019
Bicarbonate (HCO3)	mg/L	383	335	8884019	331	0.50	217	0.50	8884019
Carbonate (CO3)	mg/L	<0.50	<0.50	8884019	<0.50	0.50	<0.50	0.50	8884019
Hydroxide (OH)	mg/L	<0.50	<0.50	8884019	<0.50	0.50	<0.50	0.50	8884019
Anions									
Dissolved Sulphate (SO4)	mg/L	52.5	48.1	8885966	48.6	0.50	33.0	0.50	8885966
Dissolved Chloride (Cl)	mg/L	<0.50	<0.50	8885963	<0.50	0.50	<0.50	0.50	8885963
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0046	0.0039	8883921	0.0043	0.0020	0.0106	0.0020	8883921
Total Ammonia (N)	mg/L	0.10	0.026	8885681	0.035	0.0050	0.017	0.0050	8885681
Nitrate plus Nitrite (N)	mg/L	0.251	0.272	8884301	0.270	0.0020	0.197	0.0020	8884301
Nitrite (N)	mg/L	<0.0020	<0.0020	8884302	<0.0020	0.0020	<0.0020	0.0020	8884302
Total Phosphorus (P)	mg/L	0.0064	0.0036	8884285	0.0040	0.0020	0.0154	0.0020	8884285
Physical Properties									
Conductivity	uS/cm	653	575	8884732	572	1.0	399	1.0	8884732
pH	pH	7.97	8.28	8884018	8.28		7.97		8884018

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SU4681	SU4682		SU4683		SU4684		
Sampling Date		2018/01/08 12:45	2018/01/07 15:45		2018/01/07 13:00		2018/01/09 10:50		
COC Number		08449373	08449373		08449373		08449373		
	UNITS	KZ-22	KZ-26	QC Batch	KZ-28	RDL	KZ-37	RDL	QC Batch
Physical Properties									
Total Suspended Solids	mg/L	1.2	1.0	8883947	<1.0	1.0	2.1 (1)	1.1	8883947

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SU4685		
Sampling Date		2018/01/11 11:00		
COC Number		08449373		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Anion Sum	meq/L	0.018	N/A	8883540
Cation Sum	meq/L	0.0015	N/A	8883540
Ion Balance	N/A	0.085	0.010	8883538
Ion Balance (% Difference)	%	84	N/A	8883539
Nitrate (N)	mg/L	<0.0020	0.0020	8883036
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8884997
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8884999
Fluoride (F)	mg/L	<0.010	0.010	8885689
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8886594
Acidity (pH 4.5)	mg/L	<1.0	1.0	8883943
Alkalinity (Total as CaCO3)	mg/L	0.88	0.50	8884019
Acidity (pH 8.3)	mg/L	<1.0	1.0	8883943
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8884019
Bicarbonate (HCO3)	mg/L	1.07	0.50	8884019
Carbonate (CO3)	mg/L	<0.50	0.50	8884019
Hydroxide (OH)	mg/L	<0.50	0.50	8884019
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8885966
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8885963
Nutrients				
Dissolved Phosphorus (P)	mg/L	0.0020	0.0020	8883921
Total Ammonia (N)	mg/L	<0.0050	0.0050	8885681
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	8884301
Nitrite (N)	mg/L	<0.0020	0.0020	8884302
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8884285
Physical Properties				
Conductivity	uS/cm	1.4	1.0	8884732
pH	pH	5.81		8884018
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8883947
RDL = Reportable Detection Limit N/A = Not Applicable				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SU4665	SU4666	SU4667		SU4668		
Sampling Date		2018/01/09 13:50	2018/01/09 12:30	2018/01/09 11:10		2018/01/08 14:45		
COC Number		08449372	08449372	08449372		08449372		
	UNITS	KZ-2	KZ-6	KZ-9	QC Batch	KZ-15	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO3)	mg/L	134	164	192	8883345	259	0.50	8883345
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8883669	<0.0000020	0.0000020	8883669
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00300 (1)	0.00172	0.00179	8883011	0.00975 (1)	0.00050	8886267
Dissolved Antimony (Sb)	mg/L	0.000037	<0.000020	0.000040	8883011	0.000046	0.000020	8883011
Dissolved Arsenic (As)	mg/L	0.000083	0.000059	0.000164	8883011	0.000300	0.000020	8883011
Dissolved Barium (Ba)	mg/L	0.0709	0.0460	0.0954	8883011	0.0921	0.000020	8883011
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8883011	<0.000010	0.000010	8883011
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8883011	<0.0000050	0.0000050	8883011
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	8883011	<0.010	0.010	8883011
Dissolved Cadmium (Cd)	mg/L	0.000225	0.0000212	0.0000693	8883011	0.0000549	0.0000050	8883011
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8883011	<0.00010	0.00010	8883011
Dissolved Cobalt (Co)	mg/L	0.0000075	0.0000066	0.000134	8883011	0.0000311	0.0000050	8883011
Dissolved Copper (Cu)	mg/L	0.000750 (1)	0.000195	0.000355 (1)	8883011	0.000390 (1)	0.000050	8883011
Dissolved Iron (Fe)	mg/L	<0.0010	0.0034	0.168	8883011	0.0079	0.0010	8883011
Dissolved Lead (Pb)	mg/L	0.0000400 (1)	0.0000100	0.0000175	8883011	0.0000380 (1)	0.0000050	8886267
Dissolved Lithium (Li)	mg/L	0.00141	0.00082	0.00439	8883011	0.00431	0.00050	8883011
Dissolved Manganese (Mn)	mg/L	0.000101	0.000315	0.104	8883011	0.0395	0.000050	8883011
Dissolved Molybdenum (Mo)	mg/L	0.000720	0.000592	0.000648	8883011	0.00117	0.000050	8883011
Dissolved Nickel (Ni)	mg/L	0.000278	0.000139	0.000492	8883011	0.000894	0.000020	8883011
Dissolved Phosphorus (P)	mg/L	0.0043	0.0081	0.0023	8883011	0.0035	0.0020	8883011
Dissolved Selenium (Se)	mg/L	0.00237	0.00114	0.00113	8883011	0.00158	0.000040	8883011
Dissolved Silicon (Si)	mg/L	2.09	2.77	2.93	8883011	3.62	0.050	8883011
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8883011	<0.0000050	0.0000050	8883011
Dissolved Strontium (Sr)	mg/L	0.133	0.151	0.215	8883011	0.222	0.000050	8883011
Dissolved Thallium (Tl)	mg/L	0.0000031	<0.0000020	<0.0000020	8883011	<0.0000020	0.0000020	8883011
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8883011	<0.00020	0.00020	8883011
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8883011	0.00073	0.00050	8883011
Dissolved Uranium (U)	mg/L	0.00494	0.00123	0.00155	8883011	0.00444	0.0000020	8883011
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8883011	<0.00020	0.00020	8883011

RDL = Reportable Detection Limit
(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SU4665	SU4666	SU4667		SU4668		
Sampling Date		2018/01/09 13:50	2018/01/09 12:30	2018/01/09 11:10		2018/01/08 14:45		
COC Number		08449372	08449372	08449372		08449372		
	UNITS	KZ-2	KZ-6	KZ-9	QC Batch	KZ-15	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0230	0.00083	0.0157	8883011	0.00808	0.00010	8883011
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8883011	<0.00010 (1)	0.00010	8883011
Dissolved Calcium (Ca)	mg/L	42.9	53.9	63.0	8883465	75.5	0.050	8883465
Dissolved Magnesium (Mg)	mg/L	6.45	7.03	8.44	8883465	17.1	0.050	8883465
Dissolved Potassium (K)	mg/L	2.17	0.901	1.74	8883465	1.36	0.050	8883465
Dissolved Sodium (Na)	mg/L	1.09	0.830	1.68	8883465	1.53	0.050	8883465
Dissolved Sulphur (S)	mg/L	22.3	7.4	12.5	8883465	12.3	3.0	8883465

RDL = Reportable Detection Limit
(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SU4669		SU4670	SU4671	SU4672		
Sampling Date		2018/01/08 15:20		2018/01/08 15:00	2018/01/09 11:45	2018/01/08 11:00		
COC Number		08449372		08449372	08449372	08449372		
	UNITS	KZ-16	QC Batch	KZ-17	KZ-18	KZ-19	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO3)	mg/L	273	8883345	282	211	<0.50	0.50	8883345
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8883669	<0.0000020	<0.0000020	<0.0000020	0.0000020	8883669
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00225	8883011	0.00116	0.00289	0.00486 (1)	0.00050	8883011
Dissolved Antimony (Sb)	mg/L	0.000037	8883011	0.000030	0.000041	<0.000020	0.000020	8883011
Dissolved Arsenic (As)	mg/L	0.000182	8883011	0.000220	0.000887	<0.000020	0.000020	8883011
Dissolved Barium (Ba)	mg/L	0.0969	8883011	0.102	0.0552	0.000085	0.000020	8883011
Dissolved Beryllium (Be)	mg/L	<0.000010	8883011	<0.000010	<0.000010	<0.000010	0.000010	8883011
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8883011	<0.0000050	<0.0000050	<0.0000050	0.0000050	8883011
Dissolved Boron (B)	mg/L	<0.010	8883011	<0.010	<0.010	<0.010	0.010	8883011
Dissolved Cadmium (Cd)	mg/L	0.0000561 (1)	8886267	0.0000288	0.0000442	<0.0000050	0.0000050	8883011
Dissolved Chromium (Cr)	mg/L	<0.00010	8883011	<0.00010	0.00017	<0.00010	0.00010	8883011
Dissolved Cobalt (Co)	mg/L	0.0000152	8883011	0.0000069	0.0000253	<0.0000050	0.0000050	8883011
Dissolved Copper (Cu)	mg/L	0.000442 (1)	8886267	0.000313	0.000144	0.000087	0.000050	8883011
Dissolved Iron (Fe)	mg/L	0.0034	8883011	<0.0010	0.0247	<0.0010	0.0010	8883011
Dissolved Lead (Pb)	mg/L	0.0000222	8883011	<0.0000050	0.0000147	0.0000187	0.0000050	8883011
Dissolved Lithium (Li)	mg/L	0.00426	8883011	0.00373	0.00221	<0.00050	0.00050	8883011
Dissolved Manganese (Mn)	mg/L	0.00581	8883011	0.000083	0.0118	0.000052	0.000050	8883011
Dissolved Molybdenum (Mo)	mg/L	0.000394	8883011	0.000548	0.00164	<0.000050	0.000050	8883011
Dissolved Nickel (Ni)	mg/L	0.000631	8883011	0.000550	0.000317	0.000047	0.000020	8883011
Dissolved Phosphorus (P)	mg/L	0.0024	8883011	<0.0020	0.0499	<0.0020	0.0020	8883011
Dissolved Selenium (Se)	mg/L	0.00164	8883011	0.00161	0.00134	<0.000040	0.000040	8883011
Dissolved Silicon (Si)	mg/L	3.68	8883011	3.76	3.12	<0.050	0.050	8883011
Dissolved Silver (Ag)	mg/L	<0.0000050	8883011	<0.0000050	<0.0000050	<0.0000050	0.0000050	8883011
Dissolved Strontium (Sr)	mg/L	0.250	8883011	0.259	0.176	0.000105	0.000050	8883011
Dissolved Thallium (Tl)	mg/L	<0.0000020	8883011	<0.0000020	<0.0000020	<0.0000020	0.0000020	8883011
Dissolved Tin (Sn)	mg/L	<0.00020	8883011	<0.00020	<0.00020	<0.00020	0.00020	8883011
Dissolved Titanium (Ti)	mg/L	<0.00050	8883011	<0.00050	<0.00050	<0.00050	0.00050	8883011
Dissolved Uranium (U)	mg/L	0.00296	8883011	0.00345	0.00323	<0.0000020	0.0000020	8883011
Dissolved Vanadium (V)	mg/L	<0.00020	8883011	<0.00020	<0.00020	<0.00020	0.00020	8883011

RDL = Reportable Detection Limit
(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SU4669		SU4670	SU4671	SU4672		
Sampling Date		2018/01/08 15:20		2018/01/08 15:00	2018/01/09 11:45	2018/01/08 11:00		
COC Number		08449372		08449372	08449372	08449372		
	UNITS	KZ-16	QC Batch	KZ-17	KZ-18	KZ-19	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00383 (1)	8886267	0.00132	0.00150	0.00084 (1)	0.00010	8883011
Dissolved Zirconium (Zr)	mg/L	<0.00010	8883011	<0.00010	<0.00010	<0.00010	0.00010	8883011
Dissolved Calcium (Ca)	mg/L	79.6	8883465	84.3	53.9	<0.050	0.050	8883465
Dissolved Magnesium (Mg)	mg/L	18.0	8883465	17.3	18.6	<0.050	0.050	8883465
Dissolved Potassium (K)	mg/L	1.38	8883465	1.33	0.666	<0.050	0.050	8883465
Dissolved Sodium (Na)	mg/L	1.70	8883465	1.53	1.01	0.076	0.050	8883465
Dissolved Sulphur (S)	mg/L	13.2	8883465	13.7	7.3	4.6	3.0	8883465

RDL = Reportable Detection Limit
(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SU4680	SU4681		SU4682		
Sampling Date		2018/01/07 13:45	2018/01/08 12:45		2018/01/07 15:45		
COC Number		08449373	08449373		08449373		
	UNITS	KZ-21	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO3)	mg/L	398	362	8883345	306	0.50	8883345
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8883669	<0.0000020	0.0000020	8883669
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00129	0.00172	8883011	0.00332	0.00050	8883011
Dissolved Antimony (Sb)	mg/L	0.000034	0.000040	8883011	0.000072	0.000020	8883011
Dissolved Arsenic (As)	mg/L	0.000406	0.00107	8883011	0.000336	0.000020	8883011
Dissolved Barium (Ba)	mg/L	0.0879	0.0959	8883011	0.0934	0.000020	8883011
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	8883011	<0.000010	0.000010	8883011
Dissolved Bismuth (Bi)	mg/L	0.0000064	<0.0000050	8883011	<0.0000050	0.0000050	8883011
Dissolved Boron (B)	mg/L	<0.010	<0.010	8883011	<0.010	0.010	8883011
Dissolved Cadmium (Cd)	mg/L	0.0000266	0.0000249	8883011	0.0000199	0.0000050	8883011
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	8883011	<0.00010	0.00010	8883011
Dissolved Cobalt (Co)	mg/L	0.000319	0.000165	8883011	0.0000126	0.0000050	8883011
Dissolved Copper (Cu)	mg/L	0.000209	0.000224	8883011	0.000457	0.000050	8883011
Dissolved Iron (Fe)	mg/L	0.0295	0.336	8883011	0.0069	0.0010	8883011
Dissolved Lead (Pb)	mg/L	0.0000109	<0.0000050	8883011	0.0000418 (1)	0.0000050	8886267
Dissolved Lithium (Li)	mg/L	0.0150	0.0128	8883011	0.00793	0.00050	8883011
Dissolved Manganese (Mn)	mg/L	0.343	0.126	8883011	0.00780	0.000050	8883011
Dissolved Molybdenum (Mo)	mg/L	0.00164	0.00122	8883011	0.000854	0.000050	8883011
Dissolved Nickel (Ni)	mg/L	0.00266	0.00156	8883011	0.000735	0.000020	8883011
Dissolved Phosphorus (P)	mg/L	0.0028	0.0055	8883011	0.0040	0.0020	8883011
Dissolved Selenium (Se)	mg/L	0.000273	0.00114	8883011	0.000984	0.000040	8883011
Dissolved Silicon (Si)	mg/L	7.12	5.27	8883011	4.54	0.050	8883011
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	8883011	<0.0000050	0.0000050	8883011
Dissolved Strontium (Sr)	mg/L	0.302	0.279	8883011	0.247	0.000050	8883011
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8883011	<0.0000020	0.0000020	8883011
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	8883011	<0.00020	0.00020	8883011
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	8883011	<0.00050	0.00050	8883011
Dissolved Uranium (U)	mg/L	0.00321	0.00441	8883011	0.00356	0.0000020	8883011
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	8883011	<0.00020	0.00020	8883011

RDL = Reportable Detection Limit

(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SU4680	SU4681		SU4682		
Sampling Date		2018/01/07 13:45	2018/01/08 12:45		2018/01/07 15:45		
COC Number		08449373	08449373		08449373		
	UNITS	KZ-21	KZ-22	QC Batch	KZ-26	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00203	0.00233	8883011	0.00708 (1)	0.00010	8883011
Dissolved Zirconium (Zr)	mg/L	0.00033	0.00042	8883011	<0.00010	0.00010	8883011
Dissolved Calcium (Ca)	mg/L	96.0	95.7	8883465	82.5	0.050	8883465
Dissolved Magnesium (Mg)	mg/L	38.4	29.9	8883465	24.2	0.050	8883465
Dissolved Potassium (K)	mg/L	2.16	1.69	8883465	1.44	0.050	8883465
Dissolved Sodium (Na)	mg/L	3.18	2.53	8883465	2.16	0.050	8883465
Dissolved Sulphur (S)	mg/L	16.5	18.7	8883465	15.1	3.0	8883465

RDL = Reportable Detection Limit

(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SU4683	SU4684	SU4685		
Sampling Date		2018/01/07 13:00	2018/01/09 10:50	2018/01/11 11:00		
COC Number		08449373	08449373	08449373		
	UNITS	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Calculated Parameters						
Dissolved Hardness (CaCO3)	mg/L	316	203	<0.50	0.50	8883345
Elements						
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8883669
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	0.00117	0.00209	<0.00050	0.00050	8883011
Dissolved Antimony (Sb)	mg/L	0.000064	0.000041	<0.000020	0.000020	8883011
Dissolved Arsenic (As)	mg/L	0.000282	0.000306	<0.000020	0.000020	8883011
Dissolved Barium (Ba)	mg/L	0.0892	0.0880	<0.000020	0.000020	8883011
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8883011
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8883011
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	8883011
Dissolved Cadmium (Cd)	mg/L	0.0000142	0.0000652	<0.0000050	0.0000050	8883011
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8883011
Dissolved Cobalt (Co)	mg/L	0.0000142	0.0000934	<0.0000050	0.0000050	8883011
Dissolved Copper (Cu)	mg/L	0.000346	0.000337 (1)	<0.000050	0.000050	8883011
Dissolved Iron (Fe)	mg/L	0.0048	0.145	<0.0010	0.0010	8883011
Dissolved Lead (Pb)	mg/L	0.0000055	0.0000399 (1)	<0.0000050	0.0000050	8883011
Dissolved Lithium (Li)	mg/L	0.00748	0.00409	<0.00050	0.00050	8883011
Dissolved Manganese (Mn)	mg/L	0.00802	0.0723	<0.000050	0.000050	8883011
Dissolved Molybdenum (Mo)	mg/L	0.000802	0.000921	<0.000050	0.000050	8883011
Dissolved Nickel (Ni)	mg/L	0.000748	0.000402	<0.000020	0.000020	8883011
Dissolved Phosphorus (P)	mg/L	0.0029	0.0097	<0.0020	0.0020	8883011
Dissolved Selenium (Se)	mg/L	0.00100	0.00127	<0.000040	0.000040	8883011
Dissolved Silicon (Si)	mg/L	4.66	3.65	<0.050	0.050	8883011
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8883011
Dissolved Strontium (Sr)	mg/L	0.261	0.183	<0.000050	0.000050	8883011
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8883011
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8883011
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8883011
Dissolved Uranium (U)	mg/L	0.00342	0.00200	<0.0000020	0.0000020	8883011
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8883011

RDL = Reportable Detection Limit
(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SU4683	SU4684	SU4685		
Sampling Date		2018/01/07 13:00	2018/01/09 10:50	2018/01/11 11:00		
COC Number		08449373	08449373	08449373		
	UNITS	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00122	0.0112	<0.00010	0.00010	8883011
Dissolved Zirconium (Zr)	mg/L	0.00011	<0.00010	<0.00010	0.00010	8883011
Dissolved Calcium (Ca)	mg/L	83.8	64.7	<0.050	0.050	8883465
Dissolved Magnesium (Mg)	mg/L	25.9	9.97	<0.050	0.050	8883465
Dissolved Potassium (K)	mg/L	1.46	1.36	<0.050	0.050	8883465
Dissolved Sodium (Na)	mg/L	2.15	1.37	<0.050	0.050	8883465
Dissolved Sulphur (S)	mg/L	16.3	10.0	<3.0	3.0	8883465
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SU4665	SU4666	SU4667	SU4668	SU4669		
Sampling Date		2018/01/09 13:50	2018/01/09 12:30	2018/01/09 11:10	2018/01/08 14:45	2018/01/08 15:20		
COC Number		08449372	08449372	08449372	08449372	08449372		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-15	KZ-16	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	133	168	197	254	267	0.50	8883025
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8883666
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00182	0.0129	0.00540	0.00273	0.00114	0.00050	8883541
Total Antimony (Sb)	mg/L	0.000028	<0.000020	0.000052	0.000032	0.000023	0.000020	8883541
Total Arsenic (As)	mg/L	0.000073	0.000101	0.000274	0.000406	0.000193	0.000020	8883541
Total Barium (Ba)	mg/L	0.0629	0.0480	0.0997	0.0941	0.0989	0.000020	8883541
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8883541
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8883541
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8883541
Total Cadmium (Cd)	mg/L	0.000192	0.0000394	0.0000787	0.0000535	0.0000380	0.0000050	8883541
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8883541
Total Cobalt (Co)	mg/L	0.0000067	0.0000318	0.000128	0.0000377	0.0000158	0.0000050	8883541
Total Copper (Cu)	mg/L	0.000526	0.000216	0.000249	0.000248	0.000257	0.000050	8883541
Total Iron (Fe)	mg/L	0.0013	0.0888	1.09	0.0528	0.0047	0.0010	8883541
Total Lead (Pb)	mg/L	0.0000155	0.0000567	0.0000289	0.0000197	<0.0000050	0.0000050	8883541
Total Lithium (Li)	mg/L	0.00134	0.00087	0.00452	0.00433	0.00454	0.00050	8883541
Total Manganese (Mn)	mg/L	0.000105	0.0145	0.0999	0.0473	0.00579	0.000050	8883541
Total Molybdenum (Mo)	mg/L	0.000638	0.000610	0.000647	0.00116	0.000387	0.000050	8883541
Total Nickel (Ni)	mg/L	0.000248	0.000206	0.000496	0.000808	0.000612	0.000020	8883541
Total Phosphorus (P)	mg/L	<0.0020	0.0054	0.0052	0.0033	<0.0020	0.0020	8883541
Total Selenium (Se)	mg/L	0.00225	0.00115	0.00110	0.00152	0.00160	0.000040	8883541
Total Silicon (Si)	mg/L	2.18	2.78	3.51	3.70	3.87	0.050	8883541
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8883541
Total Strontium (Sr)	mg/L	0.137	0.160	0.209	0.234	0.251	0.000050	8883541
Total Thallium (Tl)	mg/L	0.0000028	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8883541
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8883541
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8883541
Total Uranium (U)	mg/L	0.00452	0.00119	0.00162	0.00457	0.00301	0.0000020	8883541
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8883541
Total Zinc (Zn)	mg/L	0.0223	0.00171	0.0156	0.00644	0.00193	0.00010	8883541

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SU4665	SU4666	SU4667	SU4668	SU4669		
Sampling Date		2018/01/09 13:50	2018/01/09 12:30	2018/01/09 11:10	2018/01/08 14:45	2018/01/08 15:20		
COC Number		08449372	08449372	08449372	08449372	08449372		
	UNITS	**KZ-2**	**KZ-6**	**KZ-9**	**KZ-15**	**KZ-16**	**RDL**	**QC Batch**
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8883541
Total Calcium (Ca)	mg/L	42.8	55.3	65.9	73.0	77.7	0.050	8883507
Total Magnesium (Mg)	mg/L	6.41	7.25	7.84	17.4	17.7	0.050	8883507
Total Potassium (K)	mg/L	2.08	0.954	1.59	1.32	1.34	0.050	8883507
Total Sodium (Na)	mg/L	0.946	0.842	1.48	1.50	1.56	0.050	8883507
Total Sulphur (S)	mg/L	20.5	7.9	11.9	12.7	13.7	3.0	8883507

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SU4670	SU4671	SU4672	SU4680	SU4681		
Sampling Date		2018/01/08 15:00	2018/01/09 11:45	2018/01/08 11:00	2018/01/07 13:45	2018/01/08 12:45		
COC Number		08449372	08449372	08449372	08449373	08449373		
	UNITS	KZ-17	KZ-18	KZ-19	KZ-21	KZ-22	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	272	224	<0.50	416	339	0.50	8883025
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8883666
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00645	0.00723	0.00060	0.00401	0.00161	0.00050	8883541
Total Antimony (Sb)	mg/L	0.000027	0.000131	<0.000020	0.000032	0.000031	0.000020	8883541
Total Arsenic (As)	mg/L	0.000280	0.000858	<0.000020	0.00171	0.00158	0.000020	8883541
Total Barium (Ba)	mg/L	0.0961	0.0570	<0.000020	0.0927	0.0851	0.000020	8883541
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8883541
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8883541
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8883541
Total Cadmium (Cd)	mg/L	0.0000317	0.0000484	<0.0000050	0.0000326	0.0000234	0.0000050	8883541
Total Chromium (Cr)	mg/L	<0.00010	0.00019	<0.00010	<0.00010	<0.00010	0.00010	8883541
Total Cobalt (Co)	mg/L	0.0000189	0.0000246	<0.0000050	0.000341	0.000167	0.0000050	8883541
Total Copper (Cu)	mg/L	0.000353	0.000177	<0.000050	0.000198	0.000212	0.000050	8883541
Total Iron (Fe)	mg/L	0.0291	0.0370	<0.0010	0.552	0.473	0.0010	8883541
Total Lead (Pb)	mg/L	0.0000309	0.0000140	<0.0000050	0.0000109	0.0000053	0.0000050	8883541
Total Lithium (Li)	mg/L	0.00383	0.00248	<0.00050	0.0157	0.0120	0.00050	8883541
Total Manganese (Mn)	mg/L	0.00494	0.0132	<0.000050	0.350	0.122	0.000050	8883541
Total Molybdenum (Mo)	mg/L	0.000561	0.00166	<0.000050	0.00168	0.00111	0.000050	8883541
Total Nickel (Ni)	mg/L	0.000553	0.000334	<0.000020	0.00277	0.00150	0.000020	8883541
Total Phosphorus (P)	mg/L	0.0026	0.0580	<0.0020	0.0140	0.0086	0.0020	8883541
Total Selenium (Se)	mg/L	0.00154	0.00146	<0.000040	0.000261	0.00107	0.000040	8883541
Total Silicon (Si)	mg/L	3.56	3.40	<0.050	7.39	5.59	0.050	8883541
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8883541
Total Strontium (Sr)	mg/L	0.251	0.183	0.000090	0.296	0.273	0.000050	8883541
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8883541
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8883541
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8883541
Total Uranium (U)	mg/L	0.00331	0.00317	<0.0000020	0.00326	0.00399	0.0000020	8883541
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8883541
Total Zinc (Zn)	mg/L	0.00163	0.00165	<0.00010	0.00213	0.00220	0.00010	8883541

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SU4670	SU4671	SU4672	SU4680	SU4681		
Sampling Date		2018/01/08 15:00	2018/01/09 11:45	2018/01/08 11:00	2018/01/07 13:45	2018/01/08 12:45		
COC Number		08449372	08449372	08449372	08449373	08449373		
	UNITS	**KZ-17**	**KZ-18**	**KZ-19**	**KZ-21**	**KZ-22**	**RDL**	**QC Batch**
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00036	0.00040	0.00010	8883541
Total Calcium (Ca)	mg/L	81.6	57.8	<0.050	104	89.3	0.050	8883507
Total Magnesium (Mg)	mg/L	16.6	19.5	<0.050	38.2	28.1	0.050	8883507
Total Potassium (K)	mg/L	1.31	0.656	<0.050	2.17	1.62	0.050	8883507
Total Sodium (Na)	mg/L	1.50	1.01	<0.050	3.48	2.65	0.050	8883507
Total Sulphur (S)	mg/L	12.9	7.6	<3.0	16.0	17.2	3.0	8883507

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SU4682	SU4683	SU4684	SU4685		
Sampling Date		2018/01/07 15:45	2018/01/07 13:00	2018/01/09 10:50	2018/01/11 11:00		
COC Number		08449373	08449373	08449373	08449373		
	UNITS	KZ-26	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	292	310	205	<0.50	0.50	8883025
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8883666
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00361	0.00446	0.00706	<0.00050	0.00050	8883541
Total Antimony (Sb)	mg/L	0.000067	0.000063	0.000034	<0.000020	0.000020	8883541
Total Arsenic (As)	mg/L	0.000389	0.000384	0.000415	<0.000020	0.000020	8883541
Total Barium (Ba)	mg/L	0.0902	0.0861	0.0896	<0.000020	0.000020	8883541
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8883541
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8883541
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	0.010	8883541
Total Cadmium (Cd)	mg/L	0.0000179	0.0000176	0.0000659	<0.0000050	0.0000050	8883541
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8883541
Total Cobalt (Co)	mg/L	0.0000209	0.0000240	0.000107	<0.0000050	0.0000050	8883541
Total Copper (Cu)	mg/L	0.000377	0.000383	0.000208	<0.000050	0.000050	8883541
Total Iron (Fe)	mg/L	0.0300	0.0346	0.604	<0.0010	0.0010	8883541
Total Lead (Pb)	mg/L	0.0000208	0.0000186	0.0000218	<0.0000050	0.0000050	8883541
Total Lithium (Li)	mg/L	0.00829	0.00776	0.00431	<0.00050	0.00050	8883541
Total Manganese (Mn)	mg/L	0.0107	0.0111	0.0834	<0.000050	0.000050	8883541
Total Molybdenum (Mo)	mg/L	0.000817	0.000774	0.000889	<0.000050	0.000050	8883541
Total Nickel (Ni)	mg/L	0.000727	0.000738	0.000484	<0.000020	0.000020	8883541
Total Phosphorus (P)	mg/L	0.0043	0.0047	0.0167	<0.0020	0.0020	8883541
Total Selenium (Se)	mg/L	0.000898	0.000991	0.00122	<0.000040	0.000040	8883541
Total Silicon (Si)	mg/L	4.45	4.68	3.75	<0.050	0.050	8883541
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8883541
Total Strontium (Sr)	mg/L	0.252	0.248	0.209	<0.000050	0.000050	8883541
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8883541
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8883541
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8883541
Total Uranium (U)	mg/L	0.00357	0.00335	0.00206	<0.0000020	0.0000020	8883541
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8883541
Total Zinc (Zn)	mg/L	0.00176	0.00181	0.0123	<0.00010	0.00010	8883541

RDL = Reportable Detection Limit

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SU4682	SU4683	SU4684	SU4685		
Sampling Date		2018/01/07 15:45	2018/01/07 13:00	2018/01/09 10:50	2018/01/11 11:00		
COC Number		08449373	08449373	08449373	08449373		
	UNITS	KZ-26	KZ-28	KZ-37	TRIP BLANK	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8883541
Total Calcium (Ca)	mg/L	75.1	82.5	64.0	<0.050	0.050	8883507
Total Magnesium (Mg)	mg/L	25.3	25.3	11.0	<0.050	0.050	8883507
Total Potassium (K)	mg/L	1.44	1.43	1.38	<0.050	0.050	8883507
Total Sodium (Na)	mg/L	2.20	2.21	1.41	<0.050	0.050	8883507
Total Sulphur (S)	mg/L	15.4	15.8	11.0	<3.0	3.0	8883507
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: SU4665
Sample ID: KZ-2
Matrix: Water

Collected: 2018/01/09
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8883943	2018/01/12	2018/01/12	Name Redacted
Alkalinity - Low Level	AT/ALK	8884019	2018/01/12	2018/01/13	
Chloride - Low Level	KONE/COL	8885963	N/A	2018/01/15	
Cyanide SAD (strong acid dissociable)	TECH/COL	8884997	N/A	2018/01/15	
Cyanide WAD (weak acid dissociable)	TECH/COL	8884999	N/A	2018/01/15	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8884695	N/A	2018/01/15	
Conductance - Low Level	AT/ALK	8884732	2018/01/12	2018/01/13	
Fluoride - Low Level	ISE/ISE	8885689	N/A	2018/01/16	
Hardness Total (calculated as CaCO3)	CALC	8883025	N/A	2018/01/15	
Hardness (calculated as CaCO3)	CALC	8883345	N/A	2018/01/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8883669	N/A	2018/12/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8883666	2018/01/12	2018/12/01	
Ion Balance (as Cations/Anions Ratio)	CALC	8883538	N/A	2018/01/16	
Ion Balance	CALC	8883539	N/A	2018/01/16	
Sum of cations, anions	CALC	8883540	N/A	2018/01/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8883465	N/A	2018/01/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8883011	N/A	2018/01/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8883507	N/A	2018/01/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8883541	N/A	2018/01/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8885681	N/A	2018/01/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8884301	N/A	2018/01/12	
Nitrite (N) (low level)	TRAA/COL	8884302	N/A	2018/01/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8883036	N/A	2018/01/16	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/01/12	
pH Water	AT/ALK	8884018	2018/01/12	2018/01/13	
Sulphate - Low Level	KONE/COL	8885966	N/A	2018/01/15	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8883921	2018/01/12	2018/01/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8884285	2018/01/12	2018/01/13	
Total Suspended Solids-Low Level	BAL/BAL	8883947	2018/01/15	2018/01/16	

Maxxam ID: SU4665 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2018/01/09
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8884997	N/A	2018/01/15	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8884999	N/A	2018/01/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8883011	N/A	2018/01/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8883541	N/A	2018/01/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: SU4666
Sample ID: KZ-6
Matrix: Water

Collected: 2018/01/09
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8883943	2018/01/12	2018/01/12	Name Redacted
Alkalinity - Low Level	AT/ALK	8884019	2018/01/12	2018/01/13	
Chloride - Low Level	KONE/COL	8885963	N/A	2018/01/15	
Cyanide SAD (strong acid dissociable)	TECH/COL	8884997	N/A	2018/01/15	
Cyanide WAD (weak acid dissociable)	TECH/COL	8884999	N/A	2018/01/15	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8884694	N/A	2018/01/15	
Conductance - Low Level	AT/ALK	8884732	2018/01/12	2018/01/13	
Fluoride - Low Level	ISE/ISE	8885689	N/A	2018/01/16	
Hardness Total (calculated as CaCO3)	CALC	8883025	N/A	2018/01/15	
Hardness (calculated as CaCO3)	CALC	8883345	N/A	2018/01/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8883669	N/A	2018/12/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8883666	2018/01/12	2018/12/01	
Ion Balance (as Cations/Anions Ratio)	CALC	8883538	N/A	2018/01/16	
Ion Balance	CALC	8883539	N/A	2018/01/16	
Sum of cations, anions	CALC	8883540	N/A	2018/01/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8883465	N/A	2018/01/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8883011	N/A	2018/01/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8883507	N/A	2018/01/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8883541	N/A	2018/01/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8885681	N/A	2018/01/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8884301	N/A	2018/01/12	
Nitrite (N) (low level)	TRAA/COL	8884302	N/A	2018/01/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8883036	N/A	2018/01/16	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/01/12	
pH Water	AT/ALK	8884018	2018/01/12	2018/01/13	
Sulphate - Low Level	KONE/COL	8885966	N/A	2018/01/15	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8883921	2018/01/12	2018/01/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8884285	2018/01/12	2018/01/13	
Total Suspended Solids-Low Level	BAL/BAL	8883947	2018/01/15	2018/01/16	

Maxxam ID: SU4667
Sample ID: KZ-9
Matrix: Water

Collected: 2018/01/09
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8883943	2018/01/12	2018/01/12	Name Redacted
Alkalinity - Low Level	AT/ALK	8884019	2018/01/12	2018/01/13	
Chloride - Low Level	KONE/COL	8885963	N/A	2018/01/15	
Cyanide SAD (strong acid dissociable)	TECH/COL	8884997	N/A	2018/01/15	
Cyanide WAD (weak acid dissociable)	TECH/COL	8884999	N/A	2018/01/15	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8884694	N/A	2018/01/15	
Conductance - Low Level	AT/ALK	8884732	2018/01/12	2018/01/13	
Fluoride - Low Level	ISE/ISE	8885689	N/A	2018/01/16	
Hardness Total (calculated as CaCO3)	CALC	8883025	N/A	2018/01/15	
Hardness (calculated as CaCO3)	CALC	8883345	N/A	2018/01/15	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: SU4667
Sample ID: KZ-9
Matrix: Water

Collected: 2018/01/09
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8883669	N/A	2018/12/01	Name Redacted	
Mercury (Total-LowLevel) by CVAF	CV/AF	8883666	2018/01/12	2018/12/01		
Ion Balance (as Cations/Anions Ratio)	CALC	8883538	N/A	2018/01/16		
Ion Balance	CALC	8883539	N/A	2018/01/16		
Sum of cations, anions	CALC	8883540	N/A	2018/01/15		
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8883465	N/A	2018/01/15		
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8883011	N/A	2018/01/12		
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8883507	N/A	2018/01/15		
Elements by ICPMS Low Level (total)	ICP/CRCM	8883541	N/A	2018/01/12		
Ammonia-N Low Level (Preserved)	KONE/COL	8885681	N/A	2018/01/16		
Nitrate+Nitrite (N) (low level)	TRAA/COL	8884301	N/A	2018/01/12		
Nitrite (N) (low level)	TRAA/COL	8884302	N/A	2018/01/12		
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8883036	N/A	2018/01/16		
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/01/12		
pH Water	AT/ALK	8884018	2018/01/12	2018/01/13		
Sulphate - Low Level	KONE/COL	8885966	N/A	2018/01/15		
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8883921	2018/01/12	2018/01/13		
Total Phosphorus - Low Level Unpreserved	KONE/COL	8884285	2018/01/12	2018/01/13		
Total Suspended Solids-Low Level	BAL/BAL	8883947	2018/01/15	2018/01/16		

Maxxam ID: SU4668
Sample ID: KZ-15
Matrix: Water

Collected: 2018/01/08
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst	
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8883943	2018/01/12	2018/01/12	Name Redacted	
Alkalinity - Low Level	AT/ALK	8884023	2018/01/12	2018/01/13		
Chloride - Low Level	KONE/COL	8885963	N/A	2018/01/15		
Cyanide SAD (strong acid dissociable)	TECH/COL	8884997	N/A	2018/01/15		
Cyanide WAD (weak acid dissociable)	TECH/COL	8884999	N/A	2018/01/15		
Carbon (DOC) - field filtered/preserved	TRAA/COL	8884694	N/A	2018/01/15		
Conductance - Low Level	AT/ALK	8884972	2018/01/12	2018/01/13		
Fluoride - Low Level	ISE/ISE	8885689	N/A	2018/01/16		
Hardness Total (calculated as CaCO3)	CALC	8883025	N/A	2018/01/15		
Hardness (calculated as CaCO3)	CALC	8883345	N/A	2018/01/15		
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8883669	N/A	2018/12/01		
Mercury (Total-LowLevel) by CVAF	CV/AF	8883666	2018/01/12	2018/12/01		
Ion Balance (as Cations/Anions Ratio)	CALC	8883538	N/A	2018/01/16		
Ion Balance	CALC	8883539	N/A	2018/01/16		
Sum of cations, anions	CALC	8883540	N/A	2018/01/15		
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8883465	N/A	2018/01/15		
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8886267	N/A	2018/01/17		
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8883507	N/A	2018/01/15		
Elements by ICPMS Low Level (total)	ICP/CRCM	8883541	N/A	2018/01/12		
Ammonia-N Low Level (Preserved)	KONE/COL	8885681	N/A	2018/01/16		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: SU4668
Sample ID: KZ-15
Matrix: Water

Collected: 2018/01/08
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8884301	N/A	2018/01/12	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8884302	N/A	2018/01/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8883036	N/A	2018/01/16	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/01/12	
pH Water	AT/ALK	8884020	2018/01/12	2018/01/13	
Sulphate - Low Level	KONE/COL	8885966	N/A	2018/01/15	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8883921	2018/01/12	2018/01/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8884285	2018/01/12	2018/01/13	
Total Suspended Solids-Low Level	BAL/BAL	8883947	2018/01/15	2018/01/16	

Maxxam ID: SU4668 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2018/01/08
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total-LowLevel) by CVAF	CV/AF	8883666	2018/01/12	2018/12/01	Name Redacted

Maxxam ID: SU4669
Sample ID: KZ-16
Matrix: Water

Collected: 2018/01/08
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8883943	2018/01/12	2018/01/12	Name Redacted
Alkalinity - Low Level	AT/ALK	8884023	2018/01/12	2018/01/13	
Chloride - Low Level	KONE/COL	8885963	N/A	2018/01/15	
Cyanide SAD (strong acid dissociable)	TECH/COL	8884997	N/A	2018/01/15	
Cyanide WAD (weak acid dissociable)	TECH/COL	8884999	N/A	2018/01/15	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8884694	N/A	2018/01/15	
Conductance - Low Level	AT/ALK	8884972	2018/01/12	2018/01/13	
Fluoride - Low Level	ISE/ISE	8885689	N/A	2018/01/16	
Hardness Total (calculated as CaCO3)	CALC	8883025	N/A	2018/01/15	
Hardness (calculated as CaCO3)	CALC	8883345	N/A	2018/01/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8883669	N/A	2018/12/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8883666	2018/01/12	2018/12/01	
Ion Balance (as Cations/Anions Ratio)	CALC	8883538	N/A	2018/01/16	
Ion Balance	CALC	8883539	N/A	2018/01/16	
Sum of cations, anions	CALC	8883540	N/A	2018/01/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8883465	N/A	2018/01/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8883011	N/A	2018/01/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8883507	N/A	2018/01/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8883541	N/A	2018/01/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8885681	N/A	2018/01/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8884301	N/A	2018/01/12	
Nitrite (N) (low level)	TRAA/COL	8884302	N/A	2018/01/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8883036	N/A	2018/01/16	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: SU4669
Sample ID: KZ-16
Matrix: Water

Collected: 2018/01/08
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/01/12	Name Redacted
pH Water	AT/ALK	8884020	2018/01/12	2018/01/13	
Sulphate - Low Level	KONE/COL	8885966	N/A	2018/01/15	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8883921	2018/01/12	2018/01/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8883923	2018/01/12	2018/01/13	
Total Suspended Solids-Low Level	BAL/BAL	8883947	2018/01/15	2018/01/16	

Maxxam ID: SU4670
Sample ID: KZ-17
Matrix: Water

Collected: 2018/01/08
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8883943	2018/01/12	2018/01/12	Name Redacted
Alkalinity - Low Level	AT/ALK	8884019	2018/01/12	2018/01/13	
Chloride - Low Level	KONE/COL	8885963	N/A	2018/01/15	
Cyanide SAD (strong acid dissociable)	TECH/COL	8884997	N/A	2018/01/15	
Cyanide WAD (weak acid dissociable)	TECH/COL	8884999	N/A	2018/01/15	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8884694	N/A	2018/01/15	
Conductance - Low Level	AT/ALK	8884732	2018/01/12	2018/01/13	
Fluoride - Low Level	ISE/ISE	8885689	N/A	2018/01/16	
Hardness Total (calculated as CaCO3)	CALC	8883025	N/A	2018/01/15	
Hardness (calculated as CaCO3)	CALC	8883345	N/A	2018/01/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8883669	N/A	2018/12/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8883666	2018/01/12	2018/12/01	
Ion Balance (as Cations/Anions Ratio)	CALC	8883538	N/A	2018/01/16	
Ion Balance	CALC	8883539	N/A	2018/01/16	
Sum of cations, anions	CALC	8883540	N/A	2018/01/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8883465	N/A	2018/01/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8883011	N/A	2018/01/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8883507	N/A	2018/01/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8883541	N/A	2018/01/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8885681	N/A	2018/01/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8884301	N/A	2018/01/12	
Nitrite (N) (low level)	TRAA/COL	8884302	N/A	2018/01/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8883036	N/A	2018/01/16	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/01/12	
pH Water	AT/ALK	8884018	2018/01/12	2018/01/13	
Sulphate - Low Level	KONE/COL	8885966	N/A	2018/01/15	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8883921	2018/01/12	2018/01/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8883923	2018/01/12	2018/01/13	
Total Suspended Solids-Low Level	BAL/BAL	8883947	2018/01/15	2018/01/16	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: SU4670 Dup
Sample ID: KZ-17
Matrix: Water

Collected: 2018/01/08
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8883921	2018/01/12	2018/01/13	Name Redacted
Total Phosphorus - Low Level Unpreserved	KONE/COL	8883923	2018/01/12	2018/01/13	

Maxxam ID: SU4671
Sample ID: KZ-18
Matrix: Water

Collected: 2018/01/09
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8883943	2018/01/12	2018/01/12	Name Redacted
Alkalinity - Low Level	AT/ALK	8884019	2018/01/12	2018/01/13	
Chloride - Low Level	KONE/COL	8885963	N/A	2018/01/15	
Cyanide SAD (strong acid dissociable)	TECH/COL	8884997	N/A	2018/01/15	
Cyanide WAD (weak acid dissociable)	TECH/COL	8884999	N/A	2018/01/15	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8884694	N/A	2018/01/15	
Conductance - Low Level	AT/ALK	8884732	2018/01/12	2018/01/13	
Fluoride - Low Level	ISE/ISE	8885689	N/A	2018/01/16	
Hardness Total (calculated as CaCO3)	CALC	8883025	N/A	2018/01/15	
Hardness (calculated as CaCO3)	CALC	8883345	N/A	2018/01/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8883669	N/A	2018/12/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8883666	2018/01/12	2018/12/01	
Ion Balance (as Cations/Anions Ratio)	CALC	8883538	N/A	2018/01/16	
Ion Balance	CALC	8883539	N/A	2018/01/16	
Sum of cations, anions	CALC	8883540	N/A	2018/01/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8883465	N/A	2018/01/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8883011	N/A	2018/01/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8883507	N/A	2018/01/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8883541	N/A	2018/01/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8885681	N/A	2018/01/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8884301	N/A	2018/01/12	
Nitrite (N) (low level)	TRAA/COL	8884302	N/A	2018/01/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8883036	N/A	2018/01/16	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/01/12	
pH Water	AT/ALK	8884018	2018/01/12	2018/01/13	
Sulphate - Low Level	KONE/COL	8885966	N/A	2018/01/15	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8883921	2018/01/12	2018/01/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8884285	2018/01/12	2018/01/13	
Total Suspended Solids-Low Level	BAL/BAL	8883947	2018/01/15	2018/01/16	

Maxxam ID: SU4672
Sample ID: KZ-19
Matrix: Water

Collected: 2018/01/08
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8883943	2018/01/12	2018/01/12	Name Redacted
Alkalinity - Low Level	AT/ALK	8884019	2018/01/12	2018/01/13	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: SU4672
Sample ID: KZ-19
Matrix: Water

Collected: 2018/01/08
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride - Low Level	KONE/COL	8885963	N/A	2018/01/15	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8884997	N/A	2018/01/15	
Cyanide WAD (weak acid dissociable)	TECH/COL	8884999	N/A	2018/01/15	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8884694	N/A	2018/01/15	
Conductance - Low Level	AT/ALK	8884732	2018/01/12	2018/01/13	
Fluoride - Low Level	ISE/ISE	8885689	N/A	2018/01/16	
Hardness Total (calculated as CaCO3)	CALC	8883025	N/A	2018/01/15	
Hardness (calculated as CaCO3)	CALC	8883345	N/A	2018/01/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8883669	N/A	2018/12/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8883666	2018/01/12	2018/12/01	
Ion Balance (as Cations/Anions Ratio)	CALC	8883538	N/A	2018/01/16	
Ion Balance	CALC	8883539	N/A	2018/01/16	
Sum of cations, anions	CALC	8883540	N/A	2018/01/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8883465	N/A	2018/01/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8883011	N/A	2018/01/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8883507	N/A	2018/01/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8883541	N/A	2018/01/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8885681	N/A	2018/01/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8889271	N/A	2018/01/19	
Nitrite (N) (low level)	TRAA/COL	8884302	N/A	2018/01/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8883036	N/A	2018/01/16	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/01/12	
pH Water	AT/ALK	8884018	2018/01/12	2018/01/13	
Sulphate - Low Level	KONE/COL	8885966	N/A	2018/01/15	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8883921	2018/01/12	2018/01/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8883923	2018/01/12	2018/01/13	
Total Suspended Solids-Low Level	BAL/BAL	8883947	2018/01/15	2018/01/16	

Maxxam ID: SU4680
Sample ID: KZ-21
Matrix: Water

Collected: 2018/01/07
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8883943	2018/01/12	2018/01/12	Name Redacted
Alkalinity - Low Level	AT/ALK	8884023	2018/01/12	2018/01/13	
Chloride - Low Level	KONE/COL	8885963	N/A	2018/01/15	
Cyanide SAD (strong acid dissociable)	TECH/COL	8884997	N/A	2018/01/15	
Cyanide WAD (weak acid dissociable)	TECH/COL	8884999	N/A	2018/01/15	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8884694	N/A	2018/01/15	
Conductance - Low Level	AT/ALK	8884972	2018/01/12	2018/01/13	
Fluoride - Low Level	ISE/ISE	8885689	N/A	2018/01/16	
Hardness Total (calculated as CaCO3)	CALC	8883025	N/A	2018/01/15	
Hardness (calculated as CaCO3)	CALC	8883345	N/A	2018/01/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8883669	N/A	2018/12/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8883666	2018/01/12	2018/12/01	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: SU4680
Sample ID: KZ-21
Matrix: Water

Collected: 2018/01/07
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance (as Cations/Anions Ratio)	CALC	8883538	N/A	2018/01/16	Name Redacted
Ion Balance	CALC	8883539	N/A	2018/01/16	
Sum of cations, anions	CALC	8883540	N/A	2018/01/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8883465	N/A	2018/01/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8883011	N/A	2018/01/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8883507	N/A	2018/01/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8883541	N/A	2018/01/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8885681	N/A	2018/01/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8884301	N/A	2018/01/12	
Nitrite (N) (low level)	TRAA/COL	8884302	N/A	2018/01/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8883036	N/A	2018/01/16	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/01/12	
pH Water	AT/ALK	8884020	2018/01/12	2018/01/13	
Sulphate - Low Level	KONE/COL	8885966	N/A	2018/01/15	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8883921	2018/01/12	2018/01/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8883923	2018/01/12	2018/01/13	
Total Suspended Solids-Low Level	BAL/BAL	8883947	2018/01/15	2018/01/16	

Maxxam ID: SU4680 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2018/01/07
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Low Level	AT/ALK	8884023	2018/01/12	2018/01/13	Name Redacted
Conductance - Low Level	AT/ALK	8884972	2018/01/12	2018/01/13	
pH Water	AT/ALK	8884020	2018/01/12	2018/01/13	

Maxxam ID: SU4681
Sample ID: KZ-22
Matrix: Water

Collected: 2018/01/08
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8883943	2018/01/12	2018/01/12	Name Redacted
Alkalinity - Low Level	AT/ALK	8884019	2018/01/12	2018/01/13	
Chloride - Low Level	KONE/COL	8885963	N/A	2018/01/15	
Cyanide SAD (strong acid dissociable)	TECH/COL	8884997	N/A	2018/01/15	
Cyanide WAD (weak acid dissociable)	TECH/COL	8884999	N/A	2018/01/15	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8884694	N/A	2018/01/15	
Conductance - Low Level	AT/ALK	8884732	2018/01/12	2018/01/13	
Fluoride - Low Level	ISE/ISE	8885689	N/A	2018/01/16	
Hardness Total (calculated as CaCO3)	CALC	8883025	N/A	2018/01/15	
Hardness (calculated as CaCO3)	CALC	8883345	N/A	2018/01/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8883669	N/A	2018/12/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8883666	2018/01/12	2018/12/01	
Ion Balance (as Cations/Anions Ratio)	CALC	8883538	N/A	2018/01/16	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: SU4681
Sample ID: KZ-22
Matrix: Water

Collected: 2018/01/08
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ion Balance	CALC	8883539	N/A	2018/01/16	Name Redacted
Sum of cations, anions	CALC	8883540	N/A	2018/01/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8883465	N/A	2018/01/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8883011	N/A	2018/01/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8883507	N/A	2018/01/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8883541	N/A	2018/01/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8885681	N/A	2018/01/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8884301	N/A	2018/01/12	
Nitrite (N) (low level)	TRAA/COL	8884302	N/A	2018/01/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8883036	N/A	2018/01/16	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/01/12	
pH Water	AT/ALK	8884018	2018/01/12	2018/01/13	
Sulphate - Low Level	KONE/COL	8885966	N/A	2018/01/15	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8883921	2018/01/12	2018/01/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8884285	2018/01/12	2018/01/13	
Total Suspended Solids-Low Level	BAL/BAL	8883947	2018/01/15	2018/01/16	

Maxxam ID: SU4682
Sample ID: KZ-26
Matrix: Water

Collected: 2018/01/07
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8883943	2018/01/12	2018/01/12	Name Redacted
Alkalinity - Low Level	AT/ALK	8884019	2018/01/12	2018/01/13	
Chloride - Low Level	KONE/COL	8885963	N/A	2018/01/15	
Cyanide SAD (strong acid dissociable)	TECH/COL	8884997	N/A	2018/01/15	
Cyanide WAD (weak acid dissociable)	TECH/COL	8884999	N/A	2018/01/15	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8884694	N/A	2018/01/15	
Conductance - Low Level	AT/ALK	8884732	2018/01/12	2018/01/13	
Fluoride - Low Level	ISE/ISE	8885689	N/A	2018/01/16	
Hardness Total (calculated as CaCO3)	CALC	8883025	N/A	2018/01/15	
Hardness (calculated as CaCO3)	CALC	8883345	N/A	2018/01/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8883669	N/A	2018/12/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8883666	2018/01/12	2018/12/01	
Ion Balance (as Cations/Anions Ratio)	CALC	8883538	N/A	2018/01/16	
Ion Balance	CALC	8883539	N/A	2018/01/16	
Sum of cations, anions	CALC	8883540	N/A	2018/01/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8883465	N/A	2018/01/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8883011	N/A	2018/01/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8883507	N/A	2018/01/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8883541	N/A	2018/01/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8885681	N/A	2018/01/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8884301	N/A	2018/01/12	
Nitrite (N) (low level)	TRAA/COL	8884302	N/A	2018/01/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8883036	N/A	2018/01/16	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: SU4682
Sample ID: KZ-26
Matrix: Water

Collected: 2018/01/07
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/01/12	Name Redacted
pH Water	AT/ALK	8884018	2018/01/12	2018/01/13	
Sulphate - Low Level	KONE/COL	8885966	N/A	2018/01/15	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8883921	2018/01/12	2018/01/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8884285	2018/01/12	2018/01/13	
Total Suspended Solids-Low Level	BAL/BAL	8883947	2018/01/15	2018/01/16	

Maxxam ID: SU4682 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2018/01/07
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8883669	N/A	2018/12/01	Chamila Jayasinghe

Maxxam ID: SU4683
Sample ID: KZ-28
Matrix: Water

Collected: 2018/01/07
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8883943	2018/01/12	2018/01/12	Name Redacted
Alkalinity - Low Level	AT/ALK	8884019	2018/01/12	2018/01/13	
Chloride - Low Level	KONE/COL	8885963	N/A	2018/01/15	
Cyanide SAD (strong acid dissociable)	TECH/COL	8884997	N/A	2018/01/15	
Cyanide WAD (weak acid dissociable)	TECH/COL	8884999	N/A	2018/01/15	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8884695	N/A	2018/01/15	
Conductance - Low Level	AT/ALK	8884732	2018/01/12	2018/01/13	
Fluoride - Low Level	ISE/ISE	8885689	N/A	2018/01/16	
Hardness Total (calculated as CaCO3)	CALC	8883025	N/A	2018/01/15	
Hardness (calculated as CaCO3)	CALC	8883345	N/A	2018/01/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8883669	N/A	2018/12/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8883666	2018/01/12	2018/12/01	
Ion Balance (as Cations/Anions Ratio)	CALC	8883538	N/A	2018/01/16	
Ion Balance	CALC	8883539	N/A	2018/01/16	
Sum of cations, anions	CALC	8883540	N/A	2018/01/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8883465	N/A	2018/01/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8883011	N/A	2018/01/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8883507	N/A	2018/01/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8883541	N/A	2018/01/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8885681	N/A	2018/01/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8884301	N/A	2018/01/12	
Nitrite (N) (low level)	TRAA/COL	8884302	N/A	2018/01/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8883036	N/A	2018/01/16	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/01/12	
pH Water	AT/ALK	8884018	2018/01/12	2018/01/13	
Sulphate - Low Level	KONE/COL	8885966	N/A	2018/01/15	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: SU4683
Sample ID: KZ-28
Matrix: Water

Collected: 2018/01/07
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8883921	2018/01/12	2018/01/13	Name Redacted
Total Phosphorus - Low Level Unpreserved	KONE/COL	8884285	2018/01/12	2018/01/13	
Total Suspended Solids-Low Level	BAL/BAL	8883947	2018/01/15	2018/01/16	

Maxxam ID: SU4684
Sample ID: KZ-37
Matrix: Water

Collected: 2018/01/09
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8883943	2018/01/12	2018/01/12	Name Redacted
Alkalinity - Low Level	AT/ALK	8884019	2018/01/12	2018/01/13	
Chloride - Low Level	KONE/COL	8885963	N/A	2018/01/15	
Cyanide SAD (strong acid dissociable)	TECH/COL	8884997	N/A	2018/01/15	
Cyanide WAD (weak acid dissociable)	TECH/COL	8884999	N/A	2018/01/15	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8884695	N/A	2018/01/15	
Conductance - Low Level	AT/ALK	8884732	2018/01/12	2018/01/13	
Fluoride - Low Level	ISE/ISE	8885689	N/A	2018/01/16	
Hardness Total (calculated as CaCO3)	CALC	8883025	N/A	2018/01/15	
Hardness (calculated as CaCO3)	CALC	8883345	N/A	2018/01/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8883669	N/A	2018/12/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8883666	2018/01/12	2018/12/01	
Ion Balance (as Cations/Anions Ratio)	CALC	8883538	N/A	2018/01/16	
Ion Balance	CALC	8883539	N/A	2018/01/16	
Sum of cations, anions	CALC	8883540	N/A	2018/01/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8883465	N/A	2018/01/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8883011	N/A	2018/01/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8883507	N/A	2018/01/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8883541	N/A	2018/01/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8885681	N/A	2018/01/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8884301	N/A	2018/01/12	
Nitrite (N) (low level)	TRAA/COL	8884302	N/A	2018/01/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8883036	N/A	2018/01/16	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/01/12	
pH Water	AT/ALK	8884018	2018/01/12	2018/01/13	
Sulphate - Low Level	KONE/COL	8885966	N/A	2018/01/15	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8883921	2018/01/12	2018/01/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8884285	2018/01/12	2018/01/13	
Total Suspended Solids-Low Level	BAL/BAL	8883947	2018/01/15	2018/01/16	

Maxxam ID: SU4684 Dup
Sample ID: KZ-37
Matrix: Water

Collected: 2018/01/09
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8883943	2018/01/12	2018/01/12	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: SU4684 Dup
Sample ID: KZ-37
Matrix: Water

Collected: 2018/01/09
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride - Low Level	KONE/COL	8885963	N/A	2018/01/15	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8884301	N/A	2018/01/12	
Nitrite (N) (low level)	TRAA/COL	8884302	N/A	2018/01/12	
Sulphate - Low Level	KONE/COL	8885966	N/A	2018/01/15	

Maxxam ID: SU4685
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2018/01/11
Shipped:
Received: 2018/01/11

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8883943	2018/01/12	2018/01/12	Name Redacted
Alkalinity - Low Level	AT/ALK	8884019	2018/01/12	2018/01/13	
Chloride - Low Level	KONE/COL	8885963	N/A	2018/01/15	
Cyanide SAD (strong acid dissociable)	TECH/COL	8884997	N/A	2018/01/15	
Cyanide WAD (weak acid dissociable)	TECH/COL	8884999	N/A	2018/01/15	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8886594	N/A	2018/01/18	
Conductance - Low Level	AT/ALK	8884732	2018/01/12	2018/01/13	
Fluoride - Low Level	ISE/ISE	8885689	N/A	2018/01/16	
Hardness Total (calculated as CaCO3)	CALC	8883025	N/A	2018/01/15	
Hardness (calculated as CaCO3)	CALC	8883345	N/A	2018/01/15	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8883669	N/A	2018/12/01	
Mercury (Total-LowLevel) by CVAF	CV/AF	8883666	2018/01/12	2018/12/01	
Ion Balance (as Cations/Anions Ratio)	CALC	8883538	N/A	2018/01/16	
Ion Balance	CALC	8883539	N/A	2018/01/16	
Sum of cations, anions	CALC	8883540	N/A	2018/01/15	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8883465	N/A	2018/01/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8883011	N/A	2018/01/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8883507	N/A	2018/01/15	
Elements by ICPMS Low Level (total)	ICP/CRCM	8883541	N/A	2018/01/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8885681	N/A	2018/01/16	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8884301	N/A	2018/01/12	
Nitrite (N) (low level)	TRAA/COL	8884302	N/A	2018/01/12	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8883036	N/A	2018/01/16	
pH Water	AT/ALK	8884018	2018/01/12	2018/01/13	
Sulphate - Low Level	KONE/COL	8885966	N/A	2018/01/15	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8883921	2018/01/12	2018/01/13	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8884285	2018/01/12	2018/01/13	
Total Suspended Solids-Low Level	BAL/BAL	8883947	2018/01/15	2018/01/16	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
Package 2	2.0°C
Package 3	3.0°C

Sample SU4668 [KZ-15] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample SU4669 [KZ-16] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample SU4670 [KZ-17] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample SU4672 [KZ-19] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample SU4680 [KZ-21] : Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Total Suspended Solids-Low Level.

Sample SU4681 [KZ-22] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample SU4682 [KZ-26] : Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Total Suspended Solids-Low Level.

Sample SU4683 [KZ-28] : Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Total Suspended Solids-Low Level.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

Sample SU4668, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample SU4669, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample SU4682, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8883011	Dissolved Aluminum (Al)	2018/01/12	99	80 - 120	101	80 - 120	<0.00050	mg/L	2.2	20
8883011	Dissolved Antimony (Sb)	2018/01/12	94	80 - 120	97	80 - 120	<0.000020	mg/L	4.2	20
8883011	Dissolved Arsenic (As)	2018/01/12	95	80 - 120	95	80 - 120	<0.000020	mg/L	2.5	20
8883011	Dissolved Barium (Ba)	2018/01/12	NC	80 - 120	99	80 - 120	<0.000020	mg/L	1.1	20
8883011	Dissolved Beryllium (Be)	2018/01/12	98	80 - 120	97	80 - 120	<0.000010	mg/L	NC	20
8883011	Dissolved Bismuth (Bi)	2018/01/12	97	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8883011	Dissolved Boron (B)	2018/01/12	92	80 - 120	92	80 - 120	<0.010	mg/L	NC	20
8883011	Dissolved Cadmium (Cd)	2018/01/12	94	80 - 120	97	80 - 120	<0.0000050	mg/L	2.2	20
8883011	Dissolved Chromium (Cr)	2018/01/12	91	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
8883011	Dissolved Cobalt (Co)	2018/01/12	90	80 - 120	97	80 - 120	<0.0000050	mg/L	11	20
8883011	Dissolved Copper (Cu)	2018/01/12	87	80 - 120	96	80 - 120	<0.000050	mg/L	0.52	20
8883011	Dissolved Iron (Fe)	2018/01/12	93	80 - 120	97	80 - 120	<0.0010	mg/L	NC	20
8883011	Dissolved Lead (Pb)	2018/01/12	97	80 - 120	102	80 - 120	<0.0000050	mg/L	11	20
8883011	Dissolved Lithium (Li)	2018/01/12	97	80 - 120	98	80 - 120	<0.00050	mg/L	7.1	20
8883011	Dissolved Manganese (Mn)	2018/01/12	91	80 - 120	97	80 - 120	<0.000050	mg/L	8.8	20
8883011	Dissolved Molybdenum (Mo)	2018/01/12	97	80 - 120	97	80 - 120	<0.000050	mg/L	2.3	20
8883011	Dissolved Nickel (Ni)	2018/01/12	89	80 - 120	97	80 - 120	<0.000020	mg/L	4.0	20
8883011	Dissolved Phosphorus (P)	2018/01/12	97	80 - 120	101	80 - 120	<0.0020	mg/L	NC	20
8883011	Dissolved Selenium (Se)	2018/01/12	95	80 - 120	97	80 - 120	<0.000040	mg/L	2.5	20
8883011	Dissolved Silicon (Si)	2018/01/12	97	80 - 120	98	80 - 120	<0.050	mg/L	4.7	20
8883011	Dissolved Silver (Ag)	2018/01/12	93	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8883011	Dissolved Strontium (Sr)	2018/01/12	NC	80 - 120	92	80 - 120	<0.000050	mg/L	0.70	20
8883011	Dissolved Thallium (Tl)	2018/01/12	95	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8883011	Dissolved Tin (Sn)	2018/01/12	93	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
8883011	Dissolved Titanium (Ti)	2018/01/12	90	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8883011	Dissolved Uranium (U)	2018/01/12	102	80 - 120	102	80 - 120	<0.0000020	mg/L	3.2	20
8883011	Dissolved Vanadium (V)	2018/01/12	92	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
8883011	Dissolved Zinc (Zn)	2018/01/12	91	80 - 120	97	80 - 120	<0.00010	mg/L	2.6	20
8883011	Dissolved Zirconium (Zr)	2018/01/12	93	80 - 120	92	80 - 120	<0.00010	mg/L	NC	20
8883541	Total Aluminum (Al)	2018/01/12	100	80 - 120	101	80 - 120	<0.00050	mg/L	6.7	20
8883541	Total Antimony (Sb)	2018/01/12	98	80 - 120	95	80 - 120	<0.000020	mg/L	9.7	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8883541	Total Arsenic (As)	2018/01/12	98	80 - 120	95	80 - 120	<0.000020	mg/L	6.8	20
8883541	Total Barium (Ba)	2018/01/12	NC	80 - 120	97	80 - 120	<0.000020	mg/L	13	20
8883541	Total Beryllium (Be)	2018/01/12	102	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8883541	Total Bismuth (Bi)	2018/01/12	97	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8883541	Total Boron (B)	2018/01/12	95	80 - 120	95	80 - 120	<0.010	mg/L	NC	20
8883541	Total Cadmium (Cd)	2018/01/12	96	80 - 120	96	80 - 120	<0.0000050	mg/L	14	20
8883541	Total Chromium (Cr)	2018/01/12	96	80 - 120	94	80 - 120	<0.00010	mg/L	NC	20
8883541	Total Cobalt (Co)	2018/01/12	95	80 - 120	95	80 - 120	<0.0000050	mg/L	14	20
8883541	Total Copper (Cu)	2018/01/12	91	80 - 120	93	80 - 120	<0.000050	mg/L	1.8	20
8883541	Total Iron (Fe)	2018/01/12	96	80 - 120	97	80 - 120	<0.0010	mg/L	9.0	20
8883541	Total Lead (Pb)	2018/01/12	99	80 - 120	99	80 - 120	<0.0000050	mg/L	14	20
8883541	Total Lithium (Li)	2018/01/12	107	80 - 120	106	80 - 120	<0.00050	mg/L	12	20
8883541	Total Manganese (Mn)	2018/01/12	97	80 - 120	95	80 - 120	<0.000050	mg/L	NC	20
8883541	Total Molybdenum (Mo)	2018/01/12	101	80 - 120	98	80 - 120	<0.000050	mg/L	13	20
8883541	Total Nickel (Ni)	2018/01/12	94	80 - 120	94	80 - 120	<0.000020	mg/L	5.9	20
8883541	Total Phosphorus (P)	2018/01/12	103	80 - 120	97	80 - 120	<0.0020	mg/L	NC	20
8883541	Total Selenium (Se)	2018/01/12	97	80 - 120	95	80 - 120	<0.000040	mg/L	1.5	20
8883541	Total Silicon (Si)	2018/01/12	95	80 - 120	99	80 - 120	<0.050	mg/L	0.40	20
8883541	Total Silver (Ag)	2018/01/12	95	80 - 120	94	80 - 120	<0.0000050	mg/L	NC	20
8883541	Total Strontium (Sr)	2018/01/12	NC	80 - 120	93	80 - 120	<0.000050	mg/L	0.98	20
8883541	Total Thallium (Tl)	2018/01/12	96	80 - 120	96	80 - 120	<0.0000020	mg/L	19	20
8883541	Total Tin (Sn)	2018/01/12	95	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
8883541	Total Titanium (Ti)	2018/01/12	101	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8883541	Total Uranium (U)	2018/01/12	106	80 - 120	105	80 - 120	<0.0000020	mg/L	11	20
8883541	Total Vanadium (V)	2018/01/12	99	80 - 120	94	80 - 120	<0.00020	mg/L	NC	20
8883541	Total Zinc (Zn)	2018/01/12	94	80 - 120	95	80 - 120	<0.00010	mg/L	1.7	20
8883541	Total Zirconium (Zr)	2018/01/12	93	80 - 120	92	80 - 120	<0.00010	mg/L	NC	20
8883666	Total Mercury (Hg)	2018/12/01	87	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	20
8883669	Dissolved Mercury (Hg)	2018/12/01	98	80 - 120	94	80 - 120	<0.0000020	mg/L	NC	20
8883921	Dissolved Phosphorus (P)	2018/01/13	95	80 - 120	109	80 - 120	<0.0020	mg/L	13	20
8883923	Total Phosphorus (P)	2018/01/13	92	80 - 120	109	80 - 120	<0.0020	mg/L	3.4	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8883943	Acidity (pH 4.5)	2018/01/12					<1.0	mg/L	NC	20
8883943	Acidity (pH 8.3)	2018/01/12			98	80 - 120	<1.0	mg/L	3.7	20
8883947	Total Suspended Solids	2018/01/16			107	80 - 120	<1.0	mg/L		
8884018	pH	2018/01/12			101	97 - 103				
8884019	Alkalinity (PP as CaCO3)	2018/01/12					<0.50	mg/L		
8884019	Alkalinity (Total as CaCO3)	2018/01/12			97	80 - 120	<0.50	mg/L		
8884019	Bicarbonate (HCO3)	2018/01/12					<0.50	mg/L		
8884019	Carbonate (CO3)	2018/01/12					<0.50	mg/L		
8884019	Hydroxide (OH)	2018/01/12					<0.50	mg/L		
8884020	pH	2018/01/13			101	97 - 103			0.14	20
8884023	Alkalinity (PP as CaCO3)	2018/01/13					<0.50	mg/L	NC	20
8884023	Alkalinity (Total as CaCO3)	2018/01/13	NC	80 - 120	98	80 - 120	<0.50	mg/L	1.2	20
8884023	Bicarbonate (HCO3)	2018/01/13					<0.50	mg/L	1.2	20
8884023	Carbonate (CO3)	2018/01/13					<0.50	mg/L	NC	20
8884023	Hydroxide (OH)	2018/01/13					<0.50	mg/L	NC	20
8884285	Total Phosphorus (P)	2018/01/13			99	80 - 120	<0.0020	mg/L		
8884301	Nitrate plus Nitrite (N)	2018/01/12	106	80 - 120	106	80 - 120	<0.0020	mg/L	0.56	25
8884302	Nitrite (N)	2018/01/12	101	80 - 120	100	80 - 120	<0.0020	mg/L	NC	25
8884694	Dissolved Organic Carbon (C)	2018/01/15	113	80 - 120	114	80 - 120	<0.50	mg/L	5.6	20
8884695	Dissolved Organic Carbon (C)	2018/01/15	114	80 - 120	112	80 - 120	<0.50	mg/L		
8884732	Conductivity	2018/01/12			98	80 - 120	<1.0	uS/cm		
8884972	Conductivity	2018/01/13			99	80 - 120	<1.0	uS/cm	1.1	20
8884997	Strong Acid Dissoc. Cyanide (CN)	2018/01/15	104	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8884999	Weak Acid Dissoc. Cyanide (CN)	2018/01/15	106	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8885681	Total Ammonia (N)	2018/01/16			108	80 - 120	<0.0050	mg/L		
8885689	Fluoride (F)	2018/01/16	101	80 - 120	102	80 - 120	<0.010	mg/L	NC	20
8885963	Dissolved Chloride (Cl)	2018/01/15	119	80 - 120	103	80 - 120	<0.50	mg/L	NC	20
8885966	Dissolved Sulphate (SO4)	2018/01/15	NC	80 - 120	99	80 - 120	<0.50	mg/L	0.34	20
8886267	Dissolved Aluminum (Al)	2018/01/17			103	80 - 120	<0.00050	mg/L		
8886267	Dissolved Cadmium (Cd)	2018/01/17			96	80 - 120	<0.0000050	mg/L		
8886267	Dissolved Copper (Cu)	2018/01/17			105	80 - 120	<0.000050	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8886267	Dissolved Lead (Pb)	2018/01/17			100	80 - 120	<0.0000050	mg/L		
8886267	Dissolved Zinc (Zn)	2018/01/17			103	80 - 120	<0.00010	mg/L		
8886594	Dissolved Organic Carbon (C)	2018/01/18	102	80 - 120	112	80 - 120	<0.50	mg/L	NC	20
8889271	Nitrate plus Nitrite (N)	2018/01/19			106	80 - 120	<0.0020	mg/L		

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B802746
Report Date: 2018/01/19

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Name Redacted Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RE

COC #: 08449372

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		9-Jan-18	13:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3	KZ-6		9-Jan-18	12:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
4	KZ-9		9-Jan-18	11:10	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6	KZ-15		8-Jan-18	14:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
7	KZ-16		8-Jan-18	15:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
8	KZ-17		8-Jan-18	15:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
9	KZ-18		9-Jan-18	11:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
10	KZ-19		8-Jan-18	11:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	

LABORATORY USE ONLY

CUSTODY SEAL Present	CUSTODY SEAL Intact	COOLER TEMPERATURES
Y	Y	0,1,3/1,1,1
Y	Y	-1,-0,-0

COOLING MEDIA PRESENT (Y) / N

COMMENTS

RECEIVED IN WHITEHORSE

BY: Signature Redacted

2018 -01- 11

TEMP: 1 1 2
3 1 2
3 3 3

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Name Redacted	1/11/2018	10:00	Signature Redacted	2018/01/12	09:45

B802746_COC

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RE(

COC #: 08449373

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from Invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-21		8-Jan-18	13:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
2	KZ-22		8-Jan-18	12:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3	KZ-26		7-Jan-18	15:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
4	KZ-28		7-Jan-18	13:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
5	KZ-37		9-Jan-18	10:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
7																			
8																			
9																			
10																			

LABORATORY USE ONLY

CUSTODY SEAL Present (Y) N	CUSTODY SEAL Intact (Y) N	COOLER TEMPERATURES
Y	Y	9,2/1,1,1
Y	Y	-1,-0,-0

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED WHITEHORSE
BY: Signature Redacted 2 11 00

TEMP: 1 1 1 12
3 1 2
3 3 3

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	1/11/2018	10:00	Signature Redacted	2018/01/12	09:45

B802746_COC

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08449758

Attention: KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2018/02/09
Report #: R2512093
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B808455
Received: 2018/02/01, 09:45

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	1	2018/02/05	2018/02/05	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Low Level	1	2018/02/06	2018/02/06	BBY6SOP-00026	SM 22 2320 B m
Chloride - Low Level	1	N/A	2018/02/05	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	1	N/A	2018/02/06	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	1	N/A	2018/02/06	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	1	N/A	2018/02/05	BBY6SOP-00003	SM 22 5310 C m
Conductance - Low Level	1	2018/02/06	2018/02/06	BBY6SOP-00026	SM 22 2510 B m
Fluoride - Low Level	1	N/A	2018/02/05	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3) (2)	1	N/A	2018/02/06	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	1	N/A	2018/02/06	BBY WI-00033	Auto Calc
Mercury (Dissolved-LowLevel) by CVAF	1	N/A	2018/02/05	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total-LowLevel) by CVAF	1	2018/02/05	2018/02/05	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance (as Cations/Anions Ratio)	1	N/A	2018/02/06	BBY WI-00033	Auto Calc
Ion Balance	1	N/A	2018/02/06	BBY WI-00033	Auto Calc
Sum of cations, anions	1	N/A	2018/02/06	BBY WI-00033	Auto Calc
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2018/02/06	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (dissolved)	1	N/A	2018/02/05	BBY7SOP-00002	EPA 6020b R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2018/02/06	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (total)	1	N/A	2018/02/05	BBY7SOP-00002	EPA 6020b R2 m
Ammonia-N Low Level (Preserved)	1	N/A	2018/02/05	BBY6SOP-00009	EPA 350.1 m
Nitrate+Nitrite (N) (low level)	1	N/A	2018/02/03	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	1	N/A	2018/02/03	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N) Low Level Calc	1	N/A	2018/02/06	BBY WI-00033	Auto Calc
Filter and HNO3 Preserve for Metals	1	N/A	2018/02/06	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (3)	1	2018/02/06	2018/02/06	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate - Low Level	1	N/A	2018/02/06	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2018/02/03	2018/02/03	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	1	2018/02/03	2018/02/03	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	1	2018/02/05	2018/02/06	BBY6SOP-00034	SM 22 2540 D

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08449758

Attention: KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2018/02/09
Report #: R2512093
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B808455
Received: 2018/02/01, 09:45

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(3) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B808455
Report Date: 2018/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SX3002		
Sampling Date		2018/01/31 12:00		
COC Number		08449758		
	UNITS	**KZ-13**	**RDL**	**QC Batch**
Calculated Parameters				
Anion Sum	meq/L	2.3	N/A	8901677
Cation Sum	meq/L	2.4	N/A	8901677
Filter and HNO3 Preservation	N/A	FIELD		ONSITE
Ion Balance	N/A	1.0	0.010	8901675
Ion Balance (% Difference)	%	1.9	N/A	8901676
Nitrate (N)	mg/L	0.101	0.0020	8901656
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8903847
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8903848
Fluoride (F)	mg/L	0.059	0.010	8902886
Dissolved Organic Carbon (C)	mg/L	3.19	0.50	8902913
Acidity (pH 4.5)	mg/L	<1.0	1.0	8902814
Alkalinity (Total as CaCO3)	mg/L	95.3	0.50	8904094
Acidity (pH 8.3)	mg/L	<1.0	1.0	8902814
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8904094
Bicarbonate (HCO3)	mg/L	116	0.50	8904094
Carbonate (CO3)	mg/L	<0.50	0.50	8904094
Hydroxide (OH)	mg/L	<0.50	0.50	8904094
Anions				
Dissolved Sulphate (SO4)	mg/L	19.5	0.50	8904264
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8903656
Nutrients				
Dissolved Phosphorus (P)	mg/L	0.0045	0.0020	8900625
Total Ammonia (N)	mg/L	0.014	0.0050	8902873
Nitrate plus Nitrite (N)	mg/L	0.101	0.0020	8902032
Nitrite (N)	mg/L	<0.0020	0.0020	8902033
Total Phosphorus (P)	mg/L	0.0068	0.0020	8902042
Physical Properties				
Conductivity	uS/cm	223	1.0	8904091
pH	pH	8.16		8904072

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B808455
Report Date: 2018/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SX3002		
Sampling Date		2018/01/31 12:00		
COC Number		08449758		
	UNITS	KZ-13	RDL	QC Batch
Physical Properties				
Total Suspended Solids	mg/L	1.4	1.0	8902660
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B808455
Report Date: 2018/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SX3002		
Sampling Date		2018/01/31 12:00		
COC Number		08449758		
	UNITS	KZ-13	RDL	QC Batch
Calculated Parameters				
Dissolved Hardness (CaCO3)	mg/L	115	0.50	8900947
Elements				
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000020	8902252
Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	mg/L	0.00384	0.00050	8902223
Dissolved Antimony (Sb)	mg/L	0.000042	0.000020	8902223
Dissolved Arsenic (As)	mg/L	0.000199	0.000020	8902223
Dissolved Barium (Ba)	mg/L	0.120	0.000020	8902223
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000010	8902223
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8902223
Dissolved Boron (B)	mg/L	<0.010	0.010	8902223
Dissolved Cadmium (Cd)	mg/L	0.0000472	0.0000050	8902223
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00010	8902223
Dissolved Cobalt (Co)	mg/L	0.0000447	0.0000050	8902223
Dissolved Copper (Cu)	mg/L	0.000378	0.000050	8902223
Dissolved Iron (Fe)	mg/L	0.0877	0.0010	8902223
Dissolved Lead (Pb)	mg/L	0.0000064	0.0000050	8902223
Dissolved Lithium (Li)	mg/L	0.00173	0.00050	8902223
Dissolved Manganese (Mn)	mg/L	0.0830	0.000050	8902223
Dissolved Molybdenum (Mo)	mg/L	0.000824	0.000050	8902223
Dissolved Nickel (Ni)	mg/L	0.000467	0.000020	8902223
Dissolved Phosphorus (P)	mg/L	0.0038	0.0020	8902223
Dissolved Selenium (Se)	mg/L	0.000273	0.000040	8902223
Dissolved Silicon (Si)	mg/L	3.98	0.050	8902223
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	8902223
Dissolved Strontium (Sr)	mg/L	0.105	0.000050	8902223
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000020	8902223
Dissolved Tin (Sn)	mg/L	<0.00020	0.00020	8902223
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00050	8902223
Dissolved Uranium (U)	mg/L	0.00141	0.0000020	8902223
Dissolved Vanadium (V)	mg/L	<0.00020	0.00020	8902223
Dissolved Zinc (Zn)	mg/L	0.00285	0.00010	8902223
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B808455
Report Date: 2018/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SX3002		
Sampling Date		2018/01/31 12:00		
COC Number		08449758		
	UNITS	**KZ-13**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00010	8902223
Dissolved Calcium (Ca)	mg/L	38.9	0.050	8900949
Dissolved Magnesium (Mg)	mg/L	4.22	0.050	8900949
Dissolved Potassium (K)	mg/L	2.19	0.050	8900949
Dissolved Sodium (Na)	mg/L	1.27	0.050	8900949
Dissolved Sulphur (S)	mg/L	5.5	3.0	8900949
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B808455
Report Date: 2018/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SX3002		
Sampling Date		2018/01/31 12:00		
COC Number		08449758		
	UNITS	KZ-13	RDL	QC Batch
Calculated Parameters				
Total Hardness (CaCO3)	mg/L	108	0.50	8900789
Elements				
Total Mercury (Hg)	mg/L	<0.0000020	0.0000020	8902236
Total Metals by ICPMS				
Total Aluminum (Al)	mg/L	0.0137	0.00050	8902743
Total Antimony (Sb)	mg/L	0.000043	0.000020	8902743
Total Arsenic (As)	mg/L	0.000242	0.000020	8902743
Total Barium (Ba)	mg/L	0.116	0.000020	8902743
Total Beryllium (Be)	mg/L	<0.000010	0.000010	8902743
Total Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8902743
Total Boron (B)	mg/L	<0.010	0.010	8902743
Total Cadmium (Cd)	mg/L	0.0000640	0.0000050	8902743
Total Chromium (Cr)	mg/L	<0.00010	0.00010	8902743
Total Cobalt (Co)	mg/L	0.0000507	0.0000050	8902743
Total Copper (Cu)	mg/L	0.000464	0.000050	8902743
Total Iron (Fe)	mg/L	0.187	0.0010	8902743
Total Lead (Pb)	mg/L	0.0000654	0.0000050	8902743
Total Lithium (Li)	mg/L	0.00155	0.00050	8902743
Total Manganese (Mn)	mg/L	0.0838	0.000050	8902743
Total Molybdenum (Mo)	mg/L	0.000805	0.000050	8902743
Total Nickel (Ni)	mg/L	0.000440	0.000020	8902743
Total Phosphorus (P)	mg/L	0.0145	0.0020	8902743
Total Selenium (Se)	mg/L	0.000247	0.000040	8902743
Total Silicon (Si)	mg/L	3.80	0.050	8902743
Total Silver (Ag)	mg/L	<0.0000050	0.0000050	8902743
Total Strontium (Sr)	mg/L	0.101	0.000050	8902743
Total Thallium (Tl)	mg/L	<0.0000020	0.0000020	8902743
Total Tin (Sn)	mg/L	<0.00020	0.00020	8902743
Total Titanium (Ti)	mg/L	0.00062	0.00050	8902743
Total Uranium (U)	mg/L	0.00135	0.0000020	8902743
Total Vanadium (V)	mg/L	<0.00020	0.00020	8902743
Total Zinc (Zn)	mg/L	0.00384	0.00010	8902743
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B808455
Report Date: 2018/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SX3002		
Sampling Date		2018/01/31 12:00		
COC Number		08449758		
	UNITS	**KZ-13**	**RDL**	**QC Batch**
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8902743
Total Calcium (Ca)	mg/L	36.6	0.050	8901203
Total Magnesium (Mg)	mg/L	3.97	0.050	8901203
Total Potassium (K)	mg/L	2.11	0.050	8901203
Total Sodium (Na)	mg/L	1.21	0.050	8901203
Total Sulphur (S)	mg/L	5.6	3.0	8901203
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B808455
Report Date: 2018/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: SX3002
Sample ID: KZ-13
Matrix: Water

Collected: 2018/01/31
Shipped:
Received: 2018/02/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8902814	2018/02/05	2018/02/05	Name Redacted
Alkalinity - Low Level	AT/ALK	8904094	2018/02/06	2018/02/06	
Chloride - Low Level	KONE/COL	8903656	N/A	2018/02/05	
Cyanide SAD (strong acid dissociable)	TECH/COL	8903847	N/A	2018/02/06	
Cyanide WAD (weak acid dissociable)	TECH/COL	8903848	N/A	2018/02/06	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8902913	N/A	2018/02/05	
Conductance - Low Level	AT/ALK	8904091	2018/02/06	2018/02/06	
Fluoride - Low Level	ISE/ISE	8902886	N/A	2018/02/05	
Hardness Total (calculated as CaCO3)	CALC	8900789	N/A	2018/02/06	
Hardness (calculated as CaCO3)	CALC	8900947	N/A	2018/02/06	
Mercury (Dissolved-LowLevel) by CVAF	CV/AF	8902252	N/A	2018/02/05	
Mercury (Total-LowLevel) by CVAF	CV/AF	8902236	2018/02/05	2018/02/05	
Ion Balance (as Cations/Anions Ratio)	CALC	8901675	N/A	2018/02/06	
Ion Balance	CALC	8901676	N/A	2018/02/06	
Sum of cations, anions	CALC	8901677	N/A	2018/02/06	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8900949	N/A	2018/02/06	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8902223	N/A	2018/02/05	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8901203	N/A	2018/02/06	
Elements by ICPMS Low Level (total)	ICP/CRCM	8902743	N/A	2018/02/05	
Ammonia-N Low Level (Preserved)	KONE/COL	8902873	N/A	2018/02/05	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8902032	N/A	2018/02/03	
Nitrite (N) (low level)	TRAA/COL	8902033	N/A	2018/02/03	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8901656	N/A	2018/02/06	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/02	
pH Water	AT/ALK	8904072	2018/02/06	2018/02/06	
Sulphate - Low Level	KONE/COL	8904264	N/A	2018/02/06	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8900625	2018/02/03	2018/02/03	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8902042	2018/02/03	2018/02/03	
Total Suspended Solids-Low Level	BAL/BAL	8902660	2018/02/05	2018/02/06	

Maxxam ID: SX3002 Dup
Sample ID: KZ-13
Matrix: Water

Collected: 2018/01/31
Shipped:
Received: 2018/02/01

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Low Level	AT/ALK	8904094	2018/02/06	2018/02/06	Name
Conductance - Low Level	AT/ALK	8904091	2018/02/06	2018/02/06	Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8902032	N/A	2018/02/03	
Nitrite (N) (low level)	TRAA/COL	8902033	N/A	2018/02/03	
pH Water	AT/ALK	8904072	2018/02/06	2018/02/06	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B808455
Report Date: 2018/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.0°C

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B808455
Report Date: 2018/02/09

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8900625	Dissolved Phosphorus (P)	2018/02/03	90	80 - 120	97	80 - 120	<0.0020	mg/L	NC	20
8902032	Nitrate plus Nitrite (N)	2018/02/03	102	80 - 120	102	80 - 120	<0.0020	mg/L	0	25
8902033	Nitrite (N)	2018/02/03	97	80 - 120	96	80 - 120	<0.0020	mg/L	NC	25
8902042	Total Phosphorus (P)	2018/02/03	NC	80 - 120	91	80 - 120	<0.0020	mg/L	0.45	20
8902223	Dissolved Aluminum (Al)	2018/02/05	104	80 - 120	102	80 - 120	<0.00050	mg/L	1.2	20
8902223	Dissolved Antimony (Sb)	2018/02/05	103	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8902223	Dissolved Arsenic (As)	2018/02/05	99	80 - 120	97	80 - 120	<0.000020	mg/L	NC	20
8902223	Dissolved Barium (Ba)	2018/02/05	93	80 - 120	91	80 - 120	<0.000020	mg/L	0.13	20
8902223	Dissolved Beryllium (Be)	2018/02/05	89	80 - 120	91	80 - 120	<0.000010	mg/L	NC	20
8902223	Dissolved Bismuth (Bi)	2018/02/05	103	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8902223	Dissolved Boron (B)	2018/02/05	90	80 - 120	90	80 - 120	<0.010	mg/L	NC	20
8902223	Dissolved Cadmium (Cd)	2018/02/05	101	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8902223	Dissolved Chromium (Cr)	2018/02/05	100	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
8902223	Dissolved Cobalt (Co)	2018/02/05	99	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8902223	Dissolved Copper (Cu)	2018/02/05	96	80 - 120	96	80 - 120	<0.000050	mg/L	0.72	20
8902223	Dissolved Iron (Fe)	2018/02/05	100	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
8902223	Dissolved Lead (Pb)	2018/02/05	98	80 - 120	97	80 - 120	<0.0000050	mg/L	0.65	20
8902223	Dissolved Lithium (Li)	2018/02/05	87	80 - 120	87	80 - 120	<0.00050	mg/L	4.9	20
8902223	Dissolved Manganese (Mn)	2018/02/05	100	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8902223	Dissolved Molybdenum (Mo)	2018/02/05	104	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8902223	Dissolved Nickel (Ni)	2018/02/05	99	80 - 120	96	80 - 120	<0.000020	mg/L	NC	20
8902223	Dissolved Phosphorus (P)	2018/02/05	98	80 - 120	96	80 - 120	<0.0020	mg/L		
8902223	Dissolved Selenium (Se)	2018/02/05	99	80 - 120	98	80 - 120	<0.000040	mg/L	NC	20
8902223	Dissolved Silicon (Si)	2018/02/05	99	80 - 120	102	80 - 120	<0.050	mg/L	7.1	20
8902223	Dissolved Silver (Ag)	2018/02/05	99	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8902223	Dissolved Strontium (Sr)	2018/02/05	96	80 - 120	94	80 - 120	<0.000050	mg/L	5.1	20
8902223	Dissolved Thallium (Tl)	2018/02/05	104	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8902223	Dissolved Tin (Sn)	2018/02/05	100	80 - 120	98	80 - 120	<0.00020	mg/L	NC	20
8902223	Dissolved Titanium (Ti)	2018/02/05	99	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8902223	Dissolved Uranium (U)	2018/02/05	102	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8902223	Dissolved Vanadium (V)	2018/02/05	100	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B808455
Report Date: 2018/02/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8902223	Dissolved Zinc (Zn)	2018/02/05	100	80 - 120	99	80 - 120	<0.00010	mg/L	2.8	20
8902223	Dissolved Zirconium (Zr)	2018/02/05	101	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8902236	Total Mercury (Hg)	2018/02/05	95	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	20
8902252	Dissolved Mercury (Hg)	2018/02/05	90	80 - 120	92	80 - 120	<0.0000020	mg/L	NC	20
8902660	Total Suspended Solids	2018/02/06			97	80 - 120	<1.0	mg/L		
8902743	Total Aluminum (Al)	2018/02/05	99	80 - 120	99	80 - 120	<0.00050	mg/L	4.6	20
8902743	Total Antimony (Sb)	2018/02/05	99	80 - 120	96	80 - 120	<0.000020	mg/L	2.0	20
8902743	Total Arsenic (As)	2018/02/05	98	80 - 120	95	80 - 120	<0.000020	mg/L	2.5	20
8902743	Total Barium (Ba)	2018/02/05	89	80 - 120	88	80 - 120	<0.000020	mg/L	0.95	20
8902743	Total Beryllium (Be)	2018/02/05	84	80 - 120	87	80 - 120	<0.000010	mg/L	NC	20
8902743	Total Bismuth (Bi)	2018/02/05	96	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8902743	Total Boron (B)	2018/02/05	87	80 - 120	87	80 - 120	<0.010	mg/L	0.48	20
8902743	Total Cadmium (Cd)	2018/02/05	95	80 - 120	94	80 - 120	<0.0000050	mg/L	NC	20
8902743	Total Chromium (Cr)	2018/02/05	97	80 - 120	94	80 - 120	<0.00010	mg/L	3.0	20
8902743	Total Cobalt (Co)	2018/02/05	94	80 - 120	93	80 - 120	<0.0000050	mg/L	NC	20
8902743	Total Copper (Cu)	2018/02/05	91	80 - 120	92	80 - 120	<0.000050	mg/L	2.1	20
8902743	Total Iron (Fe)	2018/02/05	99	80 - 120	95	80 - 120	<0.0010	mg/L	1.4	20
8902743	Total Lead (Pb)	2018/02/05	93	80 - 120	93	80 - 120	<0.0000050	mg/L	15	20
8902743	Total Lithium (Li)	2018/02/05	82	80 - 120	83	80 - 120	<0.00050	mg/L	2.4	20
8902743	Total Manganese (Mn)	2018/02/05	94	80 - 120	93	80 - 120	<0.000050	mg/L	1.9	20
8902743	Total Molybdenum (Mo)	2018/02/05	105	80 - 120	99	80 - 120	<0.000050	mg/L	0.23	20
8902743	Total Nickel (Ni)	2018/02/05	94	80 - 120	94	80 - 120	<0.000020	mg/L	2.6	20
8902743	Total Phosphorus (P)	2018/02/05	99	80 - 120	94	80 - 120	<0.0020	mg/L	4.2	20
8902743	Total Selenium (Se)	2018/02/05	97	80 - 120	93	80 - 120	<0.000040	mg/L	0.17	20
8902743	Total Silicon (Si)	2018/02/05	97	80 - 120	96	80 - 120	<0.050	mg/L	0.19	20
8902743	Total Silver (Ag)	2018/02/05	97	80 - 120	93	80 - 120	<0.0000050	mg/L	NC	20
8902743	Total Strontium (Sr)	2018/02/05	NC	80 - 120	92	80 - 120	<0.000050	mg/L	1.2	20
8902743	Total Thallium (Tl)	2018/02/05	99	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8902743	Total Tin (Sn)	2018/02/05	100	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
8902743	Total Titanium (Ti)	2018/02/05	97	80 - 120	93	80 - 120	<0.00050	mg/L	NC	20
8902743	Total Uranium (U)	2018/02/05	100	80 - 120	98	80 - 120	<0.0000020	mg/L	0.41	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B808455
Report Date: 2018/02/09

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8902743	Total Vanadium (V)	2018/02/05	98	80 - 120	95	80 - 120	<0.00020	mg/L	6.9	20
8902743	Total Zinc (Zn)	2018/02/05	93	80 - 120	93	80 - 120	<0.00010	mg/L	17	20
8902743	Total Zirconium (Zr)	2018/02/05	100	80 - 120	95	80 - 120	<0.00010	mg/L	NC	20
8902814	Acidity (pH 4.5)	2018/02/05					<1.0	mg/L	NC	20
8902814	Acidity (pH 8.3)	2018/02/05			105	80 - 120	<1.0	mg/L	NC	20
8902873	Total Ammonia (N)	2018/02/05	100	80 - 120	108	80 - 120	<0.0050	mg/L	NC	20
8902886	Fluoride (F)	2018/02/05	100	80 - 120	102	80 - 120	<0.010	mg/L	1.4	20
8902913	Dissolved Organic Carbon (C)	2018/02/05	92	80 - 120	101	80 - 120	<0.50	mg/L	3.3	20
8903656	Dissolved Chloride (Cl)	2018/02/05	106	80 - 120	99	80 - 120	<0.50	mg/L	1.6	20
8903847	Strong Acid Dissoc. Cyanide (CN)	2018/02/06	99	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8903848	Weak Acid Dissoc. Cyanide (CN)	2018/02/06			101	80 - 120	<0.00050	mg/L		
8904072	pH	2018/02/06			101	97 - 103			0.20	20
8904091	Conductivity	2018/02/06			100	80 - 120	<1.0	uS/cm	0.90	20
8904094	Alkalinity (PP as CaCO3)	2018/02/06					<0.50	mg/L	NC	20
8904094	Alkalinity (Total as CaCO3)	2018/02/06	96	80 - 120	97	80 - 120	<0.50	mg/L	0.038	20
8904094	Bicarbonate (HCO3)	2018/02/06					<0.50	mg/L	0.038	20
8904094	Carbonate (CO3)	2018/02/06					<0.50	mg/L	NC	20
8904094	Hydroxide (OH)	2018/02/06					<0.50	mg/L	NC	20
8904264	Dissolved Sulphate (SO4)	2018/02/06			100	80 - 120	<0.50	mg/L		

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B808455
Report Date: 2018/02/09

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Name Redacted , Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC # 08449758

BBY FCD-00077/05

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)	
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:	
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah
Phone:		Phone:	(867) 668-6463	Site #:	
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	

...und Time (TAT) Required

[x] Regular TAT 5 days (Most analyses)

PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS

Rush TAT (Surcharges will be applied)

[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days

Date Required:

Rush Confirmation #:

Regulatory Criteria

[ ] BC CSR Soil [ ] BC CSR Water [ ] CCME (Specify) [ ] Other (Specify) [ ] Drinking Water [ ] BC Water Quality

Special Instructions

[ ] Return Cooler [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-13		31-Jan-18	12:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3																			
4																			
6																			
7																			
8																			
9																			
10																			

LABORATORY USE ONLY

CUSTODY SEAL Present (Y)	CUSTODY SEAL Intact (Y)	COOLER TEMPERATURES
Y	Y	4.4.4

COOLING MEDIA PRESENT (Y) / N

COMMENTS

RECEIVED IN WHITEHORSE 0945

Signature Redacted

2018-02-01

TEMP: 3 / 3 / 3

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	01/02/2018	9:00	Signature Redacted	2018/02/02	15:15

B808455_COC

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 20180217-3, 20180217-4

Attention: KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2018/03/22
Report #: R2531587
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B812124
Received: 2018/02/16, 09:25

Sample Matrix: Water
Samples Received: 17

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	15	2018/02/20	2018/02/20	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Low Level	1	2018/02/19	2018/02/20	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Low Level	11	2018/02/19	2018/02/21	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Low Level	2	2018/02/20	2018/02/20	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Low Level	1	2018/02/20	2018/02/21	BBY6SOP-00026	SM 22 2320 B m
Chloride - Low Level	14	N/A	2018/02/19	BBY6SOP-00011	SM 22 4500-Cl- E m
Chloride - Low Level	1	N/A	2018/02/21	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	15	N/A	2018/02/20	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	15	N/A	2018/02/20	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	15	N/A	2018/02/20	BBY6SOP-00003	SM 22 5310 C m
Conductance - Low Level	9	2018/02/19	2018/02/19	BBY6SOP-00026	SM 22 2510 B m
Conductance - Low Level	3	2018/02/19	2018/02/20	BBY6SOP-00026	SM 22 2510 B m
Conductance - Low Level	2	2018/02/20	2018/02/20	BBY6SOP-00026	SM 22 2510 B m
Conductance - Low Level	1	2018/02/20	2018/02/21	BBY6SOP-00026	SM 22 2510 B m
Fluoride - Low Level	15	N/A	2018/02/19	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3) (2)	15	N/A	2018/02/21	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3) (2)	1	N/A	2018/03/20	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	15	N/A	2018/02/21	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	1	N/A	2018/03/20	BBY WI-00033	Auto Calc
Mercury (Dissolved) by CVAF	15	N/A	2018/02/19	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total) by CVAF	15	2018/02/19	2018/02/19	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Ion Balance (as Cations/Anions Ratio)	15	N/A	2018/02/21	BBY WI-00033	Auto Calc
Ion Balance	15	N/A	2018/02/21	BBY WI-00033	Auto Calc
Sum of cations, anions	15	N/A	2018/02/21	BBY WI-00033	Auto Calc
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	15	N/A	2018/02/21	BBY WI-00033	Auto Calc
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2018/03/20	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (dissolved)	15	N/A	2018/02/20	BBY7SOP-00002	EPA 6020b R2 m
Elements by ICPMS Low Level (dissolved)	2	N/A	2018/03/19	BBY7SOP-00002	EPA 6020b R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	15	N/A	2018/02/21	BBY WI-00033	Auto Calc

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 20180217-3, 20180217-4

Attention: KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2018/03/22
Report #: R2531587
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B812124
Received: 2018/02/16, 09:25

Sample Matrix: Water
Samples Received: 17

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2018/03/20	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (total)	15	N/A	2018/02/21	BBY7SOP-00002	EPA 6020b R2 m
Elements by ICPMS Low Level (total)	2	N/A	2018/03/19	BBY7SOP-00002	EPA 6020b R2 m
Ammonia-N Low Level (Preserved)	15	N/A	2018/02/20	BBY6SOP-00009	EPA 350.1 m
Nitrate+Nitrite (N) (low level)	15	N/A	2018/02/17	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	15	N/A	2018/02/17	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N) Low Level Calc	15	N/A	2018/02/17	BBY WI-00033	Auto Calc
Filter and HNO3 Preserve for Metals	8	N/A	2018/02/19	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	6	N/A	2018/02/20	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	1	N/A	2018/02/22	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	1	N/A	2018/03/19	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (3)	1	2018/02/19	2018/02/20	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (3)	11	2018/02/19	2018/02/21	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (3)	2	2018/02/20	2018/02/20	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (3)	1	2018/02/21	2018/02/21	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate - Low Level	15	N/A	2018/02/19	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	14	2018/02/17	2018/02/20	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2018/02/22	2018/02/22	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	14	2018/02/17	2018/02/20	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	1	2018/02/22	2018/02/22	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	15	2018/02/20	2018/02/21	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 20180217-3, 20180217-4

Attention: KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2018/03/22
Report #: R2531587
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

MAXXAM JOB #: B812124
Received: 2018/02/16, 09:25

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(3) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone and Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SZ1091		SZ1092	SZ1093	SZ1094		
Sampling Date		2018/02/15 10:10		2018/02/15 09:40	2018/02/14 13:55	2018/02/14 11:40		
COC Number		20180217-3		20180217-3	20180217-3	20180217-3		
	UNITS	KZ-2	QC Batch	KZ-6	KZ-9	KZ-15	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	3.3	8913525	3.6	4.9	5.9	N/A	8913525
Cation Sum	meq/L	2.9	8913525	3.5	4.7	5.9	N/A	8913525
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	FIELD	FIELD		ONSITE
Ion Balance	N/A	0.89	8913523	0.96	0.96	1.0	0.010	8913523
Ion Balance (% Difference)	%	6.1	8913524	1.9	2.3	0.15	N/A	8913524
Nitrate (N)	mg/L	0.186	8913481	0.141	0.201	0.196	0.0020	8913481
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8914781	0.00062	0.00071	0.00073	0.00050	8914781
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8914789	0.00085	0.00087	0.00054	0.00050	8914789
Fluoride (F)	mg/L	0.052	8914152	0.075	0.110	0.140	0.010	8914152
Dissolved Organic Carbon (C)	mg/L	<0.50	8915206	1.19	1.23	1.13	0.50	8915205
Acidity (pH 4.5)	mg/L	<1.0	8914654	<1.0	<1.0	<1.0	1.0	8914654
Alkalinity (Total as CaCO3)	mg/L	85.6	8914144	150	203	249	0.50	8914144
Acidity (pH 8.3)	mg/L	<1.0	8914654	<1.0	11.4	<1.0	1.0	8914654
Alkalinity (PP as CaCO3)	mg/L	<0.50	8914144	1.81	3.61	6.39	0.50	8914144
Bicarbonate (HCO3)	mg/L	104	8914144	178	239	289	0.50	8914144
Carbonate (CO3)	mg/L	<0.50	8914144	2.17	4.33	7.67	0.50	8914144
Hydroxide (OH)	mg/L	<0.50	8914144	<0.50	<0.50	<0.50	0.50	8914144
Anions								
Dissolved Sulphate (SO4)	mg/L	76.8	8915692	26.7	35.4	42.5	0.50	8915692
Dissolved Chloride (Cl)	mg/L	<0.50	8915689	0.79	3.1	<0.50	0.50	8915689
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0093	8913615	0.0064	0.0101	0.0095	0.0020	8913615
Total Ammonia (N)	mg/L	<0.0050	8915207	0.0070	0.022	0.028	0.0050	8915207
Nitrate plus Nitrite (N)	mg/L	0.186	8913584	0.141	0.201	0.196	0.0020	8913584
Nitrite (N)	mg/L	<0.0020	8913585	<0.0020	<0.0020	<0.0020	0.0020	8913585
Total Phosphorus (P)	mg/L	0.0067	8913614	0.0252	0.0125	0.0085	0.0020	8913614
Physical Properties								
Conductivity	uS/cm	309	8914145	337	456	536	1.0	8914145

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SZ1091		SZ1092	SZ1093	SZ1094		
Sampling Date		2018/02/15 10:10		2018/02/15 09:40	2018/02/14 13:55	2018/02/14 11:40		
COC Number		20180217-3		20180217-3	20180217-3	20180217-3		
	UNITS	KZ-2	QC Batch	KZ-6	KZ-9	KZ-15	RDL	QC Batch
pH	pH	8.11	8914139	8.34	8.37	8.45		8914139
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8914757	1.0	2.8	<1.0	1.0	8914757
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SZ1095	SZ1096	SZ1097		SZ1098		
Sampling Date		2018/02/14 12:40	2018/02/14 12:05	2018/02/14 14:30		2018/02/13 14:50		
COC Number		20180217-3	20180217-3	20180217-3		20180217-3		
	UNITS	KZ-16	KZ-17	KZ-18	QC Batch	KZ-19	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	7.8	6.2	4.6	8913525	0.032	N/A	8913525
Cation Sum	meq/L	7.7	6.2	4.6	8913525	0.0013	N/A	8913525
Filter and HNO3 Preservation	N/A	FIELD	FIELD	FIELD	ONSITE	FIELD		ONSITE
Ion Balance	N/A	0.99	1.0	0.99	8913523	0.040 (1)	0.010	8913523
Ion Balance (% Difference)	%	0.61	0.13	0.50	8913524	92 (1)	N/A	8913524
Nitrate (N)	mg/L	0.274	0.304	0.239	8913481	<0.0020	0.0020	8913481
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00066	0.00052	0.00056	8914781	0.00051	0.00050	8914781
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00060	<0.00050	0.00058	8914789	0.00063	0.00050	8914789
Fluoride (F)	mg/L	0.080	0.073	0.084	8914152	0.010	0.010	8914152
Dissolved Organic Carbon (C)	mg/L	1.67	1.07	<0.50	8915206	0.57	0.50	8915206
Acidity (pH 4.5)	mg/L	<1.0	<1.0	<1.0	8914654	<1.0	1.0	8914654
Alkalinity (Total as CaCO3)	mg/L	327	256	204	8914144	0.85	0.50	8914144
Acidity (pH 8.3)	mg/L	17.7	1.9	<1.0	8914654	<1.0	1.0	8914654
Alkalinity (PP as CaCO3)	mg/L	7.07	6.27	5.52	8914144	<0.50	0.50	8914144
Bicarbonate (HCO3)	mg/L	382	297	236	8914144	1.04	0.50	8914144
Carbonate (CO3)	mg/L	8.48	7.52	6.62	8914144	<0.50	0.50	8914144
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	8914144	<0.50	0.50	8914144
Anions								
Dissolved Sulphate (SO4)	mg/L	58.5	50.2	25.1	8915692	0.72	0.50	8915692
Dissolved Chloride (Cl)	mg/L	0.60	<0.50	<0.50	8915689	<0.50	0.50	8915689
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0181	0.0125	0.0704	8913615	<0.0020	0.0020	8913615
Total Ammonia (N)	mg/L	0.015	0.027	0.013	8915207	<0.0050	0.0050	8915207
Nitrate plus Nitrite (N)	mg/L	0.274	0.304	0.239	8913584	<0.0020	0.0020	8913584
Nitrite (N)	mg/L	<0.0020	<0.0020	<0.0020	8913585	<0.0020	0.0020	8913585
Total Phosphorus (P)	mg/L	0.0210	0.0116	0.0671	8913614	<0.0020	0.0020	8913614

RDL = Reportable Detection Limit

N/A = Not Applicable

(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SZ1095	SZ1096	SZ1097		SZ1098		
Sampling Date		2018/02/14 12:40	2018/02/14 12:05	2018/02/14 14:30		2018/02/13 14:50		
COC Number		20180217-3	20180217-3	20180217-3		20180217-3		
	UNITS	KZ-16	KZ-17	KZ-18	QC Batch	KZ-19	RDL	QC Batch
Physical Properties								
Conductivity	uS/cm	701	572	422	8914145	1.4	1.0	8914145
pH	pH	8.42	8.42	8.46	8914139	5.87		8914139
Physical Properties								
Total Suspended Solids	mg/L	<1.0	1.3	1.1	8914757	<1.0	1.0	8914708
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SZ1099		SZ1100		SZ1101	SZ1102		
Sampling Date		2018/02/13 14:45		2018/02/13 14:15		2018/02/13 12:15	2018/02/13 14:20		
COC Number		20180217-4		20180217-4		20180217-4	20180217-4		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	KZ-28	RDL	QC Batch
Calculated Parameters									
Anion Sum	meq/L	9.1	8913525	8.0	8913525	6.5	7.9	N/A	8913525
Cation Sum	meq/L	8.9	8913525	7.7	8913525	6.6	8.0	N/A	8913525
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD	FIELD		ONSITE
Ion Balance	N/A	0.97	8913523	0.96	8913523	1.0	1.0	0.010	8913523
Ion Balance (% Difference)	%	1.4	8913524	1.8	8913524	1.0	0.31	N/A	8913524
Nitrate (N)	mg/L	0.273	8913481	0.278	8913481	0.289	0.280	0.0020	8913481
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00066	8914781	0.00060	8914781	0.00057	0.00060	0.00050	8914781
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00067	8914789	0.00067	8914789	0.00076	<0.00050	0.00050	8914789
Fluoride (F)	mg/L	0.290	8914152	0.190	8914152	0.120	0.200	0.010	8914152
Dissolved Organic Carbon (C)	mg/L	2.33	8915205	1.62	8915205	1.66	1.74	0.50	8915205
Acidity (pH 4.5)	mg/L	<1.0	8914654	<1.0	8914654	<1.0	<1.0	1.0	8914654
Alkalinity (Total as CaCO3)	mg/L	390	8914144	333	8915197	260	329	0.50	8914144
Acidity (pH 8.3)	mg/L	16.2	8914654	11.2	8914654	<1.0	9.4	1.0	8914654
Alkalinity (PP as CaCO3)	mg/L	10.2	8914144	4.63	8915197	6.34	<0.50	0.50	8914144
Bicarbonate (HCO3)	mg/L	451	8914144	395	8915197	302	402	0.50	8914144
Carbonate (CO3)	mg/L	12.2	8914144	5.56	8915197	7.61	<0.50	0.50	8914144
Hydroxide (OH)	mg/L	<0.50	8914144	<0.50	8915197	<0.50	<0.50	0.50	8914144
Anions									
Dissolved Sulphate (SO4)	mg/L	62.4	8915692	62.4	8915692	59.4	63.1	0.50	8915692
Dissolved Chloride (Cl)	mg/L	<0.50	8915689	0.53	8916300	<0.50	<0.50	0.50	8915689
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0181	8913615	0.0036	8917220	0.0097	0.0175	0.0020	8913615
Total Ammonia (N)	mg/L	0.17	8915207	0.21	8915207	0.057	0.10	0.0050	8915207
Nitrate plus Nitrite (N)	mg/L	0.273	8913584	0.278	8913584	0.289	0.280	0.0020	8913584
Nitrite (N)	mg/L	<0.0020	8913585	<0.0020	8913585	<0.0020	<0.0020	0.0020	8913585
Total Phosphorus (P)	mg/L	0.0149	8913614	0.0073	8917262	0.0070	0.0171	0.0020	8913614
Physical Properties									
Conductivity	uS/cm	807	8914145	714	8915193	590	711	1.0	8914145

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SZ1099		SZ1100		SZ1101	SZ1102		
Sampling Date		2018/02/13 14:45		2018/02/13 14:15		2018/02/13 12:15	2018/02/13 14:20		
COC Number		20180217-4		20180217-4		20180217-4	20180217-4		
	UNITS	KZ-21	QC Batch	KZ-22	QC Batch	KZ-26	KZ-28	RDL	QC Batch
pH	pH	8.43	8914139	8.36	8914927	8.43	8.12		8914139
Physical Properties									
Total Suspended Solids	mg/L	<1.0	8914708	1.9	8914708	<1.0	1.0	1.0	8914708
RDL = Reportable Detection Limit									

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SZ1103		SZ1104		SZ1105		
Sampling Date		2018/02/14 13:40		2018/02/15 11:10		2018/02/16 09:25		
COC Number		20180217-4		20180217-4		20180217-4		
	UNITS	KZ-37	QC Batch	KZ-13	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Anion Sum	meq/L	4.5	8913525	2.0	8913525	0.012	N/A	8913525
Cation Sum	meq/L	4.9	8913525	1.9	8913525	0.0039	N/A	8913525
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE			
Ion Balance	N/A	1.1	8913523	0.96	8913523	0.34 (1)	0.010	8913523
Ion Balance (% Difference)	%	3.5	8913524	1.9	8913524	50 (1)	N/A	8913524
Nitrate (N)	mg/L	0.201	8913481	0.140	8913481	<0.0020	0.0020	8913481
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00058	8914781	0.00065	8914781	<0.00050	0.00050	8914784
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00058	8914789	<0.00050	8914789	<0.00050	0.00050	8914796
Fluoride (F)	mg/L	0.110	8914152	0.055	8914152	0.011	0.010	8914152
Dissolved Organic Carbon (C)	mg/L	1.17	8915205	2.36	8915206	<0.50	0.50	8915205
Acidity (pH 4.5)	mg/L	<1.0	8914654	<1.0	8914654	<1.0	1.0	8914654
Alkalinity (Total as CaCO3)	mg/L	195	8915197	76.3	8914144	0.55	0.50	8914136
Acidity (pH 8.3)	mg/L	7.0	8914654	<1.0	8914654	<1.0	1.0	8914654
Alkalinity (PP as CaCO3)	mg/L	<0.50	8915197	<0.50	8914144	<0.50	0.50	8914136
Bicarbonate (HCO3)	mg/L	237	8915197	93.0	8914144	0.67	0.50	8914136
Carbonate (CO3)	mg/L	<0.50	8915197	<0.50	8914144	<0.50	0.50	8914136
Hydroxide (OH)	mg/L	<0.50	8915197	<0.50	8914144	<0.50	0.50	8914136
Anions								
Dissolved Sulphate (SO4)	mg/L	30.1	8915692	19.4	8915692	<0.50	0.50	8915692
Dissolved Chloride (Cl)	mg/L	<0.50	8915689	0.67	8915689	<0.50	0.50	8915689
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0127	8913615	0.0089	8913615	0.0020	0.0020	8913615
Total Ammonia (N)	mg/L	0.027	8915207	0.016	8915207	<0.0050	0.0050	8915207
Nitrate plus Nitrite (N)	mg/L	0.201	8913584	0.140	8913584	<0.0020	0.0020	8913584
Nitrite (N)	mg/L	<0.0020	8913585	<0.0020	8913585	<0.0020	0.0020	8913585
Total Phosphorus (P)	mg/L	0.0128	8913614	0.0109	8913614	0.0029	0.0020	8913614

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Ion balance out of optimal range due to high measurement uncertainty at this level (Ion Sum < 0.4 meq/L for both cations and anions).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SZ1103		SZ1104		SZ1105		
Sampling Date		2018/02/14 13:40		2018/02/15 11:10		2018/02/16 09:25		
COC Number		20180217-4		20180217-4		20180217-4		
	UNITS	KZ-37	QC Batch	KZ-13	QC Batch	TRIP BLANK	RDL	QC Batch
Physical Properties								
Conductivity	uS/cm	437	8915193	191	8914145	1.1	1.0	8914137
pH	pH	8.28	8914927	8.03	8914139	5.41		8914134
Physical Properties								
Total Suspended Solids	mg/L	1.2	8914757	1.0	8914757	<1.0	1.0	8914757
RDL = Reportable Detection Limit								

Maxxam ID		TC7775	TC7776	
Sampling Date		2018/02/15 10:10	2018/02/15 09:40	
COC Number		20180217-3	20180217-3	
	UNITS	KZ-2 VIAL 2	KZ-6 VIAL 2	QC Batch
Calculated Parameters				
Filter and HNO3 Preservation	N/A	FIELD	FIELD	ONSITE

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SZ1091		SZ1092		SZ1093		
Sampling Date		2018/02/15 10:10		2018/02/15 09:40		2018/02/14 13:55		
COC Number		20180217-3		20180217-3		20180217-3		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO3)	mg/L	141	8913415	168	8913415	225	0.50	8913415
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8913973	<0.0000020	8913973	<0.0000020	0.0000020	8913973
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00202	8914082	0.00214	8914082	0.00292	0.00050	8914082
Dissolved Antimony (Sb)	mg/L	0.000032	8914082	0.000023	8914082	0.000026	0.000020	8914082
Dissolved Arsenic (As)	mg/L	0.000083	8914082	0.000093	8914082	0.000219	0.000020	8914082
Dissolved Barium (Ba)	mg/L	0.0794	8914082	0.0535	8914082	0.117	0.000020	8914082
Dissolved Beryllium (Be)	mg/L	<0.000010	8914082	<0.000010	8914082	<0.000010	0.000010	8914082
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8914082	<0.0000050	8914082	<0.0000050	0.0000050	8914082
Dissolved Boron (B)	mg/L	<0.010	8914082	<0.010	8914082	<0.010	0.010	8914082
Dissolved Cadmium (Cd)	mg/L	0.000300 (1)	8916601	0.0000882	8914082	0.0000876	0.0000050	8914082
Dissolved Chromium (Cr)	mg/L	<0.00010	8914082	<0.00010	8914082	<0.00010	0.00010	8914082
Dissolved Cobalt (Co)	mg/L	0.0000173	8914082	0.0000248	8914082	0.000234	0.0000050	8914082
Dissolved Copper (Cu)	mg/L	0.000717 (1)	8916601	0.000487	8914082	0.000245	0.000050	8914082
Dissolved Iron (Fe)	mg/L	0.253 (1)	8916601	0.377	8916601	0.274	0.0010	8914082
Dissolved Lead (Pb)	mg/L	0.0000394 (1)	8916601	0.0000401	8914082	0.0000126	0.0000050	8914082
Dissolved Lithium (Li)	mg/L	0.00159	8914082	0.00067	8914082	0.00560	0.00050	8914082
Dissolved Manganese (Mn)	mg/L	0.00333 (1)	8916601	0.00496	8914082	0.193	0.000050	8914082
Dissolved Molybdenum (Mo)	mg/L	0.000743	8914082	0.000748	8914082	0.000730	0.000050	8914082
Dissolved Nickel (Ni)	mg/L	0.000384 (1)	8916601	0.000286	8914082	0.000782	0.000020	8914082
Dissolved Phosphorus (P)	mg/L	0.0033	8914082	0.0050	8914082	0.0026	0.0020	8914082
Dissolved Selenium (Se)	mg/L	0.00233	8914082	0.00165	8914082	0.00112	0.000040	8914082
Dissolved Silicon (Si)	mg/L	2.40	8914082	3.06	8914082	4.24	0.050	8914082
Dissolved Silver (Ag)	mg/L	<0.0000050	8914082	<0.0000050	8914082	<0.0000050	0.0000050	8914082
Dissolved Strontium (Sr)	mg/L	0.152	8914082	0.167	8914082	0.262	0.000050	8914082
Dissolved Thallium (Tl)	mg/L	0.0000030	8914082	<0.0000020	8914082	<0.0000020	0.0000020	8914082
Dissolved Tin (Sn)	mg/L	<0.00020	8914082	<0.00020	8914082	<0.00020	0.00020	8914082
Dissolved Titanium (Ti)	mg/L	<0.00050	8914082	<0.00050	8914082	<0.00050	0.00050	8914082

RDL = Reportable Detection Limit
(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SZ1091		SZ1092		SZ1093		
Sampling Date		2018/02/15 10:10		2018/02/15 09:40		2018/02/14 13:55		
COC Number		20180217-3		20180217-3		20180217-3		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	RDL	QC Batch
Dissolved Uranium (U)	mg/L	0.00517	8914082	0.00133	8914082	0.00181	0.0000020	8914082
Dissolved Vanadium (V)	mg/L	<0.00020	8914082	<0.00020	8914082	<0.00020	0.00020	8914082
Dissolved Zinc (Zn)	mg/L	0.0307	8914082	0.00293	8914082	0.0168	0.00010	8914082
Dissolved Zirconium (Zr)	mg/L	<0.00010	8914082	<0.00010	8914082	<0.00010	0.00010	8914082
Dissolved Calcium (Ca)	mg/L	44.5	8913479	55.6	8913479	75.1	0.050	8913479
Dissolved Magnesium (Mg)	mg/L	7.37	8913479	7.07	8913479	9.09	0.050	8913479
Dissolved Potassium (K)	mg/L	2.53	8913479	1.44	8913479	1.89	0.050	8913479
Dissolved Sodium (Na)	mg/L	1.06	8913479	0.990	8913479	2.71	0.050	8913479
Dissolved Sulphur (S)	mg/L	21.3	8913479	7.6	8913479	10.5	3.0	8913479
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SZ1094		SZ1095	SZ1096		
Sampling Date		2018/02/14 11:40		2018/02/14 12:40	2018/02/14 12:05		
COC Number		20180217-3		20180217-3	20180217-3		
	UNITS	KZ-15	QC Batch	KZ-16	KZ-17	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO3)	mg/L	290	8913415	378	305	0.50	8913415
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	8913973	<0.0000020	<0.0000020	0.0000020	8913973
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00211	8914082	0.00198	0.00100	0.00050	8914082
Dissolved Antimony (Sb)	mg/L	0.000033	8914082	0.000033	0.000025	0.000020	8914082
Dissolved Arsenic (As)	mg/L	0.000299	8914082	0.000186	0.000222	0.000020	8914082
Dissolved Barium (Ba)	mg/L	0.103	8914082	0.136	0.115	0.000020	8914082
Dissolved Beryllium (Be)	mg/L	<0.000010	8914082	<0.000010	<0.000010	0.000010	8914082
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8914082	<0.0000050	<0.0000050	0.0000050	8914082
Dissolved Boron (B)	mg/L	<0.010	8914082	<0.010	<0.010	0.010	8914082
Dissolved Cadmium (Cd)	mg/L	0.0000804	8914082	0.0000483	0.0000363	0.0000050	8914082
Dissolved Chromium (Cr)	mg/L	<0.00010	8914082	<0.00010	<0.00010	0.00010	8914082
Dissolved Cobalt (Co)	mg/L	0.0000617	8914082	0.0000064	0.0000067	0.0000050	8914082
Dissolved Copper (Cu)	mg/L	0.000215	8914082	0.000472	0.000331	0.000050	8914082
Dissolved Iron (Fe)	mg/L	0.0082	8914082	0.0020	<0.0010	0.0010	8914082
Dissolved Lead (Pb)	mg/L	<0.0000050	8914082	0.0000279	0.0000093	0.0000050	8914082
Dissolved Lithium (Li)	mg/L	0.00483	8914082	0.00646	0.00348	0.00050	8914082
Dissolved Manganese (Mn)	mg/L	0.0883	8914082	0.000505	0.000121	0.000050	8914082
Dissolved Molybdenum (Mo)	mg/L	0.00171	8914082	0.000287	0.000680	0.000050	8914082
Dissolved Nickel (Ni)	mg/L	0.00139	8914082	0.000935	0.000669	0.000020	8914082
Dissolved Phosphorus (P)	mg/L	0.0041	8914082	0.0032	0.0033	0.0020	8914082
Dissolved Selenium (Se)	mg/L	0.00145	8914082	0.00173	0.00156	0.000040	8914082
Dissolved Silicon (Si)	mg/L	4.24	8914082	4.88	4.10	0.050	8914082
Dissolved Silver (Ag)	mg/L	<0.0000050	8914082	<0.0000050	<0.0000050	0.0000050	8914082
Dissolved Strontium (Sr)	mg/L	0.264	8914082	0.376	0.294	0.000050	8914082
Dissolved Thallium (Tl)	mg/L	<0.0000020	8914082	<0.0000020	<0.0000020	0.0000020	8914082
Dissolved Tin (Sn)	mg/L	<0.00020	8914082	<0.00020	<0.00020	0.00020	8914082
Dissolved Titanium (Ti)	mg/L	<0.00050	8914082	<0.00050	<0.00050	0.00050	8914082
Dissolved Uranium (U)	mg/L	0.00678	8914082	0.00407	0.00419	0.0000020	8914082

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SZ1094		SZ1095	SZ1096		
Sampling Date		2018/02/14 11:40		2018/02/14 12:40	2018/02/14 12:05		
COC Number		20180217-3		20180217-3	20180217-3		
	UNITS	KZ-15	QC Batch	KZ-16	KZ-17	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	8914082	<0.00020	<0.00020	0.00020	8914082
Dissolved Zinc (Zn)	mg/L	0.0107	8914082	0.00463	0.00349	0.00010	8916601
Dissolved Zirconium (Zr)	mg/L	<0.00010	8914082	<0.00010	<0.00010	0.00010	8914082
Dissolved Calcium (Ca)	mg/L	81.8	8913479	108	91.0	0.050	8913479
Dissolved Magnesium (Mg)	mg/L	20.8	8913479	26.3	18.9	0.050	8913479
Dissolved Potassium (K)	mg/L	1.54	8913479	1.95	1.47	0.050	8913479
Dissolved Sodium (Na)	mg/L	1.59	8913479	2.21	1.59	0.050	8913479
Dissolved Sulphur (S)	mg/L	12.6	8913479	16.9	13.7	3.0	8913479

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SZ1097	SZ1098		SZ1099		
Sampling Date		2018/02/14 14:30	2018/02/13 14:50		2018/02/13 14:45		
COC Number		20180217-3	20180217-3		20180217-4		
	UNITS	KZ-18	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO3)	mg/L	226	<0.50	8913415	432	0.50	8913415
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8913973	<0.0000020	0.0000020	8913973
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00237	<0.00050	8914082	0.00550 (1)	0.00050	8916601
Dissolved Antimony (Sb)	mg/L	0.000037	<0.000020	8914082	0.000026	0.000020	8914082
Dissolved Arsenic (As)	mg/L	0.000964	<0.000020	8914082	0.000311	0.000020	8914082
Dissolved Barium (Ba)	mg/L	0.0614	<0.000020	8914082	0.0965	0.000020	8914082
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	8914082	<0.000010	0.000010	8914082
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8914082	<0.0000050	0.0000050	8914082
Dissolved Boron (B)	mg/L	<0.010	<0.010	8914082	<0.010	0.010	8914082
Dissolved Cadmium (Cd)	mg/L	0.0000484	<0.0000050	8914082	0.0000267	0.0000050	8914082
Dissolved Chromium (Cr)	mg/L	0.00015	<0.00010	8914082	<0.00010	0.00010	8914082
Dissolved Cobalt (Co)	mg/L	0.0000336	<0.0000050	8914082	0.000370	0.0000050	8914082
Dissolved Copper (Cu)	mg/L	0.000103	<0.000050	8914082	0.000211	0.000050	8914082
Dissolved Iron (Fe)	mg/L	0.0433	<0.0010	8914082	0.0398	0.0010	8914082
Dissolved Lead (Pb)	mg/L	<0.0000050	<0.0000050	8914082	0.0000098	0.0000050	8914082
Dissolved Lithium (Li)	mg/L	0.00226	<0.00050	8914082	0.0166	0.00050	8914082
Dissolved Manganese (Mn)	mg/L	0.0158	<0.000050	8914082	0.289	0.000050	8914082
Dissolved Molybdenum (Mo)	mg/L	0.00187	<0.000050	8914082	0.00174	0.000050	8914082
Dissolved Nickel (Ni)	mg/L	0.000335	<0.000020	8914082	0.00318	0.000020	8914082
Dissolved Phosphorus (P)	mg/L	0.0631	<0.0020	8914082	0.0040	0.0020	8914082
Dissolved Selenium (Se)	mg/L	0.00144	<0.000040	8914082	0.000273	0.000040	8914082
Dissolved Silicon (Si)	mg/L	3.41	<0.050	8914082	7.91	0.050	8914082
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	8914082	<0.0000050	0.0000050	8914082
Dissolved Strontium (Sr)	mg/L	0.190	<0.000050	8914082	0.338	0.000050	8914082
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8914082	<0.0000020	0.0000020	8914082
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	8914082	<0.00020	0.00020	8914082
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	8914082	<0.00050	0.00050	8914082

RDL = Reportable Detection Limit
(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SZ1097	SZ1098		SZ1099		
Sampling Date		2018/02/14 14:30	2018/02/13 14:50		2018/02/13 14:45		
COC Number		20180217-3	20180217-3		20180217-4		
	UNITS	KZ-18	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Dissolved Uranium (U)	mg/L	0.00339	<0.0000020	8914082	0.00331	0.0000020	8914082
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	8914082	<0.00020	0.00020	8914082
Dissolved Zinc (Zn)	mg/L	0.00188	<0.00010	8914082	0.00252	0.00010	8914082
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	8914082	0.00035	0.00010	8914082
Dissolved Calcium (Ca)	mg/L	57.7	<0.050	8913479	104	0.050	8913479
Dissolved Magnesium (Mg)	mg/L	19.9	<0.050	8913479	41.9	0.050	8913479
Dissolved Potassium (K)	mg/L	0.766	<0.050	8913479	2.41	0.050	8913479
Dissolved Sodium (Na)	mg/L	0.970	<0.050	8913479	3.43	0.050	8913479
Dissolved Sulphur (S)	mg/L	7.4	<3.0	8913479	17.1	3.0	8913479
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SZ1100		SZ1101		SZ1102		
Sampling Date		2018/02/13 14:15		2018/02/13 12:15		2018/02/13 14:20		
COC Number		20180217-4		20180217-4		20180217-4		
	UNITS	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO3)	mg/L	375	8913415	323	8913415	389	0.50	8913415
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8913973	<0.0000020	8913973	<0.0000020	0.0000020	8913973
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00273	8914082	0.00112	8914082	0.00140	0.00050	8914082
Dissolved Antimony (Sb)	mg/L	0.000040	8914082	0.000065	8914082	0.000041	0.000020	8914082
Dissolved Arsenic (As)	mg/L	0.00107	8914082	0.000312	8914082	0.00120	0.000020	8914082
Dissolved Barium (Ba)	mg/L	0.0987	8914082	0.101	8914082	0.102	0.000020	8914082
Dissolved Beryllium (Be)	mg/L	<0.000010	8914082	<0.000010	8914082	<0.000010	0.000010	8914082
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8914082	<0.0000050	8914082	<0.0000050	0.0000050	8914082
Dissolved Boron (B)	mg/L	<0.010	8914082	<0.010	8914082	<0.010	0.010	8914082
Dissolved Cadmium (Cd)	mg/L	0.000303	8914082	0.0000176	8914082	0.0000417 (1)	0.0000050	8916601
Dissolved Chromium (Cr)	mg/L	<0.00010	8914082	<0.00010	8914082	<0.00010	0.00010	8914082
Dissolved Cobalt (Co)	mg/L	0.000201	8914082	0.0000149	8914082	0.000202	0.0000050	8914082
Dissolved Copper (Cu)	mg/L	0.000391 (1)	8916601	0.000410	8914082	0.000431 (1)	0.000050	8916601
Dissolved Iron (Fe)	mg/L	0.394	8914082	0.0053	8914082	0.432	0.0010	8914082
Dissolved Lead (Pb)	mg/L	0.0000208	8914082	0.0000201	8914082	0.0000367 (1)	0.0000050	8916601
Dissolved Lithium (Li)	mg/L	0.0135	8914082	0.00690	8914082	0.0131	0.00050	8914082
Dissolved Manganese (Mn)	mg/L	0.132	8914082	0.00390	8914082	0.138	0.000050	8914082
Dissolved Molybdenum (Mo)	mg/L	0.00122	8914082	0.000816	8914082	0.00125	0.000050	8914082
Dissolved Nickel (Ni)	mg/L	0.00190	8914082	0.000728	8914082	0.00193	0.000020	8914082
Dissolved Phosphorus (P)	mg/L	0.0088	8914082	0.0060	8914082	0.0089	0.0020	8914082
Dissolved Selenium (Se)	mg/L	0.000967	8914082	0.000905	8914082	0.000994	0.000040	8914082
Dissolved Silicon (Si)	mg/L	6.21	8914082	4.75	8914082	6.19	0.050	8914082
Dissolved Silver (Ag)	mg/L	<0.0000050	8914082	<0.0000050	8914082	<0.0000050	0.0000050	8914082
Dissolved Strontium (Sr)	mg/L	0.319	8914082	0.282	8914082	0.343	0.000050	8914082
Dissolved Thallium (Tl)	mg/L	<0.0000020	8914082	<0.0000020	8914082	<0.0000020	0.0000020	8914082
Dissolved Tin (Sn)	mg/L	<0.00020	8914082	<0.00020	8914082	<0.00020	0.00020	8914082
Dissolved Titanium (Ti)	mg/L	<0.00050	8914082	<0.00050	8914082	<0.00050	0.00050	8914082

RDL = Reportable Detection Limit
(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SZ1100		SZ1101		SZ1102		
Sampling Date		2018/02/13 14:15		2018/02/13 12:15		2018/02/13 14:20		
COC Number		20180217-4		20180217-4		20180217-4		
	UNITS	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Dissolved Uranium (U)	mg/L	0.00433	8914082	0.00354	8914082	0.00443	0.0000020	8914082
Dissolved Vanadium (V)	mg/L	<0.00020	8914082	<0.00020	8914082	<0.00020	0.00020	8914082
Dissolved Zinc (Zn)	mg/L	0.00640	8914082	0.00178	8914082	0.00691 (1)	0.00010	8916601
Dissolved Zirconium (Zr)	mg/L	0.00054	8914082	<0.00010	8914082	0.00059	0.00010	8914082
Dissolved Calcium (Ca)	mg/L	95.1	8913479	83.8	8913479	97.9	0.050	8913479
Dissolved Magnesium (Mg)	mg/L	33.4	8913479	27.6	8913479	35.0	0.050	8913479
Dissolved Potassium (K)	mg/L	1.98	8913479	1.64	8913479	2.09	0.050	8913479
Dissolved Sodium (Na)	mg/L	2.89	8913479	2.33	8913479	2.92	0.050	8913479
Dissolved Sulphur (S)	mg/L	18.5	8913479	16.6	8913479	19.8	3.0	8913479

RDL = Reportable Detection Limit
(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SZ1103	SZ1104	SZ1105		
Sampling Date		2018/02/14 13:40	2018/02/15 11:10	2018/02/16 09:25		
COC Number		20180217-4	20180217-4	20180217-4		
	UNITS	KZ-37	KZ-13	TRIP BLANK	RDL	QC Batch
Calculated Parameters						
Dissolved Hardness (CaCO3)	mg/L	237	88.1	<0.50	0.50	8913415
Elements						
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8913973
Dissolved Metals by ICPMS						
Dissolved Aluminum (Al)	mg/L	0.00210	0.00363	<0.00050	0.00050	8914082
Dissolved Antimony (Sb)	mg/L	0.000030	0.000033	<0.000020	0.000020	8914082
Dissolved Arsenic (As)	mg/L	0.000299	0.000122	<0.000020	0.000020	8914082
Dissolved Barium (Ba)	mg/L	0.109	0.131	<0.000020	0.000020	8914082
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	0.000010	8914082
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8914082
Dissolved Boron (B)	mg/L	<0.010	<0.010	<0.010	0.010	8914082
Dissolved Cadmium (Cd)	mg/L	0.0000789	0.0000766	<0.0000050	0.0000050	8914082
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8914082
Dissolved Cobalt (Co)	mg/L	0.000201	0.0000411	<0.0000050	0.0000050	8914082
Dissolved Copper (Cu)	mg/L	0.000171	0.000647	<0.000050	0.000050	8914082
Dissolved Iron (Fe)	mg/L	0.245	0.0504	<0.0010	0.0010	8914082
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000478	<0.0000050	0.0000050	8914082
Dissolved Lithium (Li)	mg/L	0.00525	0.00135	<0.00050	0.00050	8914082
Dissolved Manganese (Mn)	mg/L	0.160	0.0658	<0.000050	0.000050	8914082
Dissolved Molybdenum (Mo)	mg/L	0.000920	0.000804	<0.000050	0.000050	8914082
Dissolved Nickel (Ni)	mg/L	0.000656	0.000384	<0.000020	0.000020	8914082
Dissolved Phosphorus (P)	mg/L	0.0104	0.0059	<0.0020	0.0020	8914082
Dissolved Selenium (Se)	mg/L	0.00124	0.000284	<0.000040	0.000040	8914082
Dissolved Silicon (Si)	mg/L	3.75	3.74	<0.050	0.050	8914082
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	0.0000050	8914082
Dissolved Strontium (Sr)	mg/L	0.253	0.0852	<0.000050	0.000050	8914082
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	0.0000020	8914082
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8914082
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00050	8914082
Dissolved Uranium (U)	mg/L	0.00211	0.000806	<0.0000020	0.0000020	8914082
RDL = Reportable Detection Limit						

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SZ1103	SZ1104	SZ1105		
Sampling Date		2018/02/14 13:40	2018/02/15 11:10	2018/02/16 09:25		
COC Number		20180217-4	20180217-4	20180217-4		
	UNITS	KZ-37	KZ-13	TRIP BLANK	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00020	8914082
Dissolved Zinc (Zn)	mg/L	0.0128	0.00402	<0.00010	0.00010	8914082
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00010	8914082
Dissolved Calcium (Ca)	mg/L	77.2	29.9	<0.050	0.050	8913479
Dissolved Magnesium (Mg)	mg/L	10.8	3.25	<0.050	0.050	8913479
Dissolved Potassium (K)	mg/L	1.72	2.45	<0.050	0.050	8913479
Dissolved Sodium (Na)	mg/L	1.56	1.36	<0.050	0.050	8913479
Dissolved Sulphur (S)	mg/L	10.0	5.8	<3.0	3.0	8913479
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TC7775			TC7776		
Sampling Date		2018/02/15 10:10			2018/02/15 09:40		
COC Number		20180217-3			20180217-3		
	UNITS	KZ-2 VIAL 2	RDL	QC Batch	KZ-6 VIAL 2	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO3)	mg/L	145	0.50	8936705			
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00167	0.00050	8937961			
Dissolved Antimony (Sb)	mg/L	0.000030	0.000020	8937961			
Dissolved Arsenic (As)	mg/L	0.000075	0.000020	8937961			
Dissolved Barium (Ba)	mg/L	0.0736	0.000020	8937961			
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000010	8937961			
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8937961			
Dissolved Boron (B)	mg/L	<0.010	0.010	8937961			
Dissolved Cadmium (Cd)	mg/L	0.000252	0.0000050	8937961			
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00010	8937961			
Dissolved Cobalt (Co)	mg/L	0.0000058	0.0000050	8937961			
Dissolved Copper (Cu)	mg/L	0.000573 (1)	0.000050	8937961			
Dissolved Iron (Fe)	mg/L	<0.0010	0.0010	8937961	0.0014	0.0010	8937961
Dissolved Lead (Pb)	mg/L	0.0000322 (1)	0.0000050	8937961			
Dissolved Lithium (Li)	mg/L	0.00150	0.00050	8937961			
Dissolved Manganese (Mn)	mg/L	0.000061	0.000050	8937961			
Dissolved Molybdenum (Mo)	mg/L	0.000682	0.000050	8937961			
Dissolved Nickel (Ni)	mg/L	0.000329	0.000020	8937961			
Dissolved Phosphorus (P)	mg/L	0.0023	0.0020	8937961			
Dissolved Selenium (Se)	mg/L	0.00247	0.000040	8937961			
Dissolved Silicon (Si)	mg/L	2.19	0.050	8937961			
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	8937961			
Dissolved Strontium (Sr)	mg/L	0.162	0.000050	8937961			
Dissolved Thallium (Tl)	mg/L	0.0000023	0.0000020	8937961			
Dissolved Tin (Sn)	mg/L	<0.00020	0.00020	8937961			
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00050	8937961			
Dissolved Uranium (U)	mg/L	0.00502	0.0000020	8937961			

RDL = Reportable Detection Limit
(1) Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TC7775			TC7776		
Sampling Date		2018/02/15 10:10			2018/02/15 09:40		
COC Number		20180217-3			20180217-3		
	UNITS	KZ-2 VIAL 2	RDL	QC Batch	KZ-6 VIAL 2	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	0.00020	8937961			
Dissolved Zinc (Zn)	mg/L	0.0292	0.00010	8937961			
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00010	8937961			
Dissolved Calcium (Ca)	mg/L	46.5	0.050	8936853			
Dissolved Magnesium (Mg)	mg/L	6.99	0.050	8936853			
Dissolved Potassium (K)	mg/L	2.36	0.050	8936853			
Dissolved Sodium (Na)	mg/L	1.03	0.050	8936853			
Dissolved Sulphur (S)	mg/L	24.5	3.0	8936853			
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SZ1091	SZ1092	SZ1093	SZ1094	SZ1095		
Sampling Date		2018/02/15 10:10	2018/02/15 09:40	2018/02/14 13:55	2018/02/14 11:40	2018/02/14 12:40		
COC Number		20180217-3	20180217-3	20180217-3	20180217-3	20180217-3		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-15	KZ-16	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	143	166	240	282	370	0.50	8913414
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8913977
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00213	0.0100	0.0109	0.00889	0.00332	0.00050	8914011
Total Antimony (Sb)	mg/L	0.000025	0.000024	0.000033	0.000035	0.000039	0.000020	8914011
Total Arsenic (As)	mg/L	0.000079	0.000084	0.000344	0.000492	0.000199	0.000020	8914011
Total Barium (Ba)	mg/L	0.0745	0.0531	0.116	0.105	0.133	0.000020	8914011
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8914011
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8914011
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8914011
Total Cadmium (Cd)	mg/L	0.000215	0.000196	0.0000912	0.0000820	0.0000560	0.0000050	8914011
Total Chromium (Cr)	mg/L	<0.00010	0.00011	0.00010	<0.00010	0.00014	0.00010	8914011
Total Cobalt (Co)	mg/L	0.0000120	0.0000218	0.000233	0.0000769	0.0000137	0.0000050	8914011
Total Copper (Cu)	mg/L	0.000459	0.000544	0.000555	0.000243	0.000419	0.000050	8914011
Total Iron (Fe)	mg/L	0.0015	0.0311	0.843	0.0907	0.0093	0.0010	8914011
Total Lead (Pb)	mg/L	0.0000203	0.0000972	0.0000878	0.0000250	0.0000407	0.0000050	8914011
Total Lithium (Li)	mg/L	0.00164	0.00080	0.00600	0.00510	0.00668	0.00050	8914011
Total Manganese (Mn)	mg/L	0.000089	0.00431	0.185	0.0958	0.00177	0.000050	8914011
Total Molybdenum (Mo)	mg/L	0.000654	0.000728	0.000694	0.00174	0.000271	0.000050	8914011
Total Nickel (Ni)	mg/L	0.000301	0.000271	0.000716	0.00127	0.000849	0.000020	8914011
Total Phosphorus (P)	mg/L	0.0026	0.0083	0.0070	0.0059	0.0039	0.0020	8914011
Total Selenium (Se)	mg/L	0.00236	0.00169	0.00114	0.00140	0.00172	0.000040	8914011
Total Silicon (Si)	mg/L	2.49	3.13	4.19	4.45	5.19	0.050	8914011
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8914011
Total Strontium (Sr)	mg/L	0.156	0.173	0.250	0.268	0.349	0.000050	8914011
Total Thallium (Tl)	mg/L	0.0000032	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8914011
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8914011
Total Titanium (Ti)	mg/L	<0.00050	0.00062	<0.00050	<0.00050	<0.00050	0.00050	8914011
Total Uranium (U)	mg/L	0.00484	0.00132	0.00180	0.00678	0.00391	0.0000020	8914011

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SZ1091	SZ1092	SZ1093	SZ1094	SZ1095		
Sampling Date		2018/02/15 10:10	2018/02/15 09:40	2018/02/14 13:55	2018/02/14 11:40	2018/02/14 12:40		
COC Number		20180217-3	20180217-3	20180217-3	20180217-3	20180217-3		
	UNITS	KZ-2	KZ-6	KZ-9	KZ-15	KZ-16	RDL	QC Batch
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8914011
Total Zinc (Zn)	mg/L	0.0277	0.00793	0.0168	0.0112	0.00280	0.00010	8914011
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8914011
Total Calcium (Ca)	mg/L	45.4	54.3	81.7	78.6	108	0.050	8913480
Total Magnesium (Mg)	mg/L	7.12	7.33	8.69	20.8	24.2	0.050	8913480
Total Potassium (K)	mg/L	2.35	1.54	1.81	1.52	1.77	0.050	8913480
Total Sodium (Na)	mg/L	0.932	1.23	3.23	1.54	1.97	0.050	8913480
Total Sulphur (S)	mg/L	20.5	7.8	9.8	12.3	15.7	3.0	8913480

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SZ1096	SZ1097	SZ1098	SZ1099	SZ1100		
Sampling Date		2018/02/14 12:05	2018/02/14 14:30	2018/02/13 14:50	2018/02/13 14:45	2018/02/13 14:15		
COC Number		20180217-3	20180217-3	20180217-3	20180217-4	20180217-4		
	UNITS	KZ-17	KZ-18	KZ-19	KZ-21	KZ-22	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	337	213	<0.50	430	387	0.50	8913414
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8913977
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00454	0.0159	0.00063	0.00280	0.00249	0.00050	8914011
Total Antimony (Sb)	mg/L	0.000025	0.000042	<0.000020	0.000034	0.000048	0.000020	8914011
Total Arsenic (As)	mg/L	0.000239	0.00107	<0.000020	0.000930	0.00160	0.000020	8914011
Total Barium (Ba)	mg/L	0.114	0.0599	<0.000020	0.103	0.101	0.000020	8914011
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8914011
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8914011
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8914011
Total Cadmium (Cd)	mg/L	0.0000391	0.0000525	<0.0000050	0.0000238	0.000110	0.0000050	8914011
Total Chromium (Cr)	mg/L	<0.00010	0.00015	<0.00010	<0.00010	<0.00010	0.00010	8914011
Total Cobalt (Co)	mg/L	0.0000176	0.0000419	<0.0000050	0.000350	0.000207	0.0000050	8914011
Total Copper (Cu)	mg/L	0.000329	0.000121	<0.000050	0.000182	0.000527	0.000050	8914011
Total Iron (Fe)	mg/L	0.0192	0.0749	<0.0010	0.288	0.556	0.0010	8914011
Total Lead (Pb)	mg/L	0.0000186	0.0000168	0.0000054	0.0000144	0.0000772	0.0000050	8914011
Total Lithium (Li)	mg/L	0.00381	0.00236	<0.00050	0.0185	0.0150	0.00050	8914011
Total Manganese (Mn)	mg/L	0.00335	0.0167	<0.000050	0.288	0.137	0.000050	8914011
Total Molybdenum (Mo)	mg/L	0.000662	0.00180	<0.000050	0.00178	0.00126	0.000050	8914011
Total Nickel (Ni)	mg/L	0.000664	0.000347	<0.000020	0.00314	0.00202	0.000020	8914011
Total Phosphorus (P)	mg/L	0.0048	0.0685	<0.0020	0.0094	0.0133	0.0020	8914011
Total Selenium (Se)	mg/L	0.00169	0.00140	<0.000040	0.000264	0.00101	0.000040	8914011
Total Silicon (Si)	mg/L	4.46	3.57	<0.050	8.80	6.82	0.050	8914011
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8914011
Total Strontium (Sr)	mg/L	0.306	0.184	<0.000050	0.339	0.336	0.000050	8914011
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8914011
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8914011
Total Titanium (Ti)	mg/L	<0.00050	0.00090	<0.00050	<0.00050	<0.00050	0.00050	8914011
Total Uranium (U)	mg/L	0.00387	0.00323	0.0000023	0.00344	0.00439	0.0000020	8914011

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SZ1096	SZ1097	SZ1098	SZ1099	SZ1100		
Sampling Date		2018/02/14 12:05	2018/02/14 14:30	2018/02/13 14:50	2018/02/13 14:45	2018/02/13 14:15		
COC Number		20180217-3	20180217-3	20180217-3	20180217-4	20180217-4		
	UNITS	**KZ-17**	**KZ-18**	**KZ-19**	**KZ-21**	**KZ-22**	**RDL**	**QC Batch**
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8914011
Total Zinc (Zn)	mg/L	0.00202	0.00180	0.00027	0.00209	0.0163	0.00010	8914011
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	0.00031	0.00054	0.00010	8914011
Total Calcium (Ca)	mg/L	103	53.9	<0.050	103	97.1	0.050	8913480
Total Magnesium (Mg)	mg/L	19.3	19.1	<0.050	42.1	35.0	0.050	8913480
Total Potassium (K)	mg/L	1.46	0.710	<0.050	2.37	2.13	0.050	8913480
Total Sodium (Na)	mg/L	1.58	0.939	<0.050	3.37	3.06	0.050	8913480
Total Sulphur (S)	mg/L	14.8	7.2	<3.0	17.5	20.2	3.0	8913480

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SZ1101	SZ1102	SZ1103	SZ1104	SZ1105		
Sampling Date		2018/02/13 12:15	2018/02/13 14:20	2018/02/14 13:40	2018/02/15 11:10	2018/02/16 09:25		
COC Number		20180217-4	20180217-4	20180217-4	20180217-4	20180217-4		
	UNITS	KZ-26	KZ-28	KZ-37	KZ-13	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	319	380	223	84.4	<0.50	0.50	8913414
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8913977
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00989	0.00373	0.00860	0.0580	<0.00050	0.00050	8914011
Total Antimony (Sb)	mg/L	0.000070	0.000040	0.000028	0.000039	<0.000020	0.000020	8914011
Total Arsenic (As)	mg/L	0.000366	0.00170	0.000342	0.000181	<0.000020	0.000020	8914011
Total Barium (Ba)	mg/L	0.104	0.102	0.111	0.133	<0.000020	0.000020	8914011
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8914011
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8914011
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8914011
Total Cadmium (Cd)	mg/L	0.0000204	0.0000316	0.0000774	0.000142	<0.0000050	0.0000050	8914011
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	0.00022	<0.00010	0.00010	8914011
Total Cobalt (Co)	mg/L	0.0000284	0.000200	0.000221	0.0000813	<0.0000050	0.0000050	8914011
Total Copper (Cu)	mg/L	0.000463	0.000283	0.000205	0.000719	<0.000050	0.000050	8914011
Total Iron (Fe)	mg/L	0.0346	0.560	0.493	0.204	<0.0010	0.0010	8914011
Total Lead (Pb)	mg/L	0.0000711	0.0000119	0.0000176	0.0000659	<0.0000050	0.0000050	8914011
Total Lithium (Li)	mg/L	0.00802	0.0146	0.00591	0.00156	<0.00050	0.00050	8914011
Total Manganese (Mn)	mg/L	0.00574	0.138	0.165	0.0891	<0.000050	0.000050	8914011
Total Molybdenum (Mo)	mg/L	0.000817	0.00125	0.000774	0.000809	<0.000050	0.000050	8914011
Total Nickel (Ni)	mg/L	0.000772	0.00186	0.000647	0.000547	<0.000020	0.000020	8914011
Total Phosphorus (P)	mg/L	0.0080	0.0129	0.0114	0.0109	<0.0020	0.0020	8914011
Total Selenium (Se)	mg/L	0.000938	0.000969	0.00108	0.000321	<0.000040	0.000040	8914011
Total Silicon (Si)	mg/L	5.22	6.17	4.28	3.89	<0.050	0.050	8914011
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8914011
Total Strontium (Sr)	mg/L	0.283	0.337	0.252	0.0804	<0.000050	0.000050	8914011
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8914011
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8914011
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	0.00385	<0.00050	0.00050	8914011
Total Uranium (U)	mg/L	0.00365	0.00447	0.00188	0.000808	0.0000036	0.0000020	8914011

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SZ1101	SZ1102	SZ1103	SZ1104	SZ1105		
Sampling Date		2018/02/13 12:15	2018/02/13 14:20	2018/02/14 13:40	2018/02/15 11:10	2018/02/16 09:25		
COC Number		20180217-4	20180217-4	20180217-4	20180217-4	20180217-4		
	UNITS	KZ-26	KZ-28	KZ-37	KZ-13	TRIP BLANK	RDL	QC Batch
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	0.00021	<0.00020	0.00020	8914011
Total Zinc (Zn)	mg/L	0.00177	0.00283	0.0136	0.00534	<0.00010	0.00010	8914011
Total Zirconium (Zr)	mg/L	<0.00010	0.00050	<0.00010	<0.00010	<0.00010	0.00010	8914011
Total Calcium (Ca)	mg/L	83.2	94.8	73.2	28.7	<0.050	0.050	8913480
Total Magnesium (Mg)	mg/L	27.0	34.9	9.72	3.07	<0.050	0.050	8913480
Total Potassium (K)	mg/L	1.60	2.01	1.70	2.29	<0.050	0.050	8913480
Total Sodium (Na)	mg/L	2.28	2.85	1.57	1.26	<0.050	0.050	8913480
Total Sulphur (S)	mg/L	16.6	19.4	9.7	4.8	<3.0	3.0	8913480

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TC7775			TC7776		
Sampling Date		2018/02/15 10:10			2018/02/15 09:40		
COC Number		20180217-3			20180217-3		
	UNITS	KZ-2 VIAL 2	RDL	QC Batch	KZ-6 VIAL 2	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	143	0.50	8936584			
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00165	0.00050	8938008			
Total Antimony (Sb)	mg/L	0.000023	0.000020	8938008			
Total Arsenic (As)	mg/L	0.000066	0.000020	8938008			
Total Barium (Ba)	mg/L	0.0761	0.000020	8938008			
Total Beryllium (Be)	mg/L	<0.000010	0.000010	8938008			
Total Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8938008			
Total Boron (B)	mg/L	<0.010	0.010	8938008			
Total Cadmium (Cd)	mg/L	0.000229	0.0000050	8938008			
Total Chromium (Cr)	mg/L	<0.00010	0.00010	8938008			
Total Cobalt (Co)	mg/L	0.0000055	0.0000050	8938008			
Total Copper (Cu)	mg/L	0.000430	0.000050	8938008			
Total Iron (Fe)	mg/L	0.0011	0.0010	8938008	0.0268	0.0010	8938008
Total Lead (Pb)	mg/L	0.0000162	0.0000050	8938008			
Total Lithium (Li)	mg/L	0.00140	0.00050	8938008			
Total Manganese (Mn)	mg/L	0.000066	0.000050	8938008			
Total Molybdenum (Mo)	mg/L	0.000699	0.000050	8938008			
Total Nickel (Ni)	mg/L	0.000328	0.000020	8938008			
Total Phosphorus (P)	mg/L	0.0023	0.0020	8938008			
Total Selenium (Se)	mg/L	0.00254	0.000040	8938008			
Total Silicon (Si)	mg/L	2.28 (1)	0.050	8938008			
Total Silver (Ag)	mg/L	<0.0000050	0.0000050	8938008			
Total Strontium (Sr)	mg/L	0.161	0.000050	8938008			
Total Thallium (Tl)	mg/L	0.0000026	0.0000020	8938008			
Total Tin (Sn)	mg/L	<0.00020	0.00020	8938008			
Total Titanium (Ti)	mg/L	<0.00050	0.00050	8938008			
Total Uranium (U)	mg/L	0.00530	0.0000020	8938008			

RDL = Reportable Detection Limit
(1) Matrix Spike for Molybdenum outside acceptance criteria (10% of analytes failure allowed).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TC7775			TC7776		
Sampling Date		2018/02/15 10:10			2018/02/15 09:40		
COC Number		20180217-3			20180217-3		
	UNITS	KZ-2 VIAL 2	RDL	QC Batch	KZ-6 VIAL 2	RDL	QC Batch
Total Vanadium (V)	mg/L	<0.00020	0.00020	8938008			
Total Zinc (Zn)	mg/L	0.0289	0.00010	8938008			
Total Zirconium (Zr)	mg/L	<0.00010	0.00010	8938008			
Total Calcium (Ca)	mg/L	46.1	0.050	8936916			
Total Magnesium (Mg)	mg/L	6.75	0.050	8936916			
Total Potassium (K)	mg/L	2.21	0.050	8936916			
Total Sodium (Na)	mg/L	0.902	0.050	8936916			
Total Sulphur (S)	mg/L	20.8	3.0	8936916			
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: SZ1091
Sample ID: KZ-2
Matrix: Water

Collected: 2018/02/15
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8914654	2018/02/20	2018/02/20	Name Redacted
Alkalinity - Low Level	AT/ALK	8914144	2018/02/19	2018/02/21	
Chloride - Low Level	KONE/COL	8915689	N/A	2018/02/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8914781	N/A	2018/02/20	
Cyanide WAD (weak acid dissociable)	TECH/COL	8914789	N/A	2018/02/20	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8915206	N/A	2018/02/20	
Conductance - Low Level	AT/ALK	8914145	2018/02/19	2018/02/19	
Fluoride - Low Level	ISE/ISE	8914152	N/A	2018/02/19	
Hardness Total (calculated as CaCO3)	CALC	8913414	N/A	2018/02/21	
Hardness (calculated as CaCO3)	CALC	8913415	N/A	2018/02/21	
Mercury (Dissolved) by CVAF	CV/AF	8913973	N/A	2018/02/19	
Mercury (Total) by CVAF	CV/AF	8913977	2018/02/19	2018/02/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8913523	N/A	2018/02/21	
Ion Balance	CALC	8913524	N/A	2018/02/21	
Sum of cations, anions	CALC	8913525	N/A	2018/02/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8913479	N/A	2018/02/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8914082	N/A	2018/02/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8913480	N/A	2018/02/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8914011	N/A	2018/02/21	
Ammonia-N Low Level (Preserved)	KONE/COL	8915207	N/A	2018/02/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8913584	N/A	2018/02/17	
Nitrite (N) (low level)	TRAA/COL	8913585	N/A	2018/02/17	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8913481	N/A	2018/02/17	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/17	
pH Water	AT/ALK	8914139	2018/02/19	2018/02/21	
Sulphate - Low Level	KONE/COL	8915692	N/A	2018/02/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8913615	2018/02/17	2018/02/20	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8913614	2018/02/17	2018/02/20	
Total Suspended Solids-Low Level	BAL/BAL	8914757	2018/02/20	2018/02/21	

Maxxam ID: SZ1091 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2018/02/15
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8914781	N/A	2018/02/20	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8914789	N/A	2018/02/20	

Maxxam ID: SZ1092
Sample ID: KZ-6
Matrix: Water

Collected: 2018/02/15
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8914654	2018/02/20	2018/02/20	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: SZ1092
Sample ID: KZ-6
Matrix: Water

Collected: 2018/02/15
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Low Level	AT/ALK	8914144	2018/02/19	2018/02/21	Name Redacted
Chloride - Low Level	KONE/COL	8915689	N/A	2018/02/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8914781	N/A	2018/02/20	
Cyanide WAD (weak acid dissociable)	TECH/COL	8914789	N/A	2018/02/20	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8915205	N/A	2018/02/20	
Conductance - Low Level	AT/ALK	8914145	2018/02/19	2018/02/19	
Fluoride - Low Level	ISE/ISE	8914152	N/A	2018/02/19	
Hardness Total (calculated as CaCO3)	CALC	8913414	N/A	2018/02/21	
Hardness (calculated as CaCO3)	CALC	8913415	N/A	2018/02/21	
Mercury (Dissolved) by CVAF	CV/AF	8913973	N/A	2018/02/19	
Mercury (Total) by CVAF	CV/AF	8913977	2018/02/19	2018/02/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8913523	N/A	2018/02/21	
Ion Balance	CALC	8913524	N/A	2018/02/21	
Sum of cations, anions	CALC	8913525	N/A	2018/02/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8913479	N/A	2018/02/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8914082	N/A	2018/02/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8913480	N/A	2018/02/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8914011	N/A	2018/02/21	
Ammonia-N Low Level (Preserved)	KONE/COL	8915207	N/A	2018/02/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8913584	N/A	2018/02/17	
Nitrite (N) (low level)	TRAA/COL	8913585	N/A	2018/02/17	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8913481	N/A	2018/02/17	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/17	
pH Water	AT/ALK	8914139	2018/02/19	2018/02/21	
Sulphate - Low Level	KONE/COL	8915692	N/A	2018/02/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8913615	2018/02/17	2018/02/20	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8913614	2018/02/17	2018/02/20	
Total Suspended Solids-Low Level	BAL/BAL	8914757	2018/02/20	2018/02/21	

Maxxam ID: SZ1092 Dup
Sample ID: KZ-6
Matrix: Water

Collected: 2018/02/15
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8913584	N/A	2018/02/17	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8913585	N/A	2018/02/17	

Maxxam ID: SZ1093
Sample ID: KZ-9
Matrix: Water

Collected: 2018/02/14
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8914654	2018/02/20	2018/02/20	Name Redacted
Alkalinity - Low Level	AT/ALK	8914144	2018/02/19	2018/02/21	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: SZ1093
Sample ID: KZ-9
Matrix: Water

Collected: 2018/02/14
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride - Low Level	KONE/COL	8915689	N/A	2018/02/19	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8914781	N/A	2018/02/20	
Cyanide WAD (weak acid dissociable)	TECH/COL	8914789	N/A	2018/02/20	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8915205	N/A	2018/02/20	
Conductance - Low Level	AT/ALK	8914145	2018/02/19	2018/02/19	
Fluoride - Low Level	ISE/ISE	8914152	N/A	2018/02/19	
Hardness Total (calculated as CaCO3)	CALC	8913414	N/A	2018/02/21	
Hardness (calculated as CaCO3)	CALC	8913415	N/A	2018/02/21	
Mercury (Dissolved) by CVAF	CV/AF	8913973	N/A	2018/02/19	
Mercury (Total) by CVAF	CV/AF	8913977	2018/02/19	2018/02/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8913523	N/A	2018/02/21	
Ion Balance	CALC	8913524	N/A	2018/02/21	
Sum of cations, anions	CALC	8913525	N/A	2018/02/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8913479	N/A	2018/02/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8914082	N/A	2018/02/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8913480	N/A	2018/02/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8914011	N/A	2018/02/21	
Ammonia-N Low Level (Preserved)	KONE/COL	8915207	N/A	2018/02/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8913584	N/A	2018/02/17	
Nitrite (N) (low level)	TRAA/COL	8913585	N/A	2018/02/17	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8913481	N/A	2018/02/17	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/17	
pH Water	AT/ALK	8914139	2018/02/19	2018/02/21	
Sulphate - Low Level	KONE/COL	8915692	N/A	2018/02/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8913615	2018/02/17	2018/02/20	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8913614	2018/02/17	2018/02/20	
Total Suspended Solids-Low Level	BAL/BAL	8914757	2018/02/20	2018/02/21	

Maxxam ID: SZ1094
Sample ID: KZ-15
Matrix: Water

Collected: 2018/02/14
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8914654	2018/02/20	2018/02/20	Name Redacted
Alkalinity - Low Level	AT/ALK	8914144	2018/02/19	2018/02/21	
Chloride - Low Level	KONE/COL	8915689	N/A	2018/02/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8914781	N/A	2018/02/20	
Cyanide WAD (weak acid dissociable)	TECH/COL	8914789	N/A	2018/02/20	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8915205	N/A	2018/02/20	
Conductance - Low Level	AT/ALK	8914145	2018/02/19	2018/02/19	
Fluoride - Low Level	ISE/ISE	8914152	N/A	2018/02/19	
Hardness Total (calculated as CaCO3)	CALC	8913414	N/A	2018/02/21	
Hardness (calculated as CaCO3)	CALC	8913415	N/A	2018/02/21	
Mercury (Dissolved) by CVAF	CV/AF	8913973	N/A	2018/02/19	

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: SZ1094
Sample ID: KZ-15
Matrix: Water

Collected: 2018/02/14
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total) by CVAF	CV/AF	8913977	2018/02/19	2018/02/19	Name Redacted
Ion Balance (as Cations/Anions Ratio)	CALC	8913523	N/A	2018/02/21	
Ion Balance	CALC	8913524	N/A	2018/02/21	
Sum of cations, anions	CALC	8913525	N/A	2018/02/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8913479	N/A	2018/02/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8914082	N/A	2018/02/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8913480	N/A	2018/02/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8914011	N/A	2018/02/21	
Ammonia-N Low Level (Preserved)	KONE/COL	8915207	N/A	2018/02/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8913584	N/A	2018/02/17	
Nitrite (N) (low level)	TRAA/COL	8913585	N/A	2018/02/17	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8913481	N/A	2018/02/17	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/17	
pH Water	AT/ALK	8914139	2018/02/19	2018/02/21	
Sulphate - Low Level	KONE/COL	8915692	N/A	2018/02/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8913615	2018/02/17	2018/02/20	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8913614	2018/02/17	2018/02/20	
Total Suspended Solids-Low Level	BAL/BAL	8914757	2018/02/20	2018/02/21	

Maxxam ID: SZ1095
Sample ID: KZ-16
Matrix: Water

Collected: 2018/02/14
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8914654	2018/02/20	2018/02/20	Name Redacted
Alkalinity - Low Level	AT/ALK	8914144	2018/02/19	2018/02/21	
Chloride - Low Level	KONE/COL	8915689	N/A	2018/02/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8914781	N/A	2018/02/20	
Cyanide WAD (weak acid dissociable)	TECH/COL	8914789	N/A	2018/02/20	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8915206	N/A	2018/02/20	
Conductance - Low Level	AT/ALK	8914145	2018/02/19	2018/02/19	
Fluoride - Low Level	ISE/ISE	8914152	N/A	2018/02/19	
Hardness Total (calculated as CaCO3)	CALC	8913414	N/A	2018/02/21	
Hardness (calculated as CaCO3)	CALC	8913415	N/A	2018/02/21	
Mercury (Dissolved) by CVAF	CV/AF	8913973	N/A	2018/02/19	
Mercury (Total) by CVAF	CV/AF	8913977	2018/02/19	2018/02/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8913523	N/A	2018/02/21	
Ion Balance	CALC	8913524	N/A	2018/02/21	
Sum of cations, anions	CALC	8913525	N/A	2018/02/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8913479	N/A	2018/02/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8914082	N/A	2018/02/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8913480	N/A	2018/02/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8914011	N/A	2018/02/21	
Ammonia-N Low Level (Preserved)	KONE/COL	8915207	N/A	2018/02/20	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: SZ1095
Sample ID: KZ-16
Matrix: Water

Collected: 2018/02/14
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8913584	N/A	2018/02/17	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8913585	N/A	2018/02/17	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8913481	N/A	2018/02/17	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/17	
pH Water	AT/ALK	8914139	2018/02/19	2018/02/21	
Sulphate - Low Level	KONE/COL	8915692	N/A	2018/02/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8913615	2018/02/17	2018/02/20	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8913614	2018/02/17	2018/02/20	
Total Suspended Solids-Low Level	BAL/BAL	8914757	2018/02/20	2018/02/21	

Maxxam ID: SZ1095 Dup
Sample ID: KZ-16
Matrix: Water

Collected: 2018/02/14
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved) by CVAF	CV/AF	8913973	N/A	2018/02/19	Name Redacted

Maxxam ID: SZ1096
Sample ID: KZ-17
Matrix: Water

Collected: 2018/02/14
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8914654	2018/02/20	2018/02/20	Name Redacted
Alkalinity - Low Level	AT/ALK	8914144	2018/02/19	2018/02/21	
Chloride - Low Level	KONE/COL	8915689	N/A	2018/02/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8914781	N/A	2018/02/20	
Cyanide WAD (weak acid dissociable)	TECH/COL	8914789	N/A	2018/02/20	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8915206	N/A	2018/02/20	
Conductance - Low Level	AT/ALK	8914145	2018/02/19	2018/02/20	
Fluoride - Low Level	ISE/ISE	8914152	N/A	2018/02/19	
Hardness Total (calculated as CaCO3)	CALC	8913414	N/A	2018/02/21	
Hardness (calculated as CaCO3)	CALC	8913415	N/A	2018/02/21	
Mercury (Dissolved) by CVAF	CV/AF	8913973	N/A	2018/02/19	
Mercury (Total) by CVAF	CV/AF	8913977	2018/02/19	2018/02/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8913523	N/A	2018/02/21	
Ion Balance	CALC	8913524	N/A	2018/02/21	
Sum of cations, anions	CALC	8913525	N/A	2018/02/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8913479	N/A	2018/02/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8914082	N/A	2018/02/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8913480	N/A	2018/02/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8914011	N/A	2018/02/21	
Ammonia-N Low Level (Preserved)	KONE/COL	8915207	N/A	2018/02/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8913584	N/A	2018/02/17	
Nitrite (N) (low level)	TRAA/COL	8913585	N/A	2018/02/17	

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: SZ1096
Sample ID: KZ-17
Matrix: Water

Collected: 2018/02/14
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8913481	N/A	2018/02/17	Name Redacted
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/17	
pH Water	AT/ALK	8914139	2018/02/19	2018/02/21	
Sulphate - Low Level	KONE/COL	8915692	N/A	2018/02/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8913615	2018/02/17	2018/02/20	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8913614	2018/02/17	2018/02/20	
Total Suspended Solids-Low Level	BAL/BAL	8914757	2018/02/20	2018/02/21	

Maxxam ID: SZ1097
Sample ID: KZ-18
Matrix: Water

Collected: 2018/02/14
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8914654	2018/02/20	2018/02/20	Name Redacted
Alkalinity - Low Level	AT/ALK	8914144	2018/02/19	2018/02/21	
Chloride - Low Level	KONE/COL	8915689	N/A	2018/02/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8914781	N/A	2018/02/20	
Cyanide WAD (weak acid dissociable)	TECH/COL	8914789	N/A	2018/02/20	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8915206	N/A	2018/02/20	
Conductance - Low Level	AT/ALK	8914145	2018/02/19	2018/02/19	
Fluoride - Low Level	ISE/ISE	8914152	N/A	2018/02/19	
Hardness Total (calculated as CaCO3)	CALC	8913414	N/A	2018/02/21	
Hardness (calculated as CaCO3)	CALC	8913415	N/A	2018/02/21	
Mercury (Dissolved) by CVAF	CV/AF	8913973	N/A	2018/02/19	
Mercury (Total) by CVAF	CV/AF	8913977	2018/02/19	2018/02/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8913523	N/A	2018/02/21	
Ion Balance	CALC	8913524	N/A	2018/02/21	
Sum of cations, anions	CALC	8913525	N/A	2018/02/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8913479	N/A	2018/02/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8914082	N/A	2018/02/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8913480	N/A	2018/02/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8914011	N/A	2018/02/21	
Ammonia-N Low Level (Preserved)	KONE/COL	8915207	N/A	2018/02/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8913584	N/A	2018/02/17	
Nitrite (N) (low level)	TRAA/COL	8913585	N/A	2018/02/17	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8913481	N/A	2018/02/17	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/17	
pH Water	AT/ALK	8914139	2018/02/19	2018/02/21	
Sulphate - Low Level	KONE/COL	8915692	N/A	2018/02/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8913615	2018/02/17	2018/02/20	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8913614	2018/02/17	2018/02/20	
Total Suspended Solids-Low Level	BAL/BAL	8914757	2018/02/20	2018/02/21	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: SZ1097 Dup
Sample ID: KZ-18
Matrix: Water

Collected: 2018/02/14
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - Low Level Unpreserved	KONE/COL	8913614	2018/02/17	2018/02/20	Name Redacted

Maxxam ID: SZ1098
Sample ID: KZ-19
Matrix: Water

Collected: 2018/02/13
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8914654	2018/02/20	2018/02/20	Name Redacted
Alkalinity - Low Level	AT/ALK	8914144	2018/02/19	2018/02/21	
Chloride - Low Level	KONE/COL	8915689	N/A	2018/02/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8914781	N/A	2018/02/20	
Cyanide WAD (weak acid dissociable)	TECH/COL	8914789	N/A	2018/02/20	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8915206	N/A	2018/02/20	
Conductance - Low Level	AT/ALK	8914145	2018/02/19	2018/02/19	
Fluoride - Low Level	ISE/ISE	8914152	N/A	2018/02/19	
Hardness Total (calculated as CaCO3)	CALC	8913414	N/A	2018/02/21	
Hardness (calculated as CaCO3)	CALC	8913415	N/A	2018/02/21	
Mercury (Dissolved) by CVAF	CV/AF	8913973	N/A	2018/02/19	
Mercury (Total) by CVAF	CV/AF	8913977	2018/02/19	2018/02/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8913523	N/A	2018/02/21	
Ion Balance	CALC	8913524	N/A	2018/02/21	
Sum of cations, anions	CALC	8913525	N/A	2018/02/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8913479	N/A	2018/02/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8914082	N/A	2018/02/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8913480	N/A	2018/02/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8914011	N/A	2018/02/21	
Ammonia-N Low Level (Preserved)	KONE/COL	8915207	N/A	2018/02/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8913584	N/A	2018/02/17	
Nitrite (N) (low level)	TRAA/COL	8913585	N/A	2018/02/17	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8913481	N/A	2018/02/17	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/17	
pH Water	AT/ALK	8914139	2018/02/19	2018/02/21	
Sulphate - Low Level	KONE/COL	8915692	N/A	2018/02/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8913615	2018/02/17	2018/02/20	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8913614	2018/02/17	2018/02/20	
Total Suspended Solids-Low Level	BAL/BAL	8914708	2018/02/20	2018/02/21	

Maxxam ID: SZ1099
Sample ID: KZ-21
Matrix: Water

Collected: 2018/02/13
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8914654	2018/02/20	2018/02/20	Name Redacted
Alkalinity - Low Level	AT/ALK	8914144	2018/02/19	2018/02/21	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: SZ1099
Sample ID: KZ-21
Matrix: Water

Collected: 2018/02/13
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride - Low Level	KONE/COL	8915689	N/A	2018/02/19	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8914781	N/A	2018/02/20	
Cyanide WAD (weak acid dissociable)	TECH/COL	8914789	N/A	2018/02/20	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8915205	N/A	2018/02/20	
Conductance - Low Level	AT/ALK	8914145	2018/02/19	2018/02/19	
Fluoride - Low Level	ISE/ISE	8914152	N/A	2018/02/19	
Hardness Total (calculated as CaCO3)	CALC	8913414	N/A	2018/02/21	
Hardness (calculated as CaCO3)	CALC	8913415	N/A	2018/02/21	
Mercury (Dissolved) by CVAF	CV/AF	8913973	N/A	2018/02/19	
Mercury (Total) by CVAF	CV/AF	8913977	2018/02/19	2018/02/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8913523	N/A	2018/02/21	
Ion Balance	CALC	8913524	N/A	2018/02/21	
Sum of cations, anions	CALC	8913525	N/A	2018/02/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8913479	N/A	2018/02/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8916601	N/A	2018/02/26	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8913480	N/A	2018/02/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8914011	N/A	2018/02/21	
Ammonia-N Low Level (Preserved)	KONE/COL	8915207	N/A	2018/02/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8913584	N/A	2018/02/17	
Nitrite (N) (low level)	TRAA/COL	8913585	N/A	2018/02/17	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8913481	N/A	2018/02/17	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/17	
pH Water	AT/ALK	8914139	2018/02/19	2018/02/21	
Sulphate - Low Level	KONE/COL	8915692	N/A	2018/02/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8913615	2018/02/17	2018/02/20	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8913614	2018/02/17	2018/02/20	
Total Suspended Solids-Low Level	BAL/BAL	8914708	2018/02/20	2018/02/21	

Maxxam ID: SZ1099 Dup
Sample ID: KZ-21
Matrix: Water

Collected: 2018/02/13
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Total) by CVAF	CV/AF	8913977	2018/02/19	2018/02/19	Name Redacted

Maxxam ID: SZ1100
Sample ID: KZ-22
Matrix: Water

Collected: 2018/02/13
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8914654	2018/02/20	2018/02/20	Name Redacted
Alkalinity - Low Level	AT/ALK	8915197	2018/02/20	2018/02/20	
Chloride - Low Level	KONE/COL	8916300	N/A	2018/02/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8914781	N/A	2018/02/20	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: SZ1100
Sample ID: KZ-22
Matrix: Water

Collected: 2018/02/13
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide WAD (weak acid dissociable)	TECH/COL	8914789	N/A	2018/02/20	Name Redacted
Carbon (DOC) - field filtered/preserved	TRAA/COL	8915205	N/A	2018/02/20	
Conductance - Low Level	AT/ALK	8915193	2018/02/20	2018/02/20	
Fluoride - Low Level	ISE/ISE	8914152	N/A	2018/02/19	
Hardness Total (calculated as CaCO3)	CALC	8913414	N/A	2018/02/21	
Hardness (calculated as CaCO3)	CALC	8913415	N/A	2018/02/21	
Mercury (Dissolved) by CVAF	CV/AF	8913973	N/A	2018/02/19	
Mercury (Total) by CVAF	CV/AF	8913977	2018/02/19	2018/02/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8913523	N/A	2018/02/21	
Ion Balance	CALC	8913524	N/A	2018/02/21	
Sum of cations, anions	CALC	8913525	N/A	2018/02/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8913479	N/A	2018/02/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8914082	N/A	2018/02/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8913480	N/A	2018/02/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8914011	N/A	2018/02/21	
Ammonia-N Low Level (Preserved)	KONE/COL	8915207	N/A	2018/02/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8913584	N/A	2018/02/17	
Nitrite (N) (low level)	TRAA/COL	8913585	N/A	2018/02/17	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8913481	N/A	2018/02/17	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/17	
pH Water	AT/ALK	8914927	2018/02/20	2018/02/20	
Sulphate - Low Level	KONE/COL	8915692	N/A	2018/02/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8917220	2018/02/22	2018/02/22	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8917262	2018/02/22	2018/02/22	
Total Suspended Solids-Low Level	BAL/BAL	8914708	2018/02/20	2018/02/21	

Maxxam ID: SZ1100 Dup
Sample ID: KZ-22
Matrix: Water

Collected: 2018/02/13
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride - Low Level	KONE/COL	8916300	N/A	2018/02/21	Name Redacted
Sulphate - Low Level	KONE/COL	8915692	N/A	2018/02/19	

Maxxam ID: SZ1101
Sample ID: KZ-26
Matrix: Water

Collected: 2018/02/13
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8914654	2018/02/20	2018/02/20	Name Redacted
Alkalinity - Low Level	AT/ALK	8914144	2018/02/19	2018/02/21	
Chloride - Low Level	KONE/COL	8915689	N/A	2018/02/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8914781	N/A	2018/02/20	
Cyanide WAD (weak acid dissociable)	TECH/COL	8914789	N/A	2018/02/20	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: SZ1101
Sample ID: KZ-26
Matrix: Water

Collected: 2018/02/13
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8915205	N/A	2018/02/20	Name Redacted
Conductance - Low Level	AT/ALK	8914145	2018/02/19	2018/02/20	
Fluoride - Low Level	ISE/ISE	8914152	N/A	2018/02/19	
Hardness Total (calculated as CaCO3)	CALC	8913414	N/A	2018/02/21	
Hardness (calculated as CaCO3)	CALC	8913415	N/A	2018/02/21	
Mercury (Dissolved) by CVAF	CV/AF	8913973	N/A	2018/02/19	
Mercury (Total) by CVAF	CV/AF	8913977	2018/02/19	2018/02/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8913523	N/A	2018/02/21	
Ion Balance	CALC	8913524	N/A	2018/02/21	
Sum of cations, anions	CALC	8913525	N/A	2018/02/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8913479	N/A	2018/02/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8914082	N/A	2018/02/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8913480	N/A	2018/02/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8914011	N/A	2018/02/21	
Ammonia-N Low Level (Preserved)	KONE/COL	8915207	N/A	2018/02/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8913584	N/A	2018/02/17	
Nitrite (N) (low level)	TRAA/COL	8913585	N/A	2018/02/17	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8913481	N/A	2018/02/17	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/17	
pH Water	AT/ALK	8914139	2018/02/19	2018/02/21	
Sulphate - Low Level	KONE/COL	8915692	N/A	2018/02/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8913615	2018/02/17	2018/02/20	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8913614	2018/02/17	2018/02/20	
Total Suspended Solids-Low Level	BAL/BAL	8914708	2018/02/20	2018/02/21	

Maxxam ID: SZ1101 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2018/02/13
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride - Low Level	ISE/ISE	8914152	N/A	2018/02/19	Name Redacted

Maxxam ID: SZ1102
Sample ID: KZ-28
Matrix: Water

Collected: 2018/02/13
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8914654	2018/02/20	2018/02/20	Name Redacted
Alkalinity - Low Level	AT/ALK	8914144	2018/02/19	2018/02/21	
Chloride - Low Level	KONE/COL	8915689	N/A	2018/02/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8914781	N/A	2018/02/20	
Cyanide WAD (weak acid dissociable)	TECH/COL	8914789	N/A	2018/02/20	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8915205	N/A	2018/02/20	
Conductance - Low Level	AT/ALK	8914145	2018/02/19	2018/02/20	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: SZ1102
Sample ID: KZ-28
Matrix: Water

Collected: 2018/02/13
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride - Low Level	ISE/ISE	8914152	N/A	2018/02/19	Name Redacted
Hardness Total (calculated as CaCO3)	CALC	8913414	N/A	2018/02/21	
Hardness (calculated as CaCO3)	CALC	8913415	N/A	2018/02/21	
Mercury (Dissolved) by CVAF	CV/AF	8913973	N/A	2018/02/19	
Mercury (Total) by CVAF	CV/AF	8913977	2018/02/19	2018/02/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8913523	N/A	2018/02/21	
Ion Balance	CALC	8913524	N/A	2018/02/21	
Sum of cations, anions	CALC	8913525	N/A	2018/02/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8913479	N/A	2018/02/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8914082	N/A	2018/02/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8913480	N/A	2018/02/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8914011	N/A	2018/02/21	
Ammonia-N Low Level (Preserved)	KONE/COL	8915207	N/A	2018/02/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8913584	N/A	2018/02/17	
Nitrite (N) (low level)	TRAA/COL	8913585	N/A	2018/02/17	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8913481	N/A	2018/02/17	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/17	
pH Water	AT/ALK	8914139	2018/02/19	2018/02/21	
Sulphate - Low Level	KONE/COL	8915692	N/A	2018/02/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8913615	2018/02/17	2018/02/20	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8913614	2018/02/17	2018/02/20	
Total Suspended Solids-Low Level	BAL/BAL	8914708	2018/02/20	2018/02/21	

Maxxam ID: SZ1102 Dup
Sample ID: KZ-28
Matrix: Water

Collected: 2018/02/13
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Low Level	AT/ALK	8914144	2018/02/19	2018/02/21	Name Redacted
Conductance - Low Level	AT/ALK	8914145	2018/02/19	2018/02/20	
pH Water	AT/ALK	8914139	2018/02/19	2018/02/21	

Maxxam ID: SZ1103
Sample ID: KZ-37
Matrix: Water

Collected: 2018/02/14
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8914654	2018/02/20	2018/02/20	Name Redacted
Alkalinity - Low Level	AT/ALK	8915197	2018/02/20	2018/02/20	
Chloride - Low Level	KONE/COL	8915689	N/A	2018/02/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8914781	N/A	2018/02/20	
Cyanide WAD (weak acid dissociable)	TECH/COL	8914789	N/A	2018/02/20	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8915205	N/A	2018/02/20	
Conductance - Low Level	AT/ALK	8915193	2018/02/20	2018/02/20	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: SZ1103
Sample ID: KZ-37
Matrix: Water

Collected: 2018/02/14
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride - Low Level	ISE/ISE	8914152	N/A	2018/02/19	Name Redacted
Hardness Total (calculated as CaCO3)	CALC	8913414	N/A	2018/02/21	
Hardness (calculated as CaCO3)	CALC	8913415	N/A	2018/02/21	
Mercury (Dissolved) by CVAF	CV/AF	8913973	N/A	2018/02/19	
Mercury (Total) by CVAF	CV/AF	8913977	2018/02/19	2018/02/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8913523	N/A	2018/02/21	
Ion Balance	CALC	8913524	N/A	2018/02/21	
Sum of cations, anions	CALC	8913525	N/A	2018/02/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8913479	N/A	2018/02/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8914082	N/A	2018/02/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8913480	N/A	2018/02/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8914011	N/A	2018/02/21	
Ammonia-N Low Level (Preserved)	KONE/COL	8915207	N/A	2018/02/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8913584	N/A	2018/02/17	
Nitrite (N) (low level)	TRAA/COL	8913585	N/A	2018/02/17	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8913481	N/A	2018/02/17	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/17	
pH Water	AT/ALK	8914927	2018/02/20	2018/02/20	
Sulphate - Low Level	KONE/COL	8915692	N/A	2018/02/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8913615	2018/02/17	2018/02/20	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8913614	2018/02/17	2018/02/20	
Total Suspended Solids-Low Level	BAL/BAL	8914757	2018/02/20	2018/02/21	

Maxxam ID: SZ1104
Sample ID: KZ-13
Matrix: Water

Collected: 2018/02/15
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8914654	2018/02/20	2018/02/20	Name Redacted
Alkalinity - Low Level	AT/ALK	8914144	2018/02/20	2018/02/21	
Chloride - Low Level	KONE/COL	8915689	N/A	2018/02/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8914781	N/A	2018/02/20	
Cyanide WAD (weak acid dissociable)	TECH/COL	8914789	N/A	2018/02/20	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8915206	N/A	2018/02/20	
Conductance - Low Level	AT/ALK	8914145	2018/02/20	2018/02/21	
Fluoride - Low Level	ISE/ISE	8914152	N/A	2018/02/19	
Hardness Total (calculated as CaCO3)	CALC	8913414	N/A	2018/02/21	
Hardness (calculated as CaCO3)	CALC	8913415	N/A	2018/02/21	
Mercury (Dissolved) by CVAF	CV/AF	8913973	N/A	2018/02/19	
Mercury (Total) by CVAF	CV/AF	8913977	2018/02/19	2018/02/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8913523	N/A	2018/02/21	
Ion Balance	CALC	8913524	N/A	2018/02/21	
Sum of cations, anions	CALC	8913525	N/A	2018/02/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8913479	N/A	2018/02/21	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: SZ1104
Sample ID: KZ-13
Matrix: Water

Collected: 2018/02/15
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8914082	N/A	2018/02/20	Name Redacted
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8913480	N/A	2018/02/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8914011	N/A	2018/02/21	
Ammonia-N Low Level (Preserved)	KONE/COL	8915207	N/A	2018/02/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8913584	N/A	2018/02/17	
Nitrite (N) (low level)	TRAA/COL	8913585	N/A	2018/02/17	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8913481	N/A	2018/02/17	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/17	
pH Water	AT/ALK	8914139	2018/02/21	2018/02/21	
Sulphate - Low Level	KONE/COL	8915692	N/A	2018/02/19	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8913615	2018/02/17	2018/02/20	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8913614	2018/02/17	2018/02/20	
Total Suspended Solids-Low Level	BAL/BAL	8914757	2018/02/20	2018/02/21	

Maxxam ID: SZ1105
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2018/02/16
Shipped:
Received: 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8914654	2018/02/20	2018/02/20	Name Redacted
Alkalinity - Low Level	AT/ALK	8914136	2018/02/19	2018/02/20	
Chloride - Low Level	KONE/COL	8915689	N/A	2018/02/19	
Cyanide SAD (strong acid dissociable)	TECH/COL	8914784	N/A	2018/02/20	
Cyanide WAD (weak acid dissociable)	TECH/COL	8914796	N/A	2018/02/20	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8915205	N/A	2018/02/20	
Conductance - Low Level	AT/ALK	8914137	2018/02/19	2018/02/19	
Fluoride - Low Level	ISE/ISE	8914152	N/A	2018/02/19	
Hardness Total (calculated as CaCO3)	CALC	8913414	N/A	2018/02/21	
Hardness (calculated as CaCO3)	CALC	8913415	N/A	2018/02/21	
Mercury (Dissolved) by CVAF	CV/AF	8913973	N/A	2018/02/19	
Mercury (Total) by CVAF	CV/AF	8913977	2018/02/19	2018/02/19	
Ion Balance (as Cations/Anions Ratio)	CALC	8913523	N/A	2018/02/21	
Ion Balance	CALC	8913524	N/A	2018/02/21	
Sum of cations, anions	CALC	8913525	N/A	2018/02/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8913479	N/A	2018/02/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8914082	N/A	2018/02/20	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8913480	N/A	2018/02/21	
Elements by ICPMS Low Level (total)	ICP/CRCM	8914011	N/A	2018/02/21	
Ammonia-N Low Level (Preserved)	KONE/COL	8915207	N/A	2018/02/20	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8913584	N/A	2018/02/17	
Nitrite (N) (low level)	TRAA/COL	8913585	N/A	2018/02/17	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8913481	N/A	2018/02/17	
pH Water	AT/ALK	8914134	2018/02/19	2018/02/20	
Sulphate - Low Level	KONE/COL	8915692	N/A	2018/02/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: SZ1105 **Collected:** 2018/02/16
Sample ID: TRIP BLANK **Shipped:**
Matrix: Water **Received:** 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8913615	2018/02/17	2018/02/20	Name Redacted
Total Phosphorus - Low Level Unpreserved	KONE/COL	8913614	2018/02/17	2018/02/20	
Total Suspended Solids-Low Level	BAL/BAL	8914757	2018/02/20	2018/02/21	

Maxxam ID: SZ1105 Dup **Collected:** 2018/02/16
Sample ID: TRIP BLANK **Shipped:**
Matrix: Water **Received:** 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8914784	N/A	2018/02/20	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8914796	N/A	2018/02/20	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8915205	N/A	2018/02/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8914011	N/A	2018/02/21	
Ammonia-N Low Level (Preserved)	KONE/COL	8915207	N/A	2018/02/20	

Maxxam ID: TC7775 **Collected:** 2018/02/15
Sample ID: KZ-2 VIAL 2 **Shipped:**
Matrix: Water **Received:** 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness Total (calculated as CaCO3)	CALC	8936584	N/A	2018/03/20	Name Redacted
Hardness (calculated as CaCO3)	CALC	8936705	N/A	2018/03/20	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8936853	N/A	2018/03/20	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8937961	N/A	2018/03/19	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8936916	N/A	2018/03/20	
Elements by ICPMS Low Level (total)	ICP/CRCM	8938008	N/A	2018/03/19	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/19	

Maxxam ID: TC7775 Dup **Collected:** 2018/02/15
Sample ID: KZ-2 VIAL 2 **Shipped:**
Matrix: Water **Received:** 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (total)	ICP/CRCM	8938008	N/A	2018/03/19	Name Redacted

Maxxam ID: TC7776 **Collected:** 2018/02/15
Sample ID: KZ-6 VIAL 2 **Shipped:**
Matrix: Water **Received:** 2018/02/16

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8937961	N/A	2018/03/19	Name Redacted
Elements by ICPMS Low Level (total)	ICP/CRCM	8938008	N/A	2018/03/19	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/19	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.7°C
Package 2	2.7°C
Package 3	3.0°C

Version 2: Report includes additional metals results for samples KZ-2 and KZ-6 as per request from client for analysis from secondary sample vial.

Sample SZ1098 [KZ-19] : Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved.

Sample SZ1099 [KZ-21] : Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample analyzed past method specified hold time for Conductance - Low Level.

Sample SZ1100 [KZ-22] : Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved.

Sample SZ1101 [KZ-26] : Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved.

Sample SZ1102 [KZ-28] : Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past metho

Sample SZ1091, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample SZ1092, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample SZ1095, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample SZ1096, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample SZ1099, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample SZ1100, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample SZ1102, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8913584	Nitrate plus Nitrite (N)	2018/02/17	104	80 - 120	106	80 - 120	<0.0020	mg/L	0.14	25
8913585	Nitrite (N)	2018/02/17	100	80 - 120	106	80 - 120	<0.0020	mg/L	NC	25
8913614	Total Phosphorus (P)	2018/02/20	NC	80 - 120	97	80 - 120	<0.0020	mg/L	0.96	20
8913615	Dissolved Phosphorus (P)	2018/02/20	91	80 - 120	109	80 - 120	<0.0020	mg/L		
8913973	Dissolved Mercury (Hg)	2018/02/19	94	80 - 120	93	80 - 120	<0.0000020	mg/L	NC	20
8913977	Total Mercury (Hg)	2018/02/19	89	80 - 120	91	80 - 120	<0.0000020	mg/L	NC	20
8914011	Total Aluminum (Al)	2018/02/21	98	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8914011	Total Antimony (Sb)	2018/02/21	99	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8914011	Total Arsenic (As)	2018/02/21	102	80 - 120	95	80 - 120	<0.000020	mg/L	NC	20
8914011	Total Barium (Ba)	2018/02/21	NC	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8914011	Total Beryllium (Be)	2018/02/21	95	80 - 120	101	80 - 120	<0.000010	mg/L	NC	20
8914011	Total Bismuth (Bi)	2018/02/21	93	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8914011	Total Boron (B)	2018/02/21	83	80 - 120	89	80 - 120	<0.010	mg/L	NC	20
8914011	Total Cadmium (Cd)	2018/02/21	94	80 - 120	95	80 - 120	<0.0000050	mg/L	NC	20
8914011	Total Chromium (Cr)	2018/02/21	92	80 - 120	95	80 - 120	<0.00010	mg/L	NC	20
8914011	Total Cobalt (Co)	2018/02/21	88	80 - 120	94	80 - 120	<0.0000050	mg/L	NC	20
8914011	Total Copper (Cu)	2018/02/21	84	80 - 120	94	80 - 120	<0.000050	mg/L	NC	20
8914011	Total Iron (Fe)	2018/02/21	NC	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
8914011	Total Lead (Pb)	2018/02/21	96	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8914011	Total Lithium (Li)	2018/02/21	NC	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8914011	Total Manganese (Mn)	2018/02/21	NC	80 - 120	95	80 - 120	<0.000050	mg/L	NC	20
8914011	Total Molybdenum (Mo)	2018/02/21	105	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8914011	Total Nickel (Ni)	2018/02/21	87	80 - 120	95	80 - 120	<0.000020	mg/L	NC	20
8914011	Total Phosphorus (P)	2018/02/21	100	80 - 120	97	80 - 120	<0.0020	mg/L	NC	20
8914011	Total Selenium (Se)	2018/02/21	96	80 - 120	94	80 - 120	<0.000040	mg/L	NC	20
8914011	Total Silicon (Si)	2018/02/21	NC	80 - 120	106	80 - 120	<0.050	mg/L	NC	20
8914011	Total Silver (Ag)	2018/02/21	88	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8914011	Total Strontium (Sr)	2018/02/21	NC	80 - 120	96	80 - 120	<0.000050	mg/L	NC	20
8914011	Total Thallium (Tl)	2018/02/21	96	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8914011	Total Tin (Sn)	2018/02/21	97	80 - 120	95	80 - 120	<0.00020	mg/L	NC	20
8914011	Total Titanium (Ti)	2018/02/21	96	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8914011	Total Uranium (U)	2018/02/21	103	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8914011	Total Vanadium (V)	2018/02/21	97	80 - 120	97	80 - 120	<0.00020	mg/L	NC	20
8914011	Total Zinc (Zn)	2018/02/21	86	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
8914011	Total Zirconium (Zr)	2018/02/21	102	80 - 120	92	80 - 120	<0.00010	mg/L	NC	20
8914082	Dissolved Aluminum (Al)	2018/02/20	106	80 - 120	105	80 - 120	<0.00050	mg/L	5.9	20
8914082	Dissolved Antimony (Sb)	2018/02/20	104	80 - 120	106	80 - 120	<0.000020	mg/L	NC	20
8914082	Dissolved Arsenic (As)	2018/02/20	99	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8914082	Dissolved Barium (Ba)	2018/02/20	103	80 - 120	106	80 - 120	<0.000020	mg/L	1.5	20
8914082	Dissolved Beryllium (Be)	2018/02/20	99	80 - 120	99	80 - 120	<0.000010	mg/L	NC	20
8914082	Dissolved Bismuth (Bi)	2018/02/20	100	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8914082	Dissolved Boron (B)	2018/02/20	93	80 - 120	91	80 - 120	<0.010	mg/L	NC	20
8914082	Dissolved Cadmium (Cd)	2018/02/20	101	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8914082	Dissolved Chromium (Cr)	2018/02/20	101	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
8914082	Dissolved Cobalt (Co)	2018/02/20	100	80 - 120	99	80 - 120	<0.0000050	mg/L	2.0	20
8914082	Dissolved Copper (Cu)	2018/02/20	100	80 - 120	99	80 - 120	<0.000050	mg/L	0.95	20
8914082	Dissolved Iron (Fe)	2018/02/20	100	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
8914082	Dissolved Lead (Pb)	2018/02/20	102	80 - 120	105	80 - 120	<0.0000050	mg/L	2.2	20
8914082	Dissolved Lithium (Li)	2018/02/20	96	80 - 120	100	80 - 120	<0.00050	mg/L	4.7	20
8914082	Dissolved Manganese (Mn)	2018/02/20	100	80 - 120	98	80 - 120	<0.000050	mg/L	NC	20
8914082	Dissolved Molybdenum (Mo)	2018/02/20	102	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8914082	Dissolved Nickel (Ni)	2018/02/20	101	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8914082	Dissolved Phosphorus (P)	2018/02/20	102	80 - 120	99	80 - 120	<0.0020	mg/L		
8914082	Dissolved Selenium (Se)	2018/02/20	98	80 - 120	96	80 - 120	<0.000040	mg/L	NC	20
8914082	Dissolved Silicon (Si)	2018/02/20	104	80 - 120	104	80 - 120	<0.050	mg/L	17	20
8914082	Dissolved Silver (Ag)	2018/02/20	100	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8914082	Dissolved Strontium (Sr)	2018/02/20	100	80 - 120	99	80 - 120	<0.000050	mg/L	1.1	20
8914082	Dissolved Thallium (Tl)	2018/02/20	102	80 - 120	105	80 - 120	<0.0000020	mg/L	NC	20
8914082	Dissolved Tin (Sn)	2018/02/20	100	80 - 120	103	80 - 120	<0.00020	mg/L	5.9	20
8914082	Dissolved Titanium (Ti)	2018/02/20	102	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8914082	Dissolved Uranium (U)	2018/02/20	103	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8914082	Dissolved Vanadium (V)	2018/02/20	101	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8914082	Dissolved Zinc (Zn)	2018/02/20	102	80 - 120	99	80 - 120	<0.00010	mg/L	0.41	20
8914082	Dissolved Zirconium (Zr)	2018/02/20	95	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
8914134	pH	2018/02/20			101	97 - 103				
8914136	Alkalinity (PP as CaCO3)	2018/02/20					<0.50	mg/L		
8914136	Alkalinity (Total as CaCO3)	2018/02/20			96	80 - 120	<0.50	mg/L		
8914136	Bicarbonate (HCO3)	2018/02/20					<0.50	mg/L		
8914136	Carbonate (CO3)	2018/02/20					<0.50	mg/L		
8914136	Hydroxide (OH)	2018/02/20					<0.50	mg/L		
8914137	Conductivity	2018/02/19			100	80 - 120	<1.0	uS/cm		
8914139	pH	2018/02/21			101	97 - 103			0.57	20
8914144	Alkalinity (PP as CaCO3)	2018/02/21					<0.50	mg/L	NC	20
8914144	Alkalinity (Total as CaCO3)	2018/02/21	NC	80 - 120	93	80 - 120	<0.50	mg/L	0.54	20
8914144	Bicarbonate (HCO3)	2018/02/21					<0.50	mg/L	0.54	20
8914144	Carbonate (CO3)	2018/02/21					<0.50	mg/L	NC	20
8914144	Hydroxide (OH)	2018/02/21					<0.50	mg/L	NC	20
8914145	Conductivity	2018/02/20			99	80 - 120	<1.0	uS/cm	0.57	20
8914152	Fluoride (F)	2018/02/19	106	80 - 120	104	80 - 120	0.010, RDL=0.010	mg/L	0	20
8914654	Acidity (pH 4.5)	2018/02/20					<1.0	mg/L	NC	20
8914654	Acidity (pH 8.3)	2018/02/20			99	80 - 120	<1.0	mg/L	3.6	20
8914708	Total Suspended Solids	2018/02/21			99	80 - 120	<1.0	mg/L		
8914757	Total Suspended Solids	2018/02/21			98	80 - 120	<1.0	mg/L		
8914781	Strong Acid Dissoc. Cyanide (CN)	2018/02/20	102	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8914784	Strong Acid Dissoc. Cyanide (CN)	2018/02/20	102	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8914789	Weak Acid Dissoc. Cyanide (CN)	2018/02/20	100	80 - 120	92	80 - 120	<0.00050	mg/L	NC	20
8914796	Weak Acid Dissoc. Cyanide (CN)	2018/02/20	103	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8914927	pH	2018/02/20			101	97 - 103			0.12	20
8915193	Conductivity	2018/02/20			99	80 - 120	<1.0	uS/cm		
8915197	Alkalinity (PP as CaCO3)	2018/02/20					<0.50	mg/L		
8915197	Alkalinity (Total as CaCO3)	2018/02/20			93	80 - 120	<0.50	mg/L		
8915197	Bicarbonate (HCO3)	2018/02/20					<0.50	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8915197	Carbonate (CO3)	2018/02/20					<0.50	mg/L		
8915197	Hydroxide (OH)	2018/02/20					<0.50	mg/L		
8915205	Dissolved Organic Carbon (C)	2018/02/20	115	80 - 120	112	80 - 120	<0.50	mg/L	NC	20
8915206	Dissolved Organic Carbon (C)	2018/02/20	118	80 - 120	114	80 - 120	<0.50	mg/L	0.82	20
8915207	Total Ammonia (N)	2018/02/20	90	80 - 120	98	80 - 120	<0.0050	mg/L	NC	20
8915689	Dissolved Chloride (Cl)	2018/02/19			101	80 - 120	<0.50	mg/L		
8915692	Dissolved Sulphate (SO4)	2018/02/19	NC	80 - 120	99	80 - 120	<0.50	mg/L	1.0	20
8916300	Dissolved Chloride (Cl)	2018/02/21	117	80 - 120	104	80 - 120	<0.50	mg/L	6.2	20
8916601	Dissolved Aluminum (Al)	2018/02/26			111	80 - 120	<0.00050	mg/L		
8916601	Dissolved Cadmium (Cd)	2018/02/26			103	80 - 120	<0.0000050	mg/L		
8916601	Dissolved Copper (Cu)	2018/02/26			90	80 - 120	<0.000050	mg/L		
8916601	Dissolved Iron (Fe)	2018/02/26			104	80 - 120	<0.0010	mg/L		
8916601	Dissolved Lead (Pb)	2018/02/26			105	80 - 120	<0.0000050	mg/L		
8916601	Dissolved Manganese (Mn)	2018/02/26			91	80 - 120	<0.000050	mg/L		
8916601	Dissolved Nickel (Ni)	2018/02/26			90	80 - 120	0.000022, RDL=0.000020 (1)	mg/L		
8916601	Dissolved Zinc (Zn)	2018/02/26			93	80 - 120	<0.00010	mg/L		
8917220	Dissolved Phosphorus (P)	2018/02/22	100	80 - 120	103	80 - 120	<0.0020	mg/L	6.4	20
8917262	Total Phosphorus (P)	2018/02/22			103	80 - 120	<0.0020	mg/L		
8937961	Dissolved Aluminum (Al)	2018/03/19	105	80 - 120	104	80 - 120	<0.00050	mg/L	8.1	20
8937961	Dissolved Antimony (Sb)	2018/03/19	96	80 - 120	98	80 - 120	<0.000020	mg/L	0.13	20
8937961	Dissolved Arsenic (As)	2018/03/19	99	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8937961	Dissolved Barium (Ba)	2018/03/19	93	80 - 120	97	80 - 120	<0.000020	mg/L	0.50	20
8937961	Dissolved Beryllium (Be)	2018/03/19	99	80 - 120	100	80 - 120	<0.000010	mg/L	NC	20
8937961	Dissolved Bismuth (Bi)	2018/03/19	99	80 - 120	102	80 - 120	<0.0000050	mg/L	4.5	20
8937961	Dissolved Boron (B)	2018/03/19	99	80 - 120	100	80 - 120	<0.010	mg/L	NC	20
8937961	Dissolved Cadmium (Cd)	2018/03/19	95	80 - 120	97	80 - 120	<0.0000050	mg/L	1.0	20
8937961	Dissolved Chromium (Cr)	2018/03/19	97	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8937961	Dissolved Cobalt (Co)	2018/03/19	94	80 - 120	98	80 - 120	<0.0000050	mg/L	17	20
8937961	Dissolved Copper (Cu)	2018/03/19	94	80 - 120	96	80 - 120	<0.000050	mg/L	0.74	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8937961	Dissolved Iron (Fe)	2018/03/19	95	80 - 120	96	80 - 120	<0.0010	mg/L	0.90	20
8937961	Dissolved Lead (Pb)	2018/03/19	100	80 - 120	103	80 - 120	<0.0000050	mg/L	0.47	20
8937961	Dissolved Lithium (Li)	2018/03/19	93	80 - 120	97	80 - 120	<0.00050	mg/L	NC	20
8937961	Dissolved Manganese (Mn)	2018/03/19	97	80 - 120	101	80 - 120	<0.000050	mg/L	1.2	20
8937961	Dissolved Molybdenum (Mo)	2018/03/19	96	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8937961	Dissolved Nickel (Ni)	2018/03/19	95	80 - 120	99	80 - 120	<0.000020	mg/L	4.8	20
8937961	Dissolved Phosphorus (P)	2018/03/19	93	80 - 120	95	80 - 120	<0.0020	mg/L		
8937961	Dissolved Selenium (Se)	2018/03/19	96	80 - 120	99	80 - 120	<0.000040	mg/L	NC	20
8937961	Dissolved Silicon (Si)	2018/03/19	93	80 - 120	90	80 - 120	<0.050	mg/L	4.5	20
8937961	Dissolved Silver (Ag)	2018/03/19	94	80 - 120	96	80 - 120	<0.0000050	mg/L	19	20
8937961	Dissolved Strontium (Sr)	2018/03/19	99	80 - 120	101	80 - 120	<0.000050	mg/L	2.6	20
8937961	Dissolved Thallium (Tl)	2018/03/19	99	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8937961	Dissolved Tin (Sn)	2018/03/19	93	80 - 120	95	80 - 120	<0.00020	mg/L	1.5	20
8937961	Dissolved Titanium (Ti)	2018/03/19	99	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8937961	Dissolved Uranium (U)	2018/03/19	103	80 - 120	105	80 - 120	<0.0000020	mg/L	NC	20
8937961	Dissolved Vanadium (V)	2018/03/19	96	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
8937961	Dissolved Zinc (Zn)	2018/03/19	NC	80 - 120	100	80 - 120	<0.00010	mg/L	0.27	20
8937961	Dissolved Zirconium (Zr)	2018/03/19	99	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8938008	Total Aluminum (Al)	2018/03/19	100	80 - 120	101	80 - 120	<0.00050	mg/L	3.6	20
8938008	Total Antimony (Sb)	2018/03/19	96	80 - 120	103	80 - 120	<0.000020	mg/L	3.4	20
8938008	Total Arsenic (As)	2018/03/19	104	80 - 120	105	80 - 120	<0.000020	mg/L	8.3	20
8938008	Total Barium (Ba)	2018/03/19	NC	80 - 120	102	80 - 120	<0.000020	mg/L	2.0	20
8938008	Total Beryllium (Be)	2018/03/19	96	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
8938008	Total Bismuth (Bi)	2018/03/19	99	80 - 120	108	80 - 120	<0.0000050	mg/L	NC	20
8938008	Total Boron (B)	2018/03/19	88	80 - 120	86	80 - 120	<0.010	mg/L	NC	20
8938008	Total Cadmium (Cd)	2018/03/19	92	80 - 120	97	80 - 120	<0.0000050	mg/L	3.1	20
8938008	Total Chromium (Cr)	2018/03/19	96	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
8938008	Total Cobalt (Co)	2018/03/19	90	80 - 120	94	80 - 120	<0.0000050	mg/L	NC	20
8938008	Total Copper (Cu)	2018/03/19	88	80 - 120	93	80 - 120	<0.000050	mg/L	7.7	20
8938008	Total Iron (Fe)	2018/03/19	93	80 - 120	92	80 - 120	<0.0010	mg/L	2.6	20
8938008	Total Lead (Pb)	2018/03/19	100	80 - 120	109	80 - 120	<0.0000050	mg/L	0.62	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8938008	Total Lithium (Li)	2018/03/19	91	80 - 120	96	80 - 120	<0.00050	mg/L	3.6	20
8938008	Total Manganese (Mn)	2018/03/19	95	80 - 120	97	80 - 120	<0.000050	mg/L	15	20
8938008	Total Molybdenum (Mo)	2018/03/19	101	80 - 120	100	80 - 120	<0.000050	mg/L	1.3	20
8938008	Total Nickel (Ni)	2018/03/19	91	80 - 120	95	80 - 120	<0.000020	mg/L	3.7	20
8938008	Total Phosphorus (P)	2018/03/19	109	80 - 120	97	80 - 120	<0.0020	mg/L	NC	20
8938008	Total Selenium (Se)	2018/03/19	100	80 - 120	98	80 - 120	<0.000040	mg/L	0.56	20
8938008	Total Silicon (Si)	2018/03/19	75 (2)	80 - 120	96	80 - 120	<0.050	mg/L	0.49	20
8938008	Total Silver (Ag)	2018/03/19	93	80 - 120	97	80 - 120	<0.0000050	mg/L	NC	20
8938008	Total Strontium (Sr)	2018/03/19	NC	80 - 120	98	80 - 120	<0.000050	mg/L	2.0	20
8938008	Total Thallium (Tl)	2018/03/19	100	80 - 120	105	80 - 120	<0.0000020	mg/L	3.9	20
8938008	Total Tin (Sn)	2018/03/19	93	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8938008	Total Titanium (Ti)	2018/03/19	99	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8938008	Total Uranium (U)	2018/03/19	109	80 - 120	116	80 - 120	<0.0000020	mg/L	0.33	20
8938008	Total Vanadium (V)	2018/03/19	97	80 - 120	99	80 - 120	<0.00020	mg/L	NC	20
8938008	Total Zinc (Zn)	2018/03/19	96	80 - 120	102	80 - 120	<0.00010	mg/L	5.5	20
8938008	Total Zirconium (Zr)	2018/03/19	99	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Method blank exceeds acceptance limits for Ni- 2X RDL acceptable for low level metals determination.

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B812124
Report Date: 2018/03/22

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Name Redacted Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

BBY FCD-00077/05

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 20180217-3

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria		Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil	[ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify)	[ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water	[ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		15-Feb-18	10:10	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3	KZ-6		15-Feb-18	9:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
4	KZ-9		14-Feb-18	13:55	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6	KZ-15		14-Feb-18	11:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
7	KZ-16		14-Feb-18	12:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
8	KZ-17		14-Feb-18	12:05	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
9	KZ-18		14-Feb-18	14:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
10	KZ-19		13-Feb-18	14:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	

LABORATORY USE ONLY

CUSTODY SEAL Present	CUSTODY SEAL Intact	COOLER TEMPERATURES
✓	✓	5.1.3
✓	✓	2.0.3
✓	✓	1.1.2

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Signature Redacted 20925
2018-02-16
TEMP: 4, 3, 4
3, 3, 2
4 2 3

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Name Redacted	2/16/2018	8:30	Signature Redacted	2018/02/17	11:53

B812124_COC

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #: 20180217-4

BBY FCD-00077/05

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Rush Confirmation #:

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	LABORATORY USE ONLY: CUSTODY SEAL Present	CUSTODY SEAL Intact	COOLER TEMPERATURES	COMMENTS
1	KZ-21		13-Feb-18	14:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Y	Y	5.1.3	RECEIVED IN WHITEHORSE
2	KZ-22		13-Feb-18	14:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Y	Y	2.0.3	Signature 20925
3	KZ-26		13-Feb-18	12:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	11		Y	Y	1.1.2	2018-02-16
4	KZ-28		13-Feb-18	14:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	11					4.3.4
5	KZ-37		14-Feb-18	13:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	11					3 3 2
6	KZ-13		15-Feb-18	11:10	Water	x	x	x	x	x	x	x	x	x	x	x	x	11					4 2 3
7	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x	11					
8																							
9																							
10																							

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	2/16/2018	8:30	Signature Redacted	2018/02/17	11:53	B812124.

MAXXAM REANALYSIS AUTHORIZATION FORM

Company Name: Invoice Company: BMC Mineral Report Company: Alexco Environmental Group

Contact Name: Nichole Speiss

Client Project #: BMC-15-01 Maxxam Job #: B812124

(Please complete this form on a per job basis - i.e.: one form per original Maxxam Job#)

TAT Requested

Standard (5 days)	☐
Rush* (3 days)	☐
(2 days)	☐
(1 day)	☐
(Same day)	☐

Raw Data Recheck ☐

Terms and Conditions:

Standard unit rates apply with any applicable rush surcharges for re-analyses that are within acceptable RPD limits of the original reported result or confirm sample inhomogeneity.
The reanalysis process will not start until the signed authorization is received by Maxxam. Please note that reanalysis conducted past the hold-time may not be defensibe. All changes in data will be reported.

For more information on Maxxam Terms and Conditions, please refer to Maxxam.ca/Terms
* Maxxam will use its best efforts to meet mutually agreed upon turn-around times.

Client Sample ID	Maxxam ID	Sampling Date	Reason for Reanalysis	Parameter to be Reanalyzed (List one analysis per line. Use additional lines as necessary)	Proceed Past Hold-Time
KZ-22	SZ1100	2018/02/13	Mismatch with historical	D-Cd, T-Cd, T-Zn	Y / N
			Other (please specify)		Y / N
			Other (please specify)		Y / N
			Other (please specify)		Y / N
			Other (please specify)		Y / N
			Other (please specify)		Y / N
			Other (please specify)		Y / N
			Other (please specify)		Y / N
			Other (please specify)		Y / N

General Comments/Instructions

REQUESTED BY: Nichole Speiss **DATE:** 2018/03/01
(Please authorize with your Printed Name and Date) (YYYY/MM/DD)

RECEIVED BY: **DATE:** 2018/03/01
Please authorize with your Printed Name and Date) (YYYY/MM/DD)

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08450954, 08450955

Attention: KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2018/03/02
Report #: R2522750
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B813684
Received: 2018/02/22, 09:05

Sample Matrix: Water
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	10	2018/02/26	2018/02/26	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Low Level	4	2018/02/24	2018/02/24	BBY6SOP-00026	SM 22 2320 B m
Alkalinity - Low Level	6	2018/02/24	2018/02/25	BBY6SOP-00026	SM 22 2320 B m
Chloride - Low Level	10	N/A	2018/02/24	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	10	N/A	2018/02/27	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	10	N/A	2018/02/27	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	10	N/A	2018/02/26	BBY6SOP-00003	SM 22 5310 C m
Conductance - Low Level	4	2018/02/24	2018/02/24	BBY6SOP-00026	SM 22 2510 B m
Conductance - Low Level	6	2018/02/24	2018/02/25	BBY6SOP-00026	SM 22 2510 B m
Fluoride - Low Level	10	N/A	2018/02/26	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3) (2)	10	N/A	2018/02/28	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	10	N/A	2018/02/28	BBY WI-00033	Auto Calc
Mercury (Dissolved) by CVAF	10	N/A	2018/02/26	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total) by CVAF	10	2018/02/26	2018/02/26	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	10	N/A	2018/02/28	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (dissolved)	10	N/A	2018/02/27	BBY7SOP-00002	EPA 6020b R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	10	N/A	2018/02/28	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (total)	10	N/A	2018/02/27	BBY7SOP-00002	EPA 6020b R2 m
Ammonia-N Low Level (Preserved)	10	N/A	2018/02/27	BBY6SOP-00009	EPA 350.1 m
Nitrate+Nitrite (N) (low level)	10	N/A	2018/02/24	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	10	N/A	2018/02/24	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N) Low Level Calc	10	N/A	2018/02/24	BBY WI-00033	Auto Calc
Filter and HNO3 Preserve for Metals	6	N/A	2018/02/27	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	3	N/A	2018/02/28	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (3)	4	2018/02/24	2018/02/24	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (3)	6	2018/02/24	2018/02/25	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate - Low Level	10	N/A	2018/02/24	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	9	2018/02/24	2018/02/27	BBY6SOP-00013	SM 22 4500-P E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	1	2018/03/01	2018/03/01	BBY6SOP-00013	SM 22 4500-P E m

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08450954, 08450955

Attention: KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2018/03/02
Report #: R2522750
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B813684
Received: 2018/02/22, 09:05

Sample Matrix: Water
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Phosphorus - Low Level Unpreserved	9	2018/02/24	2018/02/27	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	1	2018/03/01	2018/03/01	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	4	2018/02/26	2018/02/27	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	6	2018/02/27	2018/02/27	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(3) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08450954, 08450955

Attention: KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2018/03/02
Report #: R2522750
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B813684
Received: 2018/02/22, 09:05

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SZ8808		SZ8809		SZ8810		
Sampling Date		2018/02/21 13:15		2018/02/21 10:20		2018/02/21 11:10		
COC Number		08450954		08450954		08450954		
	UNITS	KZ-26	QC Batch	KZ-15	QC Batch	KZ-9	RDL	QC Batch
Calculated Parameters								
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Nitrate (N)	mg/L	0.318	8918367	0.213	8918367	0.337	0.0020	8918367
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8920766	<0.00050	8920766	<0.00050	0.00050	8920766
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8920768	<0.00050	8920768	<0.00050	0.00050	8920768
Fluoride (F)	mg/L	0.160	8919907	0.130	8919907	0.097	0.010	8919907
Dissolved Organic Carbon (C)	mg/L	3.47	8919715	<0.50	8919715	3.20	0.50	8919715
Acidity (pH 4.5)	mg/L	<1.0	8919937	<1.0	8919937	<1.0	1.0	8919937
Alkalinity (Total as CaCO3)	mg/L	399	8919011	264	8919015	225	0.50	8919011
Acidity (pH 8.3)	mg/L	<1.0	8919937	5.3	8919937	10.5	1.0	8919937
Alkalinity (PP as CaCO3)	mg/L	<0.50	8919011	<0.50	8919015	<0.50	0.50	8919011
Bicarbonate (HCO3)	mg/L	487	8919011	322	8919015	275	0.50	8919011
Carbonate (CO3)	mg/L	<0.50	8919011	<0.50	8919015	<0.50	0.50	8919011
Hydroxide (OH)	mg/L	<0.50	8919011	<0.50	8919015	<0.50	0.50	8919011
Anions								
Dissolved Sulphate (SO4)	mg/L	78.3	8921206	41.2	8921206	40.7	0.50	8921206
Dissolved Chloride (Cl)	mg/L	0.87	8921205	<0.50	8921205	1.2	0.50	8921205
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0115	8919179	0.0049	8919179	0.0048	0.0020	8919179
Total Ammonia (N)	mg/L	0.064	8921149	0.0070	8921149	0.069	0.0050	8921149
Nitrate plus Nitrite (N)	mg/L	0.321	8919090	0.213	8919092	0.337	0.0020	8919090
Nitrite (N)	mg/L	0.0030	8919091	<0.0020	8919093	<0.0020	0.0020	8919091
Total Phosphorus (P)	mg/L	0.0127	8919180	0.0029	8919180	0.0056	0.0020	8919180
Physical Properties								
Conductivity	uS/cm	822	8919005	551	8919016	499	1.0	8919005
pH	pH	8.30	8919003	8.09	8919013	7.93		8919003
Physical Properties								
Total Suspended Solids	mg/L	4.2	8919843	1.0	8919843	2.5	1.0	8919843
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SZ8811			SZ8812			SZ8813		
Sampling Date		2018/02/21 11:15			2018/02/21 11:00			2018/02/21 11:40		
COC Number		08450954			08450954			08450954		
	UNITS	KZ-18	RDL	QC Batch	KZ-37	RDL	QC Batch	KZ-2	RDL	QC Batch
Calculated Parameters										
Filter and HNO3 Preservation	N/A	FIELD		ONSITE	FIELD		ONSITE	FIELD		ONSITE
Nitrate (N)	mg/L	0.249	0.0020	8918367	0.213	0.0020	8918367	0.186	0.0020	8918367
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8920766	<0.00050	0.00050	8920766	<0.00050	0.00050	8920766
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8920768	<0.00050	0.00050	8920768	<0.00050	0.00050	8920768
Fluoride (F)	mg/L	0.084	0.010	8919897	0.100	0.010	8919897	0.050	0.010	8919907
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8919715	1.33	0.50	8919715	0.79	0.50	8919715
Acidity (pH 4.5)	mg/L	<1.0	1.0	8919937	<1.0	1.0	8919937	<1.0	1.0	8919937
Alkalinity (Total as CaCO3)	mg/L	210	0.50	8919015	207	0.50	8919015	86.7	0.50	8919015
Acidity (pH 8.3)	mg/L	1.1	1.0	8919937	11.7	1.0	8919937	<1.0	1.0	8919937
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8919015	<0.50	0.50	8919015	<0.50	0.50	8919015
Bicarbonate (HCO3)	mg/L	256	0.50	8919015	252	0.50	8919015	106	0.50	8919015
Carbonate (CO3)	mg/L	<0.50	0.50	8919015	<0.50	0.50	8919015	<0.50	0.50	8919015
Hydroxide (OH)	mg/L	<0.50	0.50	8919015	<0.50	0.50	8919015	<0.50	0.50	8919015
Anions										
Dissolved Sulphate (SO4)	mg/L	23.6	0.50	8921206	31.1	0.50	8921206	67.2	0.50	8921206
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8921205	0.56	0.50	8921205	<0.50	0.50	8921205
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0840	0.0020	8919179	0.0030	0.0020	8923151	0.0026	0.0020	8919179
Total Ammonia (N)	mg/L	0.0070	0.0050	8921149	0.052	0.0050	8921149	<0.0050	0.0050	8921149
Nitrate plus Nitrite (N)	mg/L	0.249	0.0020	8919092	0.213	0.0020	8919092	0.186	0.0020	8919092
Nitrite (N)	mg/L	<0.0020	0.0020	8919093	<0.0020	0.0020	8919093	<0.0020	0.0020	8919093
Total Phosphorus (P)	mg/L	0.0886	0.0020	8919180	0.0080	0.0020	8923150	<0.0020	0.0020	8919180
Physical Properties										
Conductivity	uS/cm	429	1.0	8919016	447	1.0	8919016	307	1.0	8919016
pH	pH	8.10		8919013	7.92		8919013	8.09		8919013
Physical Properties										
Total Suspended Solids	mg/L	9.5 (1)	1.2	8919843	1.5	1.0	8919846	<1.1 (1)	1.1	8919846

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SZ8814		SZ8815			SZ8816		
Sampling Date		2018/02/21 12:35		2018/02/21 11:50			2018/02/21 12:00		
COC Number		08450954		08450954			08450955		
	UNITS	KZ-13	RDL	DUP	RDL	QC Batch	FIELD BLANK	RDL	QC Batch
Calculated Parameters									
Filter and HNO3 Preservation	N/A	FIELD		FIELD		ONSITE	FIELD		ONSITE
Nitrate (N)	mg/L	0.0868	0.0020	0.187	0.0020	8918367	<0.0020	0.0020	8918367
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	<0.00050	0.00050	8920766	<0.00050	0.00050	8920766
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	<0.00050	0.00050	8920768	<0.00050	0.00050	8920768
Fluoride (F)	mg/L	0.060	0.010	0.050	0.010	8919907	0.010	0.010	8919907
Dissolved Organic Carbon (C)	mg/L	3.60	0.50	0.74	0.50	8919715	<0.50	0.50	8919715
Acidity (pH 4.5)	mg/L	<1.0	1.0	<1.0	1.0	8919937	<1.0	1.0	8919937
Alkalinity (Total as CaCO3)	mg/L	112	0.50	88.1	0.50	8919015	0.63	0.50	8918998
Acidity (pH 8.3)	mg/L	<1.0	1.0	<1.0	1.0	8919937	<1.0	1.0	8919937
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	<0.50	0.50	8919015	<0.50	0.50	8918998
Bicarbonate (HCO3)	mg/L	137	0.50	107	0.50	8919015	0.77	0.50	8918998
Carbonate (CO3)	mg/L	<0.50	0.50	<0.50	0.50	8919015	<0.50	0.50	8918998
Hydroxide (OH)	mg/L	<0.50	0.50	<0.50	0.50	8919015	<0.50	0.50	8918998
Anions									
Dissolved Sulphate (SO4)	mg/L	20.5	0.50	67.0	0.50	8921206	<0.50	0.50	8921206
Dissolved Chloride (Cl)	mg/L	0.74	0.50	<0.50	0.50	8921205	<0.50	0.50	8921205
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0067	0.0020	0.0050	0.0020	8919179	0.0021	0.0020	8919179
Total Ammonia (N)	mg/L	0.078	0.0050	<0.0050	0.0050	8921149	<0.0050	0.0050	8921149
Nitrate plus Nitrite (N)	mg/L	0.0868	0.0020	0.187	0.0020	8919092	<0.0020	0.0020	8919092
Nitrite (N)	mg/L	<0.0020	0.0020	<0.0020	0.0020	8919093	<0.0020	0.0020	8919093
Total Phosphorus (P)	mg/L	0.0052	0.0020	<0.0020	0.0020	8919180	<0.0020	0.0020	8919180
Physical Properties									
Conductivity	uS/cm	256	1.0	307	1.0	8919016	1.1	1.0	8918996
pH	pH	8.12		8.08		8919013	5.48		8918993
Physical Properties									
Total Suspended Solids	mg/L	1.3	1.0	<1.1 (1)	1.1	8919846	<1.0	1.0	8919846

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		SZ8817		
Sampling Date		2018/02/22 09:05		
COC Number		08450955		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Nitrate (N)	mg/L	<0.0020	0.0020	8918367
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8920766
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8920768
Fluoride (F)	mg/L	0.010	0.010	8919897
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8919715
Acidity (pH 4.5)	mg/L	<1.0	1.0	8919937
Alkalinity (Total as CaCO3)	mg/L	0.52	0.50	8918998
Acidity (pH 8.3)	mg/L	<1.0	1.0	8919937
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8918998
Bicarbonate (HCO3)	mg/L	0.63	0.50	8918998
Carbonate (CO3)	mg/L	<0.50	0.50	8918998
Hydroxide (OH)	mg/L	<0.50	0.50	8918998
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8921206
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8921205
Nutrients				
Dissolved Phosphorus (P)	mg/L	0.0022	0.0020	8919179
Total Ammonia (N)	mg/L	<0.0050	0.0050	8921149
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	8919092
Nitrite (N)	mg/L	<0.0020	0.0020	8919093
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8919180
Physical Properties				
Conductivity	uS/cm	1.0	1.0	8918996
pH	pH	5.41		8918993
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8919846
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SZ8808	SZ8809		SZ8810		
Sampling Date		2018/02/21 13:15	2018/02/21 10:20		2018/02/21 11:10		
COC Number		08450954	08450954		08450954		
	UNITS	KZ-26	KZ-15	QC Batch	KZ-9	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO3)	mg/L	442	278	8918024	228	0.50	8918024
Elements							
Dissolved Mercury (Hg)	mg/L	0.0000023	<0.0000020	8919363	<0.0000020	0.0000020	8919363
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00086	0.00094	8919720	0.00320	0.00050	8919720
Dissolved Antimony (Sb)	mg/L	0.000095	0.000024	8919720	0.000169 (1)	0.000020	8922529
Dissolved Arsenic (As)	mg/L	0.000525	0.000343	8919720	0.000256	0.000020	8919720
Dissolved Barium (Ba)	mg/L	0.133	0.0990	8919720	0.123	0.000020	8919720
Dissolved Beryllium (Be)	mg/L	<0.000010 (2)	<0.000010	8919720	<0.000010	0.000010	8919720
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8919720	<0.0000050	0.0000050	8919720
Dissolved Boron (B)	mg/L	<0.010 (2)	<0.010	8919720	<0.010	0.010	8919720
Dissolved Cadmium (Cd)	mg/L	0.000179	0.0000684	8919720	0.000276 (1)	0.0000050	8922529
Dissolved Chromium (Cr)	mg/L	0.00011	<0.00010	8919720	0.00037	0.00010	8919720
Dissolved Cobalt (Co)	mg/L	0.0000183	0.0000508	8919720	0.000187	0.0000050	8919720
Dissolved Copper (Cu)	mg/L	0.000761	0.000213	8919720	0.00310 (1)	0.000050	8922529
Dissolved Iron (Fe)	mg/L	0.0047	0.0086	8919720	0.194	0.0010	8919720
Dissolved Lead (Pb)	mg/L	0.0000411	<0.0000050	8919720	0.000166	0.0000050	8919720
Dissolved Lithium (Li)	mg/L	0.00926 (2)	0.00404	8919720	0.00390	0.00050	8919720
Dissolved Manganese (Mn)	mg/L	0.00473	0.0759	8919720	0.133	0.000050	8919720
Dissolved Molybdenum (Mo)	mg/L	0.00107	0.00168	8919720	0.000898	0.000050	8919720
Dissolved Nickel (Ni)	mg/L	0.000768	0.00121	8919720	0.00103	0.000020	8919720
Dissolved Phosphorus (P)	mg/L	0.0107	0.0034	8919720	0.0102	0.0020	8919720
Dissolved Selenium (Se)	mg/L	0.00128	0.00149	8919720	0.00159	0.000040	8919720
Dissolved Silicon (Si)	mg/L	5.95	3.72	8919720	3.72	0.050	8919720
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	8919720	<0.0000050	0.0000050	8919720
Dissolved Strontium (Sr)	mg/L	0.372	0.252	8919720	0.262	0.000050	8919720
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8919720	<0.0000020	0.0000020	8919720
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	8919720	<0.00020	0.00020	8919720
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	8919720	<0.00050	0.00050	8919720

RDL = Reportable Detection Limit
(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.
(2) Matrix Spike outside acceptance criteria (10% of analytes failure allowed).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SZ8808	SZ8809		SZ8810		
Sampling Date		2018/02/21 13:15	2018/02/21 10:20		2018/02/21 11:10		
COC Number		08450954	08450954		08450954		
	UNITS	KZ-26	KZ-15	QC Batch	KZ-9	RDL	QC Batch
Dissolved Uranium (U)	mg/L	0.00481	0.00641	8919720	0.00210	0.0000020	8919720
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	8919720	<0.00020	0.00020	8919720
Dissolved Zinc (Zn)	mg/L	0.00573	0.00908	8919720	0.0221	0.00010	8919720
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	8919720	<0.00010	0.00010	8919720
Dissolved Calcium (Ca)	mg/L	114	78.3	8918276	74.9	0.050	8918276
Dissolved Magnesium (Mg)	mg/L	38.1	20.1	8918276	9.85	0.050	8918276
Dissolved Potassium (K)	mg/L	2.71	1.43	8918276	2.59	0.050	8918276
Dissolved Sodium (Na)	mg/L	3.55	1.63	8918276	2.81	0.050	8918276
Dissolved Sulphur (S)	mg/L	23.5	12.3	8918276	12.3	3.0	8918276
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SZ8811		SZ8812		SZ8813		
Sampling Date		2018/02/21 11:15		2018/02/21 11:00		2018/02/21 11:40		
COC Number		08450954		08450954		08450954		
	UNITS	KZ-18	QC Batch	KZ-37	QC Batch	KZ-2	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO3)	mg/L	217	8918024	209	8918024	145	0.50	8918024
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8919363	<0.0000020	8919363	<0.0000020	0.0000020	8919363
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00238	8919720	0.00251	8919720	0.00498	0.00050	8919720
Dissolved Antimony (Sb)	mg/L	0.000042	8919720	0.000032	8919720	<0.000020	0.000020	8919720
Dissolved Arsenic (As)	mg/L	0.000985	8919720	0.000411	8919720	0.000080	0.000020	8919720
Dissolved Barium (Ba)	mg/L	0.0567	8919720	0.101	8919720	0.0758	0.000020	8919720
Dissolved Beryllium (Be)	mg/L	<0.000010	8919720	<0.000010	8919720	<0.000010	0.000010	8919720
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8919720	<0.0000050	8919720	<0.0000050	0.0000050	8919720
Dissolved Boron (B)	mg/L	<0.010	8919720	<0.010	8919720	<0.010	0.010	8919720
Dissolved Cadmium (Cd)	mg/L	0.0000484	8919720	0.0000876	8919720	0.000235	0.0000050	8919720
Dissolved Chromium (Cr)	mg/L	0.00015	8919720	0.00010	8919720	<0.00010	0.00010	8919720
Dissolved Cobalt (Co)	mg/L	0.0000353	8919720	0.000203	8919720	0.0000060	0.0000050	8919720
Dissolved Copper (Cu)	mg/L	0.000122	8919720	0.000807 (1)	8922529	0.000499	0.000050	8919720
Dissolved Iron (Fe)	mg/L	0.0429	8919720	0.209	8919720	<0.0010	0.0010	8919720
Dissolved Lead (Pb)	mg/L	0.0000075	8919720	0.0000516	8919720	0.0000243	0.0000050	8919720
Dissolved Lithium (Li)	mg/L	0.00186	8919720	0.00424	8919720	0.00134	0.00050	8919720
Dissolved Manganese (Mn)	mg/L	0.0152	8919720	0.142	8919720	<0.000050	0.000050	8919720
Dissolved Molybdenum (Mo)	mg/L	0.00184	8919720	0.00100	8919720	0.000728	0.000050	8919720
Dissolved Nickel (Ni)	mg/L	0.000315	8919720	0.000715	8919720	0.000326	0.000020	8919720
Dissolved Phosphorus (P)	mg/L	0.0652	8919720	0.0154	8919720	0.0042	0.0020	8919720
Dissolved Selenium (Se)	mg/L	0.00138	8919720	0.00106	8919720	0.00240	0.000040	8919720
Dissolved Silicon (Si)	mg/L	3.09	8919720	3.49	8919720	2.16	0.050	8919720
Dissolved Silver (Ag)	mg/L	<0.0000050	8919720	<0.0000050	8919720	<0.0000050	0.0000050	8919720
Dissolved Strontium (Sr)	mg/L	0.180	8919720	0.243	8919720	0.147	0.000050	8919720
Dissolved Thallium (Tl)	mg/L	<0.0000020	8919720	<0.0000020	8919720	0.0000030	0.0000020	8919720
Dissolved Tin (Sn)	mg/L	<0.00020	8919720	<0.00020	8919720	<0.00020	0.00020	8919720
Dissolved Titanium (Ti)	mg/L	<0.00050	8919720	<0.00050	8919720	<0.00050	0.00050	8919720
Dissolved Uranium (U)	mg/L	0.00328	8919720	0.00213	8919720	0.00512	0.0000020	8919720

RDL = Reportable Detection Limit

(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SZ8811		SZ8812		SZ8813		
Sampling Date		2018/02/21 11:15		2018/02/21 11:00		2018/02/21 11:40		
COC Number		08450954		08450954		08450954		
	UNITS	KZ-18	QC Batch	KZ-37	QC Batch	KZ-2	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	8919720	<0.00020	8919720	<0.00020	0.00020	8919720
Dissolved Zinc (Zn)	mg/L	0.00169	8919720	0.0129	8919720	0.0279	0.00010	8919720
Dissolved Zirconium (Zr)	mg/L	<0.00010	8919720	<0.00010	8919720	<0.00010	0.00010	8919720
Dissolved Calcium (Ca)	mg/L	55.5	8918276	64.8	8918276	46.2	0.050	8918276
Dissolved Magnesium (Mg)	mg/L	19.0	8918276	11.4	8918276	7.20	0.050	8918276
Dissolved Potassium (K)	mg/L	0.720	8918276	1.80	8918276	2.36	0.050	8918276
Dissolved Sodium (Na)	mg/L	1.03	8918276	1.89	8918276	1.02	0.050	8918276
Dissolved Sulphur (S)	mg/L	7.3	8918276	9.8	8918276	21.7	3.0	8918276

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SZ8814		SZ8815		SZ8816		
Sampling Date		2018/02/21 12:35		2018/02/21 11:50		2018/02/21 12:00		
COC Number		08450954		08450954		08450955		
	UNITS	KZ-13	QC Batch	DUP	QC Batch	FIELD BLANK	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO3)	mg/L	115	8918024	144	8918024	<0.50	0.50	8918024
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8919363	<0.0000020	8919363	<0.0000020	0.0000020	8919363
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00569	8919720	0.00180	8919720	<0.00050	0.00050	8919720
Dissolved Antimony (Sb)	mg/L	0.000053	8919720	0.000026	8919720	<0.000020	0.000020	8919720
Dissolved Arsenic (As)	mg/L	0.000233	8919720	0.000063	8919720	<0.000020	0.000020	8919720
Dissolved Barium (Ba)	mg/L	0.131	8919720	0.0765	8919720	<0.000020	0.000020	8919720
Dissolved Beryllium (Be)	mg/L	<0.000010	8919720	<0.000010	8919720	<0.000010	0.000010	8919720
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8919720	<0.0000050	8919720	<0.0000050	0.0000050	8919720
Dissolved Boron (B)	mg/L	<0.010	8919720	<0.010	8919720	<0.010	0.010	8919720
Dissolved Cadmium (Cd)	mg/L	0.000342 (1)	8922529	0.000242	8919720	<0.0000050	0.0000050	8919720
Dissolved Chromium (Cr)	mg/L	0.00011	8919720	<0.00010	8919720	<0.00010	0.00010	8919720
Dissolved Cobalt (Co)	mg/L	0.0000547	8919720	0.0000069	8919720	<0.0000050	0.0000050	8919720
Dissolved Copper (Cu)	mg/L	0.000875 (1)	8922529	0.000781 (1)	8919720	0.000287 (1)	0.000050	8919720
Dissolved Iron (Fe)	mg/L	0.100	8919720	0.0011	8919720	<0.0010	0.0010	8919720
Dissolved Lead (Pb)	mg/L	0.0000814	8919720	0.0000483 (1)	8922529	0.0000111	0.0000050	8919720
Dissolved Lithium (Li)	mg/L	0.00198	8919720	0.00135	8919720	<0.00050	0.00050	8919720
Dissolved Manganese (Mn)	mg/L	0.133	8919720	0.000104	8919720	<0.000050	0.000050	8919720
Dissolved Molybdenum (Mo)	mg/L	0.000801	8919720	0.000717	8919720	<0.000050	0.000050	8919720
Dissolved Nickel (Ni)	mg/L	0.000551	8919720	0.000363	8919720	0.000036	0.000020	8919720
Dissolved Phosphorus (P)	mg/L	0.0078	8919720	0.0036	8919720	0.0032	0.0020	8919720
Dissolved Selenium (Se)	mg/L	0.000247	8919720	0.00230	8919720	<0.000040	0.000040	8919720
Dissolved Silicon (Si)	mg/L	3.92	8919720	2.17	8919720	<0.050	0.050	8919720
Dissolved Silver (Ag)	mg/L	<0.0000050	8919720	<0.0000050	8919720	<0.0000050	0.0000050	8919720
Dissolved Strontium (Sr)	mg/L	0.114	8919720	0.147	8919720	<0.000050	0.000050	8919720
Dissolved Thallium (Tl)	mg/L	<0.0000020	8919720	0.0000029	8919720	<0.0000020	0.0000020	8919720
Dissolved Tin (Sn)	mg/L	<0.00020	8919720	<0.00020	8919720	<0.00020	0.00020	8919720
Dissolved Titanium (Ti)	mg/L	<0.00050	8919720	<0.00050	8919720	<0.00050	0.00050	8919720
Dissolved Uranium (U)	mg/L	0.00176	8919720	0.00500	8919720	<0.0000020	0.0000020	8919720

RDL = Reportable Detection Limit

(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SZ8814		SZ8815		SZ8816		
Sampling Date		2018/02/21 12:35		2018/02/21 11:50		2018/02/21 12:00		
COC Number		08450954		08450954		08450955		
	UNITS	KZ-13	QC Batch	DUP	QC Batch	FIELD BLANK	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	8919720	<0.00020	8919720	<0.00020	0.00020	8919720
Dissolved Zinc (Zn)	mg/L	0.00565 (1)	8922529	0.0281	8919720	0.00064 (1)	0.00010	8919720
Dissolved Zirconium (Zr)	mg/L	<0.00010	8919720	<0.00010	8919720	<0.00010	0.00010	8919720
Dissolved Calcium (Ca)	mg/L	38.6	8918276	46.0	8918276	<0.050	0.050	8918276
Dissolved Magnesium (Mg)	mg/L	4.46	8918276	7.00	8918276	<0.050	0.050	8918276
Dissolved Potassium (K)	mg/L	2.59	8918276	2.38	8918276	0.054	0.050	8918276
Dissolved Sodium (Na)	mg/L	1.66	8918276	1.10	8918276	0.086	0.050	8918276
Dissolved Sulphur (S)	mg/L	5.9	8918276	20.5	8918276	<3.0	3.0	8918276

RDL = Reportable Detection Limit
(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SZ8817		
Sampling Date		2018/02/22 09:05		
COC Number		08450955		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Dissolved Hardness (CaCO3)	mg/L	<0.50	0.50	8918024
Elements				
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000020	8919424
Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	mg/L	<0.00050	0.00050	8919720
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000020	8919720
Dissolved Arsenic (As)	mg/L	<0.000020	0.000020	8919720
Dissolved Barium (Ba)	mg/L	<0.000020	0.000020	8919720
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000010	8919720
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8919720
Dissolved Boron (B)	mg/L	<0.010	0.010	8919720
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.0000050	8919720
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00010	8919720
Dissolved Cobalt (Co)	mg/L	<0.0000050	0.0000050	8919720
Dissolved Copper (Cu)	mg/L	<0.000050	0.000050	8919720
Dissolved Iron (Fe)	mg/L	<0.0010	0.0010	8919720
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000050	8919720
Dissolved Lithium (Li)	mg/L	<0.00050	0.00050	8919720
Dissolved Manganese (Mn)	mg/L	<0.000050	0.000050	8919720
Dissolved Molybdenum (Mo)	mg/L	<0.000050	0.000050	8919720
Dissolved Nickel (Ni)	mg/L	<0.000020	0.000020	8919720
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8919720
Dissolved Selenium (Se)	mg/L	<0.000040	0.000040	8919720
Dissolved Silicon (Si)	mg/L	<0.050	0.050	8919720
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	8919720
Dissolved Strontium (Sr)	mg/L	<0.000050	0.000050	8919720
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000020	8919720
Dissolved Tin (Sn)	mg/L	<0.00020	0.00020	8919720
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00050	8919720
Dissolved Uranium (U)	mg/L	<0.0000020	0.0000020	8919720
Dissolved Vanadium (V)	mg/L	<0.00020	0.00020	8919720
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		SZ8817		
Sampling Date		2018/02/22 09:05		
COC Number		08450955		
	UNITS	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	<0.00010	0.00010	8919720
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00010	8919720
Dissolved Calcium (Ca)	mg/L	<0.050	0.050	8918276
Dissolved Magnesium (Mg)	mg/L	<0.050	0.050	8918276
Dissolved Potassium (K)	mg/L	<0.050	0.050	8918276
Dissolved Sodium (Na)	mg/L	<0.050	0.050	8918276
Dissolved Sulphur (S)	mg/L	<3.0	3.0	8918276
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SZ8808	SZ8809	SZ8810	SZ8811	SZ8812		
Sampling Date		2018/02/21 13:15	2018/02/21 10:20	2018/02/21 11:10	2018/02/21 11:15	2018/02/21 11:00		
COC Number		08450954	08450954	08450954	08450954	08450954		
	UNITS	KZ-26	KZ-15	KZ-9	KZ-18	KZ-37	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	464	282	234	224	217	0.50	8918656
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8919430
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00277	0.00372	0.0106	0.0205	0.0317	0.00050	8919536
Total Antimony (Sb)	mg/L	0.000121	0.000021	0.000114	0.000031	0.000030	0.000020	8919536
Total Arsenic (As)	mg/L	0.000552	0.000501	0.000282	0.00107	0.000567	0.000020	8919536
Total Barium (Ba)	mg/L	0.140	0.102	0.121	0.0579	0.103	0.000020	8919536
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8919536
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8919536
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8919536
Total Cadmium (Cd)	mg/L	0.000334	0.0000762	0.000208	0.0000972	0.0000891	0.0000050	8919536
Total Chromium (Cr)	mg/L	0.00021	<0.00010	0.00031	0.00023	0.00015	0.00010	8919536
Total Cobalt (Co)	mg/L	0.0000202	0.0000666	0.000206	0.0000518	0.000220	0.0000050	8919536
Total Copper (Cu)	mg/L	0.00105	0.000220	0.00251	0.000192	0.000679	0.000050	8919536
Total Iron (Fe)	mg/L	0.0169	0.0689	0.513	0.102	0.578	0.0010	8919536
Total Lead (Pb)	mg/L	0.0000645	0.0000165	0.000295	0.0000308	0.0000813	0.0000050	8919536
Total Lithium (Li)	mg/L	0.00908	0.00406	0.00415	0.00181	0.00429	0.00050	8919536
Total Manganese (Mn)	mg/L	0.00510	0.0838	0.141	0.0188	0.143	0.000050	8919536
Total Molybdenum (Mo)	mg/L	0.00111	0.00172	0.000874	0.00183	0.000943	0.000050	8919536
Total Nickel (Ni)	mg/L	0.000897	0.00135	0.000879	0.000455	0.000724	0.000020	8919536
Total Phosphorus (P)	mg/L	0.0141	0.0059	0.0126	0.0754	0.0263	0.0020	8919536
Total Selenium (Se)	mg/L	0.00140	0.00155	0.00164	0.00150	0.00119	0.000040	8919536
Total Silicon (Si)	mg/L	6.41	3.86	3.73	3.02	3.56	0.050	8919536
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8919536
Total Strontium (Sr)	mg/L	0.374	0.257	0.254	0.183	0.232	0.000050	8919536
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8919536
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8919536
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00084	0.00091	0.00129	0.00050	8919536
Total Uranium (U)	mg/L	0.00500	0.00631	0.00202	0.00320	0.00202	0.0000020	8919536
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8919536

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SZ8808	SZ8809	SZ8810	SZ8811	SZ8812		
Sampling Date		2018/02/21 13:15	2018/02/21 10:20	2018/02/21 11:10	2018/02/21 11:15	2018/02/21 11:00		
COC Number		08450954	08450954	08450954	08450954	08450954		
	UNITS	**KZ-26**	**KZ-15**	**KZ-9**	**KZ-18**	**KZ-37**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.00801	0.00987	0.0210	0.00262	0.0130	0.00010	8919536
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8919536
Total Calcium (Ca)	mg/L	123	80.7	77.9	57.9	70.4	0.050	8918278
Total Magnesium (Mg)	mg/L	37.8	19.4	9.50	19.4	10.0	0.050	8918278
Total Potassium (K)	mg/L	2.82	1.44	2.32	0.753	1.65	0.050	8918278
Total Sodium (Na)	mg/L	3.64	1.60	2.40	1.11	1.68	0.050	8918278
Total Sulphur (S)	mg/L	23.5	12.9	11.7	7.4	9.1	3.0	8918278

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SZ8813	SZ8814	SZ8815	SZ8816	SZ8817		
Sampling Date		2018/02/21 11:40	2018/02/21 12:35	2018/02/21 11:50	2018/02/21 12:00	2018/02/22 09:05		
COC Number		08450954	08450954	08450954	08450955	08450955		
	UNITS	KZ-2	KZ-13	DUP	FIELD BLANK	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	139	121	142	<0.50	<0.50	0.50	8918656
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8919430
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00481	0.0257	0.00284	<0.00050	<0.00050	0.00050	8919536
Total Antimony (Sb)	mg/L	0.000021	0.000040	<0.000020	<0.000020	<0.000020	0.000020	8919536
Total Arsenic (As)	mg/L	0.000090	0.000348	0.000072	<0.000020	<0.000020	0.000020	8919536
Total Barium (Ba)	mg/L	0.0768	0.144	0.0770	<0.000020	0.000028	0.000020	8919536
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8919536
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8919536
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8919536
Total Cadmium (Cd)	mg/L	0.000235	0.0000533	0.000228	<0.0000050	<0.0000050	0.0000050	8919536
Total Chromium (Cr)	mg/L	<0.00010	0.00017	<0.00010	<0.00010	<0.00010	0.00010	8919536
Total Cobalt (Co)	mg/L	0.0000093	0.0000754	0.0000055	<0.0000050	<0.0000050	0.0000050	8919536
Total Copper (Cu)	mg/L	0.000503	0.000452	0.000481	0.000071	<0.000050	0.000050	8919536
Total Iron (Fe)	mg/L	0.0070	0.294	0.0029	<0.0010	<0.0010	0.0010	8919536
Total Lead (Pb)	mg/L	0.0000278	0.000165	0.0000171	0.0000068	<0.0000050	0.0000050	8919536
Total Lithium (Li)	mg/L	0.00132	0.00210	0.00129	<0.00050	<0.00050	0.00050	8919536
Total Manganese (Mn)	mg/L	0.000208	0.147	0.000062	<0.000050	<0.000050	0.000050	8919536
Total Molybdenum (Mo)	mg/L	0.000715	0.000900	0.000727	<0.000050	<0.000050	0.000050	8919536
Total Nickel (Ni)	mg/L	0.000330	0.000560	0.000344	<0.000020	<0.000020	0.000020	8919536
Total Phosphorus (P)	mg/L	0.0024	0.0091	0.0034	0.0021	<0.0020	0.0020	8919536
Total Selenium (Se)	mg/L	0.00236	0.000273	0.00235	<0.000040	<0.000040	0.000040	8919536
Total Silicon (Si)	mg/L	2.22	3.89	2.13	<0.050	<0.050	0.050	8919536
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8919536
Total Strontium (Sr)	mg/L	0.147	0.115	0.148	<0.000050	<0.000050	0.000050	8919536
Total Thallium (Tl)	mg/L	0.0000031	<0.0000020	0.0000034	<0.0000020	<0.0000020	0.0000020	8919536
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8919536
Total Titanium (Ti)	mg/L	<0.00050	0.00177	<0.00050	<0.00050	<0.00050	0.00050	8919536
Total Uranium (U)	mg/L	0.00513	0.00193	0.00507	<0.0000020	<0.0000020	0.0000020	8919536
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8919536

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		SZ8813	SZ8814	SZ8815	SZ8816	SZ8817		
Sampling Date		2018/02/21 11:40	2018/02/21 12:35	2018/02/21 11:50	2018/02/21 12:00	2018/02/22 09:05		
COC Number		08450954	08450954	08450954	08450955	08450955		
	UNITS	KZ-2	KZ-13	DUP	FIELD BLANK	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0285	0.00367	0.0282	<0.00010	<0.00010	0.00010	8919536
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8919536
Total Calcium (Ca)	mg/L	44.0	41.1	45.5	<0.050	<0.050	0.050	8918278
Total Magnesium (Mg)	mg/L	7.05	4.53	6.96	<0.050	<0.050	0.050	8918278
Total Potassium (K)	mg/L	2.42	2.48	2.35	<0.050	<0.050	0.050	8918278
Total Sodium (Na)	mg/L	1.02	1.53	0.943	<0.050	<0.050	0.050	8918278
Total Sulphur (S)	mg/L	21.0	5.8	20.2	<3.0	<3.0	3.0	8918278

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: SZ8808
Sample ID: KZ-26
Matrix: Water

Collected: 2018/02/21
Shipped:
Received: 2018/02/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8919937	2018/02/26	2018/02/26	Name Redacted
Alkalinity - Low Level	AT/ALK	8919011	2018/02/24	2018/02/24	
Chloride - Low Level	KONE/COL	8921205	N/A	2018/02/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8920766	N/A	2018/02/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8920768	N/A	2018/02/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8919715	N/A	2018/02/26	
Conductance - Low Level	AT/ALK	8919005	2018/02/24	2018/02/24	
Fluoride - Low Level	ISE/ISE	8919907	N/A	2018/02/26	
Hardness Total (calculated as CaCO3)	CALC	8918656	N/A	2018/02/28	
Hardness (calculated as CaCO3)	CALC	8918024	N/A	2018/02/28	
Mercury (Dissolved) by CVAF	CV/AF	8919363	N/A	2018/02/26	
Mercury (Total) by CVAF	CV/AF	8919430	2018/02/26	2018/02/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8918276	N/A	2018/02/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8919720	N/A	2018/02/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8918278	N/A	2018/02/28	
Elements by ICPMS Low Level (total)	ICP/CRCM	8919536	N/A	2018/02/27	
Ammonia-N Low Level (Preserved)	KONE/COL	8921149	N/A	2018/02/27	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8919090	N/A	2018/02/24	
Nitrite (N) (low level)	TRAA/COL	8919091	N/A	2018/02/24	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8918367	N/A	2018/02/24	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/23	
pH Water	AT/ALK	8919003	2018/02/24	2018/02/24	
Sulphate - Low Level	KONE/COL	8921206	N/A	2018/02/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8919179	2018/02/24	2018/02/27	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8919180	2018/02/24	2018/02/27	
Total Suspended Solids-Low Level	BAL/BAL	8919843	2018/02/26	2018/02/27	

Maxxam ID: SZ8808 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2018/02/21
Shipped:
Received: 2018/02/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride - Low Level	KONE/COL	8921205	N/A	2018/02/24	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8920766	N/A	2018/02/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8920768	N/A	2018/02/27	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8919720	N/A	2018/02/27	
Elements by ICPMS Low Level (total)	ICP/CRCM	8919536	N/A	2018/02/27	
Sulphate - Low Level	KONE/COL	8921206	N/A	2018/02/24	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: SZ8809
Sample ID: KZ-15
Matrix: Water

Collected: 2018/02/21
Shipped:
Received: 2018/02/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8919937	2018/02/26	2018/02/26	Name Redacted
Alkalinity - Low Level	AT/ALK	8919015	2018/02/24	2018/02/25	
Chloride - Low Level	KONE/COL	8921205	N/A	2018/02/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8920766	N/A	2018/02/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8920768	N/A	2018/02/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8919715	N/A	2018/02/26	
Conductance - Low Level	AT/ALK	8919016	2018/02/24	2018/02/25	
Fluoride - Low Level	ISE/ISE	8919907	N/A	2018/02/26	
Hardness Total (calculated as CaCO3)	CALC	8918656	N/A	2018/02/28	
Hardness (calculated as CaCO3)	CALC	8918024	N/A	2018/02/28	
Mercury (Dissolved) by CVAF	CV/AF	8919363	N/A	2018/02/26	
Mercury (Total) by CVAF	CV/AF	8919430	2018/02/26	2018/02/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8918276	N/A	2018/02/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8919720	N/A	2018/02/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8918278	N/A	2018/02/28	
Elements by ICPMS Low Level (total)	ICP/CRCM	8919536	N/A	2018/02/27	
Ammonia-N Low Level (Preserved)	KONE/COL	8921149	N/A	2018/02/27	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8919092	N/A	2018/02/24	
Nitrite (N) (low level)	TRAA/COL	8919093	N/A	2018/02/24	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8918367	N/A	2018/02/24	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/23	
pH Water	AT/ALK	8919013	2018/02/24	2018/02/25	
Sulphate - Low Level	KONE/COL	8921206	N/A	2018/02/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8919179	2018/02/24	2018/02/27	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8919180	2018/02/24	2018/02/27	
Total Suspended Solids-Low Level	BAL/BAL	8919843	2018/02/26	2018/02/27	

Maxxam ID: SZ8810
Sample ID: KZ-9
Matrix: Water

Collected: 2018/02/21
Shipped:
Received: 2018/02/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8919937	2018/02/26	2018/02/26	Name Redacted
Alkalinity - Low Level	AT/ALK	8919011	2018/02/24	2018/02/24	
Chloride - Low Level	KONE/COL	8921205	N/A	2018/02/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8920766	N/A	2018/02/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8920768	N/A	2018/02/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8919715	N/A	2018/02/26	
Conductance - Low Level	AT/ALK	8919005	2018/02/24	2018/02/24	
Fluoride - Low Level	ISE/ISE	8919907	N/A	2018/02/26	
Hardness Total (calculated as CaCO3)	CALC	8918656	N/A	2018/02/28	
Hardness (calculated as CaCO3)	CALC	8918024	N/A	2018/02/28	
Mercury (Dissolved) by CVAF	CV/AF	8919363	N/A	2018/02/26	
Mercury (Total) by CVAF	CV/AF	8919430	2018/02/26	2018/02/26	

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: SZ8810
Sample ID: KZ-9
Matrix: Water

Collected: 2018/02/21
Shipped:
Received: 2018/02/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8918276	N/A	2018/02/28	Name Redacted	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8919720	N/A	2018/02/27		
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8918278	N/A	2018/02/28		
Elements by ICPMS Low Level (total)	ICP/CRCM	8919536	N/A	2018/02/27		
Ammonia-N Low Level (Preserved)	KONE/COL	8921149	N/A	2018/02/27		
Nitrate+Nitrite (N) (low level)	TRAA/COL	8919090	N/A	2018/02/24		
Nitrite (N) (low level)	TRAA/COL	8919091	N/A	2018/02/24		
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8918367	N/A	2018/02/24		
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/23		
pH Water	AT/ALK	8919003	2018/02/24	2018/02/24		
Sulphate - Low Level	KONE/COL	8921206	N/A	2018/02/24		
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8919179	2018/02/24	2018/02/27		
Total Phosphorus - Low Level Unpreserved	KONE/COL	8919180	2018/02/24	2018/02/27		
Total Suspended Solids-Low Level	BAL/BAL	8919843	2018/02/26	2018/02/27		

Maxxam ID: SZ8811
Sample ID: KZ-18
Matrix: Water

Collected: 2018/02/21
Shipped:
Received: 2018/02/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst	
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8919937	2018/02/26	2018/02/26	Name Redacted	
Alkalinity - Low Level	AT/ALK	8919015	2018/02/24	2018/02/25		
Chloride - Low Level	KONE/COL	8921205	N/A	2018/02/24		
Cyanide SAD (strong acid dissociable)	TECH/COL	8920766	N/A	2018/02/27		
Cyanide WAD (weak acid dissociable)	TECH/COL	8920768	N/A	2018/02/27		
Carbon (DOC) - field filtered/preserved	TRAA/COL	8919715	N/A	2018/02/26		
Conductance - Low Level	AT/ALK	8919016	2018/02/24	2018/02/25		
Fluoride - Low Level	ISE/ISE	8919897	N/A	2018/02/26		
Hardness Total (calculated as CaCO3)	CALC	8918656	N/A	2018/02/28		
Hardness (calculated as CaCO3)	CALC	8918024	N/A	2018/02/28		
Mercury (Dissolved) by CVAF	CV/AF	8919363	N/A	2018/02/26		
Mercury (Total) by CVAF	CV/AF	8919430	2018/02/26	2018/02/26		
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8918276	N/A	2018/02/28		
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8919720	N/A	2018/02/27		
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8918278	N/A	2018/02/28		
Elements by ICPMS Low Level (total)	ICP/CRCM	8919536	N/A	2018/02/27		
Ammonia-N Low Level (Preserved)	KONE/COL	8921149	N/A	2018/02/27		
Nitrate+Nitrite (N) (low level)	TRAA/COL	8919092	N/A	2018/02/24		
Nitrite (N) (low level)	TRAA/COL	8919093	N/A	2018/02/24		
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8918367	N/A	2018/02/24		
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/23		
pH Water	AT/ALK	8919013	2018/02/24	2018/02/25		
Sulphate - Low Level	KONE/COL	8921206	N/A	2018/02/24		
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8919179	2018/02/24	2018/02/27		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: SZ8811 **Collected:** 2018/02/21
Sample ID: KZ-18 **Shipped:**
Matrix: Water **Received:** 2018/02/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - Low Level Unpreserved	KONE/COL	8919180	2018/02/24	2018/02/27	Name Redacted
Total Suspended Solids-Low Level	BAL/BAL	8919843	2018/02/26	2018/02/27	

Maxxam ID: SZ8811 Dup **Collected:** 2018/02/21
Sample ID: KZ-18 **Shipped:**
Matrix: Water **Received:** 2018/02/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - Low Level Unpreserved	KONE/COL	8919180	2018/02/27	2018/02/27	Name Redacted

Maxxam ID: SZ8812 **Collected:** 2018/02/21
Sample ID: KZ-37 **Shipped:**
Matrix: Water **Received:** 2018/02/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8919937	2018/02/26	2018/02/26	Name Redacted
Alkalinity - Low Level	AT/ALK	8919015	2018/02/24	2018/02/25	
Chloride - Low Level	KONE/COL	8921205	N/A	2018/02/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8920766	N/A	2018/02/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8920768	N/A	2018/02/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8919715	N/A	2018/02/26	
Conductance - Low Level	AT/ALK	8919016	2018/02/24	2018/02/25	
Fluoride - Low Level	ISE/ISE	8919897	N/A	2018/02/26	
Hardness Total (calculated as CaCO3)	CALC	8918656	N/A	2018/02/28	
Hardness (calculated as CaCO3)	CALC	8918024	N/A	2018/02/28	
Mercury (Dissolved) by CVAF	CV/AF	8919363	N/A	2018/02/26	
Mercury (Total) by CVAF	CV/AF	8919430	2018/02/26	2018/02/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8918276	N/A	2018/02/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8919720	N/A	2018/02/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8918278	N/A	2018/02/28	
Elements by ICPMS Low Level (total)	ICP/CRCM	8919536	N/A	2018/02/27	
Ammonia-N Low Level (Preserved)	KONE/COL	8921149	N/A	2018/02/27	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8919092	N/A	2018/02/24	
Nitrite (N) (low level)	TRAA/COL	8919093	N/A	2018/02/24	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8918367	N/A	2018/02/24	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/23	
pH Water	AT/ALK	8919013	2018/02/24	2018/02/25	
Sulphate - Low Level	KONE/COL	8921206	N/A	2018/02/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8923151	2018/03/01	2018/03/01	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8923150	2018/03/01	2018/03/01	
Total Suspended Solids-Low Level	BAL/BAL	8919846	2018/02/27	2018/02/27	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: SZ8813
Sample ID: KZ-2
Matrix: Water

Collected: 2018/02/21
Shipped:
Received: 2018/02/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8919937	2018/02/26	2018/02/26	Name Redacted
Alkalinity - Low Level	AT/ALK	8919015	2018/02/24	2018/02/25	
Chloride - Low Level	KONE/COL	8921205	N/A	2018/02/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8920766	N/A	2018/02/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8920768	N/A	2018/02/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8919715	N/A	2018/02/26	
Conductance - Low Level	AT/ALK	8919016	2018/02/24	2018/02/25	
Fluoride - Low Level	ISE/ISE	8919907	N/A	2018/02/26	
Hardness Total (calculated as CaCO3)	CALC	8918656	N/A	2018/02/28	
Hardness (calculated as CaCO3)	CALC	8918024	N/A	2018/02/28	
Mercury (Dissolved) by CVAF	CV/AF	8919363	N/A	2018/02/26	
Mercury (Total) by CVAF	CV/AF	8919430	2018/02/26	2018/02/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8918276	N/A	2018/02/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8919720	N/A	2018/02/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8918278	N/A	2018/02/28	
Elements by ICPMS Low Level (total)	ICP/CRCM	8919536	N/A	2018/02/27	
Ammonia-N Low Level (Preserved)	KONE/COL	8921149	N/A	2018/02/27	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8919092	N/A	2018/02/24	
Nitrite (N) (low level)	TRAA/COL	8919093	N/A	2018/02/24	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8918367	N/A	2018/02/24	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/23	
pH Water	AT/ALK	8919013	2018/02/24	2018/02/25	
Sulphate - Low Level	KONE/COL	8921206	N/A	2018/02/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8919179	2018/02/24	2018/02/27	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8919180	2018/02/24	2018/02/27	
Total Suspended Solids-Low Level	BAL/BAL	8919846	2018/02/27	2018/02/27	

Maxxam ID: SZ8814
Sample ID: KZ-13
Matrix: Water

Collected: 2018/02/21
Shipped:
Received: 2018/02/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8919937	2018/02/26	2018/02/26	Name Redacted
Alkalinity - Low Level	AT/ALK	8919015	2018/02/24	2018/02/25	
Chloride - Low Level	KONE/COL	8921205	N/A	2018/02/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8920766	N/A	2018/02/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8920768	N/A	2018/02/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8919715	N/A	2018/02/26	
Conductance - Low Level	AT/ALK	8919016	2018/02/24	2018/02/25	
Fluoride - Low Level	ISE/ISE	8919907	N/A	2018/02/26	
Hardness Total (calculated as CaCO3)	CALC	8918656	N/A	2018/02/28	
Hardness (calculated as CaCO3)	CALC	8918024	N/A	2018/02/28	
Mercury (Dissolved) by CVAF	CV/AF	8919363	N/A	2018/02/26	
Mercury (Total) by CVAF	CV/AF	8919430	2018/02/26	2018/02/26	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: SZ8814
Sample ID: KZ-13
Matrix: Water

Collected: 2018/02/21
Shipped:
Received: 2018/02/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8918276	N/A	2018/02/28	Name Redacted
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8919720	N/A	2018/02/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8918278	N/A	2018/02/28	
Elements by ICPMS Low Level (total)	ICP/CRCM	8919536	N/A	2018/02/27	
Ammonia-N Low Level (Preserved)	KONE/COL	8921149	N/A	2018/02/27	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8919092	N/A	2018/02/24	
Nitrite (N) (low level)	TRAA/COL	8919093	N/A	2018/02/24	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8918367	N/A	2018/02/24	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/23	
pH Water	AT/ALK	8919013	2018/02/24	2018/02/25	
Sulphate - Low Level	KONE/COL	8921206	N/A	2018/02/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8919179	2018/02/24	2018/02/27	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8919180	2018/02/24	2018/02/27	
Total Suspended Solids-Low Level	BAL/BAL	8919846	2018/02/27	2018/02/27	

Maxxam ID: SZ8815
Sample ID: DUP
Matrix: Water

Collected: 2018/02/21
Shipped:
Received: 2018/02/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8919937	2018/02/26	2018/02/26	Name Redacted
Alkalinity - Low Level	AT/ALK	8919015	2018/02/24	2018/02/25	
Chloride - Low Level	KONE/COL	8921205	N/A	2018/02/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8920766	N/A	2018/02/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8920768	N/A	2018/02/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8919715	N/A	2018/02/26	
Conductance - Low Level	AT/ALK	8919016	2018/02/24	2018/02/25	
Fluoride - Low Level	ISE/ISE	8919907	N/A	2018/02/26	
Hardness Total (calculated as CaCO3)	CALC	8918656	N/A	2018/02/28	
Hardness (calculated as CaCO3)	CALC	8918024	N/A	2018/02/28	
Mercury (Dissolved) by CVAF	CV/AF	8919363	N/A	2018/02/26	
Mercury (Total) by CVAF	CV/AF	8919430	2018/02/26	2018/02/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8918276	N/A	2018/02/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8919720	N/A	2018/02/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8918278	N/A	2018/02/28	
Elements by ICPMS Low Level (total)	ICP/CRCM	8919536	N/A	2018/02/27	
Ammonia-N Low Level (Preserved)	KONE/COL	8921149	N/A	2018/02/27	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8919092	N/A	2018/02/24	
Nitrite (N) (low level)	TRAA/COL	8919093	N/A	2018/02/24	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8918367	N/A	2018/02/24	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/23	
pH Water	AT/ALK	8919013	2018/02/24	2018/02/25	
Sulphate - Low Level	KONE/COL	8921206	N/A	2018/02/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8919179	2018/02/24	2018/02/27	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: SZ8815
Sample ID: DUP
Matrix: Water

Collected: 2018/02/21
Shipped:
Received: 2018/02/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - Low Level Unpreserved	KONE/COL	8919180	2018/02/24	2018/02/27	Name Redacted
Total Suspended Solids-Low Level	BAL/BAL	8919846	2018/02/27	2018/02/27	

Maxxam ID: SZ8816
Sample ID: FIELD BLANK
Matrix: Water

Collected: 2018/02/21
Shipped:
Received: 2018/02/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8919937	2018/02/26	2018/02/26	Name Redacted
Alkalinity - Low Level	AT/ALK	8918998	2018/02/24	2018/02/24	
Chloride - Low Level	KONE/COL	8921205	N/A	2018/02/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8920766	N/A	2018/02/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8920768	N/A	2018/02/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8919715	N/A	2018/02/26	
Conductance - Low Level	AT/ALK	8918996	2018/02/24	2018/02/24	
Fluoride - Low Level	ISE/ISE	8919907	N/A	2018/02/26	
Hardness Total (calculated as CaCO3)	CALC	8918656	N/A	2018/02/28	
Hardness (calculated as CaCO3)	CALC	8918024	N/A	2018/02/28	
Mercury (Dissolved) by CVAF	CV/AF	8919363	N/A	2018/02/26	
Mercury (Total) by CVAF	CV/AF	8919430	2018/02/26	2018/02/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8918276	N/A	2018/02/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8919720	N/A	2018/02/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8918278	N/A	2018/02/28	
Elements by ICPMS Low Level (total)	ICP/CRCM	8919536	N/A	2018/02/27	
Ammonia-N Low Level (Preserved)	KONE/COL	8921149	N/A	2018/02/27	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8919092	N/A	2018/02/24	
Nitrite (N) (low level)	TRAA/COL	8919093	N/A	2018/02/24	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8918367	N/A	2018/02/24	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/02/23	
pH Water	AT/ALK	8918993	2018/02/24	2018/02/24	
Sulphate - Low Level	KONE/COL	8921206	N/A	2018/02/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8919179	2018/02/24	2018/02/27	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8919180	2018/02/24	2018/02/27	
Total Suspended Solids-Low Level	BAL/BAL	8919846	2018/02/27	2018/02/27	

Maxxam ID: SZ8816 Dup
Sample ID: FIELD BLANK
Matrix: Water

Collected: 2018/02/21
Shipped:
Received: 2018/02/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride - Low Level	ISE/ISE	8919907	N/A	2018/02/26	Name Redacted
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8919720	N/A	2018/02/27	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8919092	N/A	2018/02/24	
Nitrite (N) (low level)	TRAA/COL	8919093	N/A	2018/02/24	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

TEST SUMMARY

Maxxam ID: SZ8817
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2018/02/22
Shipped:
Received: 2018/02/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8919937	2018/02/26	2018/02/26	Name Redacted
Alkalinity - Low Level	AT/ALK	8918998	2018/02/24	2018/02/24	
Chloride - Low Level	KONE/COL	8921205	N/A	2018/02/24	
Cyanide SAD (strong acid dissociable)	TECH/COL	8920766	N/A	2018/02/27	
Cyanide WAD (weak acid dissociable)	TECH/COL	8920768	N/A	2018/02/27	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8919715	N/A	2018/02/26	
Conductance - Low Level	AT/ALK	8918996	2018/02/24	2018/02/24	
Fluoride - Low Level	ISE/ISE	8919897	N/A	2018/02/26	
Hardness Total (calculated as CaCO3)	CALC	8918656	N/A	2018/02/28	
Hardness (calculated as CaCO3)	CALC	8918024	N/A	2018/02/28	
Mercury (Dissolved) by CVAF	CV/AF	8919424	N/A	2018/02/26	
Mercury (Total) by CVAF	CV/AF	8919430	2018/02/26	2018/02/26	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8918276	N/A	2018/02/28	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8919720	N/A	2018/02/27	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8918278	N/A	2018/02/28	
Elements by ICPMS Low Level (total)	ICP/CRCM	8919536	N/A	2018/02/27	
Ammonia-N Low Level (Preserved)	KONE/COL	8921149	N/A	2018/02/27	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8919092	N/A	2018/02/24	
Nitrite (N) (low level)	TRAA/COL	8919093	N/A	2018/02/24	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8918367	N/A	2018/02/24	
pH Water	AT/ALK	8918993	2018/02/24	2018/02/24	
Sulphate - Low Level	KONE/COL	8921206	N/A	2018/02/24	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8919179	2018/02/24	2018/02/27	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8919180	2018/02/24	2018/02/27	
Total Suspended Solids-Low Level	BAL/BAL	8919846	2018/02/27	2018/02/27	

Maxxam ID: SZ8817 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2018/02/22
Shipped:
Received: 2018/02/22

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N Low Level (Preserved)	KONE/COL	8921149	N/A	2018/02/27	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.7°C
Package 2	1.3°C

Sample SZ8812 [KZ-37] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.}

Sample SZ8810, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample SZ8812, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample SZ8814, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample SZ8815, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8918993	pH	2018/02/24			101	97 - 103			1.1	20
8918996	Conductivity	2018/02/24			100	80 - 120	<1.0	uS/cm		
8918998	Alkalinity (PP as CaCO3)	2018/02/24					<0.50	mg/L		
8918998	Alkalinity (Total as CaCO3)	2018/02/24			102	80 - 120	<0.50	mg/L		
8918998	Bicarbonate (HCO3)	2018/02/24					<0.50	mg/L		
8918998	Carbonate (CO3)	2018/02/24					<0.50	mg/L		
8918998	Hydroxide (OH)	2018/02/24					<0.50	mg/L		
8919003	pH	2018/02/24			101	97 - 103			0.68	20
8919005	Conductivity	2018/02/24			99	80 - 120	<1.0	uS/cm		
8919011	Alkalinity (PP as CaCO3)	2018/02/24					<0.50	mg/L		
8919011	Alkalinity (Total as CaCO3)	2018/02/24	NC	80 - 120	101	80 - 120	0.85, RDL=0.50	mg/L		
8919011	Bicarbonate (HCO3)	2018/02/24					1.04, RDL=0.50	mg/L		
8919011	Carbonate (CO3)	2018/02/24					<0.50	mg/L		
8919011	Hydroxide (OH)	2018/02/24					<0.50	mg/L		
8919013	pH	2018/02/25			101	97 - 103				
8919015	Alkalinity (PP as CaCO3)	2018/02/25					<0.50	mg/L		
8919015	Alkalinity (Total as CaCO3)	2018/02/25			99	80 - 120	<0.50	mg/L		
8919015	Bicarbonate (HCO3)	2018/02/25					<0.50	mg/L		
8919015	Carbonate (CO3)	2018/02/25					<0.50	mg/L		
8919015	Hydroxide (OH)	2018/02/25					<0.50	mg/L		
8919016	Conductivity	2018/02/25			98	80 - 120	<1.0	uS/cm		
8919090	Nitrate plus Nitrite (N)	2018/02/24	109	80 - 120	109	80 - 120	<0.0020	mg/L	2.5	25
8919091	Nitrite (N)	2018/02/24	105	80 - 120	99	80 - 120	<0.0020	mg/L	0	25
8919092	Nitrate plus Nitrite (N)	2018/02/24	108	80 - 120	109	80 - 120	<0.0020	mg/L	NC	25
8919093	Nitrite (N)	2018/02/24	105	80 - 120			<0.0020	mg/L	NC	25
8919179	Dissolved Phosphorus (P)	2018/02/27	100	80 - 120	101	80 - 120	<0.0020	mg/L	NC	20
8919180	Total Phosphorus (P)	2018/02/27	102	80 - 120	93	80 - 120	<0.0020	mg/L	2.2	20
8919363	Dissolved Mercury (Hg)	2018/02/26	100	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8919424	Dissolved Mercury (Hg)	2018/02/26	92	80 - 120	99	80 - 120	<0.0000020	mg/L	0.70	20
8919430	Total Mercury (Hg)	2018/02/26	91	80 - 120	95	80 - 120	<0.0000020	mg/L	NC	20
8919536	Total Aluminum (Al)	2018/02/27	94	80 - 120	102	80 - 120	<0.00050	mg/L	4.1	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8919536	Total Antimony (Sb)	2018/02/27	99	80 - 120	102	80 - 120	<0.000020	mg/L	0.99	20
8919536	Total Arsenic (As)	2018/02/27	104	80 - 120	100	80 - 120	<0.000020	mg/L	1.7	20
8919536	Total Barium (Ba)	2018/02/27	NC	80 - 120	99	80 - 120	<0.000020	mg/L	2.9	20
8919536	Total Beryllium (Be)	2018/02/27	84	80 - 120	89	80 - 120	<0.000010	mg/L	NC	20
8919536	Total Bismuth (Bi)	2018/02/27	89	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8919536	Total Boron (B)	2018/02/27	80	80 - 120	87	80 - 120	<0.010	mg/L	NC	20
8919536	Total Cadmium (Cd)	2018/02/27	95	80 - 120	101	80 - 120	<0.0000050	mg/L	1.8	20
8919536	Total Chromium (Cr)	2018/02/27	93	80 - 120	100	80 - 120	<0.00010	mg/L	3.6	20
8919536	Total Cobalt (Co)	2018/02/27	91	80 - 120	101	80 - 120	<0.0000050	mg/L	17	20
8919536	Total Copper (Cu)	2018/02/27	87	80 - 120	101	80 - 120	<0.000050	mg/L	0.18	20
8919536	Total Iron (Fe)	2018/02/27	92	80 - 120	101	80 - 120	<0.0010	mg/L	0.46	20
8919536	Total Lead (Pb)	2018/02/27	92	80 - 120	98	80 - 120	<0.0000050	mg/L	0.62	20
8919536	Total Lithium (Li)	2018/02/27	81	80 - 120	92	80 - 120	<0.00050	mg/L	8.7	20
8919536	Total Manganese (Mn)	2018/02/27	90	80 - 120	98	80 - 120	<0.000050	mg/L	2.1	20
8919536	Total Molybdenum (Mo)	2018/02/27	106	80 - 120	101	80 - 120	<0.000050	mg/L	0.54	20
8919536	Total Nickel (Ni)	2018/02/27	89	80 - 120	102	80 - 120	<0.000020	mg/L	3.9	20
8919536	Total Phosphorus (P)	2018/02/27	101	80 - 120	101	80 - 120	<0.0020	mg/L	9.6	20
8919536	Total Selenium (Se)	2018/02/27	103	80 - 120	100	80 - 120	<0.000040	mg/L	1.8	20
8919536	Total Silicon (Si)	2018/02/27	NC	80 - 120	97	80 - 120	<0.050	mg/L	4.8	20
8919536	Total Silver (Ag)	2018/02/27	91	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8919536	Total Strontium (Sr)	2018/02/27	NC	80 - 120	93	80 - 120	<0.000050	mg/L	6.0	20
8919536	Total Thallium (Tl)	2018/02/27	97	80 - 120	100	80 - 120	<0.0000020	mg/L	NC	20
8919536	Total Tin (Sn)	2018/02/27	98	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8919536	Total Titanium (Ti)	2018/02/27	94	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8919536	Total Uranium (U)	2018/02/27	96	80 - 120	99	80 - 120	<0.0000020	mg/L	0.38	20
8919536	Total Vanadium (V)	2018/02/27	97	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8919536	Total Zinc (Zn)	2018/02/27	87	80 - 120	101	80 - 120	<0.00010	mg/L	3.4	20
8919536	Total Zirconium (Zr)	2018/02/27	98	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8919715	Dissolved Organic Carbon (C)	2018/02/26	96	80 - 120	101	80 - 120	<0.50	mg/L	NC	20
8919720	Dissolved Aluminum (Al)	2018/02/27	94	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
8919720	Dissolved Antimony (Sb)	2018/02/27	100	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8919720	Dissolved Arsenic (As)	2018/02/27	104	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8919720	Dissolved Barium (Ba)	2018/02/27	NC	80 - 120	98	80 - 120	<0.000020	mg/L	NC	20
8919720	Dissolved Beryllium (Be)	2018/02/27	79 (1)	80 - 120	89	80 - 120	<0.000010	mg/L	NC	20
8919720	Dissolved Bismuth (Bi)	2018/02/27	89	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8919720	Dissolved Boron (B)	2018/02/27	77 (1)	80 - 120	91	80 - 120	<0.010	mg/L	NC	20
8919720	Dissolved Cadmium (Cd)	2018/02/27	95	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8919720	Dissolved Chromium (Cr)	2018/02/27	97	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8919720	Dissolved Cobalt (Co)	2018/02/27	94	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8919720	Dissolved Copper (Cu)	2018/02/27	90	80 - 120	102	80 - 120	<0.000050	mg/L	0.70	20
8919720	Dissolved Iron (Fe)	2018/02/27	95	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20
8919720	Dissolved Lead (Pb)	2018/02/27	93	80 - 120	98	80 - 120	<0.0000050	mg/L	0.90	20
8919720	Dissolved Lithium (Li)	2018/02/27	76 (1)	80 - 120	86	80 - 120	<0.00050	mg/L	NC	20
8919720	Dissolved Manganese (Mn)	2018/02/27	92	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8919720	Dissolved Molybdenum (Mo)	2018/02/27	106	80 - 120	102	80 - 120	<0.000050	mg/L	NC	20
8919720	Dissolved Nickel (Ni)	2018/02/27	94	80 - 120	104	80 - 120	<0.000020	mg/L	5.9	20
8919720	Dissolved Phosphorus (P)	2018/02/27	103	80 - 120	103	80 - 120	<0.0020	mg/L	11	20
8919720	Dissolved Selenium (Se)	2018/02/27	104	80 - 120	101	80 - 120	<0.000040	mg/L	NC	20
8919720	Dissolved Silicon (Si)	2018/02/27	NC	80 - 120	99	80 - 120	<0.050	mg/L	NC	20
8919720	Dissolved Silver (Ag)	2018/02/27	92	80 - 120	99	80 - 120	<0.0000050	mg/L	NC	20
8919720	Dissolved Strontium (Sr)	2018/02/27	NC	80 - 120	95	80 - 120	<0.000050	mg/L	NC	20
8919720	Dissolved Thallium (Tl)	2018/02/27	96	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8919720	Dissolved Tin (Sn)	2018/02/27	97	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8919720	Dissolved Titanium (Ti)	2018/02/27	98	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8919720	Dissolved Uranium (U)	2018/02/27	99	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8919720	Dissolved Vanadium (V)	2018/02/27	99	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8919720	Dissolved Zinc (Zn)	2018/02/27	89	80 - 120	103	80 - 120	<0.00010	mg/L	3.5	20
8919720	Dissolved Zirconium (Zr)	2018/02/27	98	80 - 120	95	80 - 120	<0.00010	mg/L	NC	20
8919843	Total Suspended Solids	2018/02/27			107	80 - 120	<1.0	mg/L		
8919846	Total Suspended Solids	2018/02/27			97	80 - 120	<1.0	mg/L		
8919897	Fluoride (F)	2018/02/26	101	80 - 120	102	80 - 120	0.012, RDL=0.010	mg/L	0	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8919907	Fluoride (F)	2018/02/26	100	80 - 120	100	80 - 120	0.011, RDL=0.010	mg/L	0	20
8919937	Acidity (pH 4.5)	2018/02/26					<1.0	mg/L	NC	20
8919937	Acidity (pH 8.3)	2018/02/26			99	80 - 120	<1.0	mg/L	NC	20
8920766	Strong Acid Dissoc. Cyanide (CN)	2018/02/27	106	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8920768	Weak Acid Dissoc. Cyanide (CN)	2018/02/27	107	80 - 120	103	80 - 120	<0.00050	mg/L	NC	20
8921149	Total Ammonia (N)	2018/02/27	95	80 - 120	93	80 - 120	<0.0050	mg/L	NC	20
8921205	Dissolved Chloride (Cl)	2018/02/24			101	80 - 120	<0.50	mg/L	6.7	20
8921206	Dissolved Sulphate (SO4)	2018/02/24			102	80 - 120	0.86, RDL=0.50	mg/L	1.8	20
8922529	Dissolved Antimony (Sb)	2018/03/01			102	80 - 120	<0.000020	mg/L		
8922529	Dissolved Cadmium (Cd)	2018/03/01			101	80 - 120	<0.0000050	mg/L		
8922529	Dissolved Copper (Cu)	2018/03/01			97	80 - 120	<0.000050	mg/L		
8922529	Dissolved Lead (Pb)	2018/03/01			99	80 - 120	<0.0000050	mg/L		
8922529	Dissolved Zinc (Zn)	2018/03/01			98	80 - 120	<0.00010	mg/L		
8923150	Total Phosphorus (P)	2018/03/01			96	80 - 120	<0.0020	mg/L		
8923151	Dissolved Phosphorus (P)	2018/03/01	NC	80 - 120	96	80 - 120	<0.0020	mg/L	0.43	20

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B813684
Report Date: 2018/03/02

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Name Redacted Scientific Services Manager

Signature Redacted

Name Scientific Specialist

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY F

COC #: 08450954

BBY FCD-00077/05

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-26		21-Feb-18	13:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3	KZ-15		21-Feb-18	10:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
4	KZ-9		21-Feb-18	11:10	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
6	KZ-18		21-Feb-18	11:15	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
7	KZ-37		21-Feb-18	11:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
8	KZ-2		21-Feb-18	11:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
9	KZ-13		21-Feb-18	12:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
10	DUP		21-Feb-18	11:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	

LABORATORY USE ONLY

CUSTODY SEAL (Y) N		COOLER TEMPERATURES
Present	Intact	
YES	YES	0.3.2/4.1.3

COOLING MEDIA PRESENT (Y) / N

COMMENTS

RECEIVED IN WHITEHORSE

BY: Signature Redacted @ 0905

2018-02-23

TEMP: 2 1 1 2 / 2 1 1 1

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	2/22/2018	9:00	Signature Redacted	2018/02/23	13:30

B813684_COC

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY RECORD

COC #: 08450955

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	Field Blank		21-Feb-18	12:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
2	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
YB	YB	0,3,2,4,1,3

COOLING MEDIA PRESENT (Y) / N

COMMENTS

RECEIVED IN WHITEHORSE

BY: Signature Redacted 200905

2018-02-21

TEMP: 2 / 1 / 2

2 1 1

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	2/22/2018	9:00	Signature Redacted	2018/02/23	13:20

B813684_COC

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08450578, 08450579

Attention: KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2018/03/12
Report #: R2526955
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B815882
Received: 2018/03/02, 10:40

Sample Matrix: Water
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	10	2018/03/06	2018/03/06	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Low Level	10	2018/03/06	2018/03/06	BBY6SOP-00026	SM 22 2320 B m
Chloride - Low Level	10	N/A	2018/03/05	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	10	N/A	2018/03/06	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	10	N/A	2018/03/06	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	10	N/A	2018/03/06	BBY6SOP-00003	SM 22 5310 C m
Conductance - Low Level	10	2018/03/06	2018/03/06	BBY6SOP-00026	SM 22 2510 B m
Fluoride - Low Level	10	N/A	2018/03/06	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3) (2)	10	N/A	2018/03/08	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	10	N/A	2018/03/07	BBY WI-00033	Auto Calc
Mercury (Dissolved) by CVAF	10	N/A	2018/03/06	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total) by CVAF	10	2018/03/06	2018/03/06	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	10	N/A	2018/03/07	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (dissolved)	2	N/A	2018/03/06	BBY7SOP-00002	EPA 6020b R2 m
Elements by ICPMS Low Level (dissolved)	8	N/A	2018/03/07	BBY7SOP-00002	EPA 6020b R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	10	N/A	2018/03/08	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (total)	10	N/A	2018/03/07	BBY7SOP-00002	EPA 6020b R2 m
Ammonia-N Low Level (Preserved)	10	N/A	2018/03/06	BBY6SOP-00009	EPA 350.1 m
Nitrate+Nitrite (N) (low level)	10	N/A	2018/03/03	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	10	N/A	2018/03/03	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N) Low Level Calc	10	N/A	2018/03/06	BBY WI-00033	Auto Calc
Filter and HNO3 Preserve for Metals	9	N/A	2018/03/07	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (3)	10	2018/03/06	2018/03/06	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate - Low Level	10	N/A	2018/03/05	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	10	2018/03/03	2018/03/06	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	10	2018/03/03	2018/03/06	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	9	2018/03/06	2018/03/07	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	1	2018/03/06	2018/03/09	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08450578, 08450579

Attention: KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2018/03/12
Report #: R2526955
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B815882
Received: 2018/03/02, 10:40

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(3) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Megan Smith, Project Manager
Email: msmith@maxxam.ca
Phone# (604) 734 7276

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		TA9092		TA9093			TA9094	TA9095		
Sampling Date		2018/03/01 09:30		2018/03/01 10:05			2018/03/01 11:30	2018/03/01 11:20		
COC Number		08450578		08450578			08450578	08450578		
	UNITS	KZ-26	QC Batch	KZ-15	RDL	QC Batch	KZ-9	KZ-18	RDL	QC Batch
Calculated Parameters										
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD		ONSITE	FIELD	FIELD		ONSITE
Nitrate (N)	mg/L	0.105	8925022	0.211	0.0020	8925022	0.474	0.249	0.0020	8925022
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00073	8926511	0.00055	0.00050	8926511	0.00057	0.00055	0.00050	8926511
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00082	8926522	0.00062	0.00050	8926522	0.00069	0.00075	0.00050	8926522
Fluoride (F)	mg/L	0.140	8926707	0.130	0.010	8926707	0.073	0.090	0.010	8926707
Dissolved Organic Carbon (C)	mg/L	4.77	8926753	1.45	0.50	8926753	1.38	0.75	0.50	8926753
Acidity (pH 4.5)	mg/L	<1.0	8927073	<1.0	1.0	8927073	<1.0	<1.0	1.0	8927073
Alkalinity (Total as CaCO3)	mg/L	327	8927217	274	0.50	8927217	216	211	0.50	8927217
Acidity (pH 8.3)	mg/L	<1.0	8927073	3.1	1.0	8927073	<1.0	<1.0	1.0	8927073
Alkalinity (PP as CaCO3)	mg/L	7.26	8927217	5.61	0.50	8927217	2.29	2.69	0.50	8927217
Bicarbonate (HCO3)	mg/L	381	8927217	321	0.50	8927217	258	251	0.50	8927217
Carbonate (CO3)	mg/L	8.71	8927217	6.73	0.50	8927217	2.75	3.23	0.50	8927217
Hydroxide (OH)	mg/L	<0.50	8927217	<0.50	0.50	8927217	<0.50	<0.50	0.50	8927217
Anions										
Dissolved Sulphate (SO4)	mg/L	58.9	8927843	42.9	0.50	8927843	52.6	23.1	0.50	8927843
Dissolved Chloride (Cl)	mg/L	0.99	8927840	0.52	0.50	8927840	0.58	<0.50	0.50	8927840
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0129	8926918	0.0049	0.0020	8926918	0.0041	0.0654	0.0020	8926918
Total Ammonia (N)	mg/L	0.012	8926856	0.017	0.0050	8926856	0.0080	0.0090	0.0050	8926856
Nitrate plus Nitrite (N)	mg/L	0.108	8925076	0.211	0.0020	8925076	0.477	0.249	0.0020	8925076
Nitrite (N)	mg/L	0.0034	8925077	<0.0020	0.0020	8925077	0.0027	<0.0020	0.0020	8925077
Total Phosphorus (P)	mg/L	0.0273	8925062	0.0052	0.0020	8926921	0.0065	0.0674	0.0020	8925062
Physical Properties										
Conductivity	uS/cm	680	8927215	567	1.0	8927215	507	428	1.0	8927215
pH	pH	8.41	8927211	8.39		8927211	8.35	8.37		8927211
Physical Properties										
Total Suspended Solids	mg/L	1.6 (1)	8926628	1.5 (1)	1.1	8926628	3.4	2.4	1.0	8926628

RDL = Reportable Detection Limit
(1) RDL raised due to limited initial sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		TA9096	TA9097			TA9098		
Sampling Date		2018/03/01 11:00	2018/03/01 12:10			2018/03/01 12:20		
COC Number		08450578	08450578			08450578		
	UNITS	KZ-37	KZ-2	RDL	QC Batch	KZ-13	RDL	QC Batch
Calculated Parameters								
Filter and HNO3 Preservation	N/A	FIELD	FIELD		ONSITE	FIELD		ONSITE
Nitrate (N)	mg/L	0.200	0.185	0.0020	8925022	0.107	0.0020	8925022
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00061	<0.00050	0.00050	8926511	0.00069	0.00050	8926511
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00062	<0.00050	0.00050	8926522	0.00059	0.00050	8926522
Fluoride (F)	mg/L	0.110	0.052	0.010	8926707	0.062	0.010	8926707
Dissolved Organic Carbon (C)	mg/L	0.79	0.84	0.50	8926753	3.56	0.50	8926753
Acidity (pH 4.5)	mg/L	<1.0	<1.0	1.0	8927073	<1.0	1.0	8927073
Alkalinity (Total as CaCO3)	mg/L	202	88.4	0.50	8927217	107	0.50	8927217
Acidity (pH 8.3)	mg/L	11.4	<1.0	1.0	8927073	<1.0	1.0	8927073
Alkalinity (PP as CaCO3)	mg/L	<0.50	<0.50	0.50	8927217	<0.50	0.50	8927217
Bicarbonate (HCO3)	mg/L	247	108	0.50	8927217	130	0.50	8927217
Carbonate (CO3)	mg/L	<0.50	<0.50	0.50	8927217	<0.50	0.50	8927217
Hydroxide (OH)	mg/L	<0.50	<0.50	0.50	8927217	<0.50	0.50	8927217
Anions								
Dissolved Sulphate (SO4)	mg/L	29.4	65.0	0.50	8927843	18.4	0.50	8927843
Dissolved Chloride (Cl)	mg/L	<0.50	1.1	0.50	8927840	<0.50	0.50	8927840
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0091	<0.0020	0.0020	8926918	0.0037	0.0020	8926918
Total Ammonia (N)	mg/L	0.024	0.0050	0.0050	8926856	0.024	0.0050	8926856
Nitrate plus Nitrite (N)	mg/L	0.200	0.185	0.0020	8925076	0.107	0.0020	8925076
Nitrite (N)	mg/L	<0.0020	<0.0020	0.0020	8925077	<0.0020	0.0020	8925077
Total Phosphorus (P)	mg/L	0.0084	0.0026	0.0020	8926921	0.0053	0.0020	8925062
Physical Properties								
Conductivity	uS/cm	437	316	1.0	8927215	243	1.0	8927215
pH	pH	8.26	8.13		8927211	8.19		8927211
Physical Properties								
Total Suspended Solids	mg/L	1.4	<1.0	1.0	8926628	<4.6 (1)	4.6	8930307

RDL = Reportable Detection Limit
(1) RDL raised due to limited sample amount.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		TA9099		TA9100		TA9101		
Sampling Date		2018/03/01 11:50		2018/03/01 09:40		2018/03/02 10:40		
COC Number		08450578		08450579		08450579		
	UNITS	DUP	QC Batch	FIELD BLANK	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE			
Nitrate (N)	mg/L	0.184	8925022	<0.0020	8925022	<0.0020	0.0020	8925022
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00056	8926511	<0.00050	8926511	<0.00050	0.00050	8926511
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00058	8926522	<0.00050	8926522	<0.00050	0.00050	8926522
Fluoride (F)	mg/L	0.054	8926707	<0.010	8926707	<0.010	0.010	8926707
Dissolved Organic Carbon (C)	mg/L	0.71	8926753	<0.50	8926753	<0.50	0.50	8926753
Acidity (pH 4.5)	mg/L	<1.0	8927073	<1.0	8927073	<1.0	1.0	8927073
Alkalinity (Total as CaCO3)	mg/L	87.6	8927217	0.81	8927217	0.73	0.50	8927217
Acidity (pH 8.3)	mg/L	<1.0	8927073	<1.0	8927073	<1.0	1.0	8927073
Alkalinity (PP as CaCO3)	mg/L	<0.50	8927217	<0.50	8927217	<0.50	0.50	8927217
Bicarbonate (HCO3)	mg/L	107	8927217	0.99	8927217	0.89	0.50	8927217
Carbonate (CO3)	mg/L	<0.50	8927217	<0.50	8927217	<0.50	0.50	8927217
Hydroxide (OH)	mg/L	<0.50	8927217	<0.50	8927217	<0.50	0.50	8927217
Anions								
Dissolved Sulphate (SO4)	mg/L	67.1	8927843	<0.50	8927843	<0.50	0.50	8927843
Dissolved Chloride (Cl)	mg/L	0.57	8927840	<0.50	8927840	<0.50	0.50	8927840
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0023	8926918	0.0023	8926918	<0.0020	0.0020	8926918
Total Ammonia (N)	mg/L	0.019	8926856	<0.0050	8926856	<0.0050	0.0050	8926856
Nitrate plus Nitrite (N)	mg/L	0.184	8925076	<0.0020	8925076	<0.0020	0.0020	8925076
Nitrite (N)	mg/L	<0.0020	8925077	<0.0020	8925077	<0.0020	0.0020	8925077
Total Phosphorus (P)	mg/L	<0.0020	8925062	<0.0020	8926921	<0.0020	0.0020	8926921
Physical Properties								
Conductivity	uS/cm	311	8927215	1.1	8927215	1.0	1.0	8927215
pH	pH	8.12	8927211	5.48	8927211	5.48		8927211
Physical Properties								
Total Suspended Solids	mg/L	1.0	8926628	1.1	8926628	<1.0	1.0	8926628
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TA9092		TA9093	TA9094		
Sampling Date		2018/03/01 09:30		2018/03/01 10:05	2018/03/01 11:30		
COC Number		08450578		08450578	08450578		
	UNITS	KZ-26	QC Batch	KZ-15	KZ-9	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO3)	mg/L	374	8925006	313	272	0.50	8925006
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	8926616	<0.0000020	<0.0000020	0.0000020	8926616
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00115	8925822	0.00081	0.00087	0.00050	8925822
Dissolved Antimony (Sb)	mg/L	0.000071	8925822	0.000028	0.000027	0.000020	8925822
Dissolved Arsenic (As)	mg/L	0.000775	8925822	0.000338	0.000131	0.000020	8925822
Dissolved Barium (Ba)	mg/L	0.110	8925822	0.113	0.179	0.000020	8925822
Dissolved Beryllium (Be)	mg/L	<0.000010	8925822	<0.000010	<0.000010	0.000010	8925822
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8925822	<0.0000050	<0.0000050	0.0000050	8925822
Dissolved Boron (B)	mg/L	<0.010	8925822	<0.010	<0.010	0.010	8925822
Dissolved Cadmium (Cd)	mg/L	0.0000510	8925822	0.0000617	0.0000333	0.0000050	8925822
Dissolved Chromium (Cr)	mg/L	<0.00010	8925822	<0.00010	0.00024	0.00010	8925822
Dissolved Cobalt (Co)	mg/L	0.0000208	8925822	0.0000506	0.0000057	0.0000050	8925822
Dissolved Copper (Cu)	mg/L	0.000215	8925822	<0.000050	<0.000050	0.000050	8925822
Dissolved Iron (Fe)	mg/L	0.0029	8925822	0.0089	0.0027	0.0010	8925822
Dissolved Lead (Pb)	mg/L	0.0000174	8929670	0.0000061	0.0000139	0.0000050	8925822
Dissolved Lithium (Li)	mg/L	0.00872	8925822	0.00492	0.00202	0.00050	8925822
Dissolved Manganese (Mn)	mg/L	0.00711	8925822	0.0672	0.00149	0.000050	8925822
Dissolved Molybdenum (Mo)	mg/L	0.000854	8925822	0.00155	0.00133	0.000050	8925822
Dissolved Nickel (Ni)	mg/L	0.000609	8925822	0.00128	0.000128	0.000020	8925822
Dissolved Phosphorus (P)	mg/L	0.0130	8925822	0.0045	0.0031	0.0020	8925822
Dissolved Selenium (Se)	mg/L	0.00111	8925822	0.00167	0.00321	0.000040	8925822
Dissolved Silicon (Si)	mg/L	5.83	8925822	4.17	3.57	0.050	8925822
Dissolved Silver (Ag)	mg/L	<0.0000050	8925822	<0.0000050	<0.0000050	0.0000050	8925822
Dissolved Strontium (Sr)	mg/L	0.333	8925822	0.295	0.287	0.000050	8925822
Dissolved Thallium (Tl)	mg/L	0.0000028	8925822	0.0000022	<0.0000020	0.0000020	8925822
Dissolved Tin (Sn)	mg/L	<0.00020	8925822	<0.00020	<0.00020	0.00020	8925822
Dissolved Titanium (Ti)	mg/L	<0.00050	8925822	<0.00050	<0.00050	0.00050	8925822
Dissolved Uranium (U)	mg/L	0.00438	8925822	0.00670	0.00336	0.0000020	8925822
Dissolved Vanadium (V)	mg/L	<0.00020	8925822	<0.00020	<0.00020	0.00020	8925822

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TA9092		TA9093	TA9094		
Sampling Date		2018/03/01 09:30		2018/03/01 10:05	2018/03/01 11:30		
COC Number		08450578		08450578	08450578		
	UNITS	KZ-26	QC Batch	KZ-15	KZ-9	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00420	8925822	0.00897	0.00352	0.00010	8925822
Dissolved Zirconium (Zr)	mg/L	<0.00010	8925822	<0.00010	<0.00010	0.00010	8925822
Dissolved Calcium (Ca)	mg/L	98.0	8925020	89.8	90.6	0.050	8925020
Dissolved Magnesium (Mg)	mg/L	31.4	8925020	21.6	11.0	0.050	8925020
Dissolved Potassium (K)	mg/L	2.74	8925020	1.58	1.45	0.050	8925020
Dissolved Sodium (Na)	mg/L	2.79	8925020	1.77	1.29	0.050	8925020
Dissolved Sulphur (S)	mg/L	20.7	8925020	15.0	17.9	3.0	8925020

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TA9095		TA9096	TA9097	TA9098		
Sampling Date		2018/03/01 11:20		2018/03/01 11:00	2018/03/01 12:10	2018/03/01 12:20		
COC Number		08450578		08450578	08450578	08450578		
	UNITS	KZ-18	QC Batch	KZ-37	KZ-2	KZ-13	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO3)	mg/L	214	8925006	226	149	113	0.50	8925006
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8926616	<0.0000020	<0.0000020	<0.0000020	0.0000020	8926616
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00247	8925822	0.00196	0.00189	0.00346	0.00050	8925822
Dissolved Antimony (Sb)	mg/L	0.000041	8925822	0.000027	0.000026	0.000035	0.000020	8925822
Dissolved Arsenic (As)	mg/L	0.00108	8925822	0.000319	0.000088	0.000205	0.000020	8925822
Dissolved Barium (Ba)	mg/L	0.0615	8925822	0.106	0.0825	0.128	0.000020	8925822
Dissolved Beryllium (Be)	mg/L	<0.000010	8925822	<0.000010	<0.000010	<0.000010	0.000010	8925822
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8925822	<0.0000050	<0.0000050	<0.0000050	0.0000050	8925822
Dissolved Boron (B)	mg/L	<0.010	8925822	<0.010	<0.010	<0.010	0.010	8925822
Dissolved Cadmium (Cd)	mg/L	0.0000504	8925822	0.0000636	0.000238	0.0000223	0.0000050	8925822
Dissolved Chromium (Cr)	mg/L	0.00015	8925822	<0.00010	<0.00010	<0.00010	0.00010	8925822
Dissolved Cobalt (Co)	mg/L	0.0000400	8925822	0.000191	<0.0000050	0.0000457	0.0000050	8925822
Dissolved Copper (Cu)	mg/L	<0.000050	8925822	<0.000050	0.000257	<0.000050	0.000050	8925822
Dissolved Iron (Fe)	mg/L	0.0452	8925822	0.230	<0.0010	0.0906	0.0010	8925822
Dissolved Lead (Pb)	mg/L	0.0000168	8925822	0.0000172	0.0000546	0.0000118	0.0000050	8925822
Dissolved Lithium (Li)	mg/L	0.00229	8925822	0.00510	0.00166	0.00215	0.00050	8925822
Dissolved Manganese (Mn)	mg/L	0.0177	8925822	0.143	0.000113	0.0826	0.000050	8925822
Dissolved Molybdenum (Mo)	mg/L	0.00184	8925822	0.000843	0.000716	0.000795	0.000050	8925822
Dissolved Nickel (Ni)	mg/L	0.000369	8925822	0.000601	0.000328	0.000465	0.000020	8925822
Dissolved Phosphorus (P)	mg/L	0.0636	8925822	0.0083	0.0028	0.0035	0.0020	8925822
Dissolved Selenium (Se)	mg/L	0.00142	8925822	0.00115	0.00255	0.000256	0.000040	8925822
Dissolved Silicon (Si)	mg/L	3.24	8925822	3.88	2.37	4.07	0.050	8925822
Dissolved Silver (Ag)	mg/L	<0.0000050	8925822	<0.0000050	<0.0000050	<0.0000050	0.0000050	8925822
Dissolved Strontium (Sr)	mg/L	0.191	8925822	0.250	0.160	0.115	0.000050	8925822
Dissolved Thallium (Tl)	mg/L	<0.0000020	8925822	<0.0000020	0.0000045	0.0000024	0.0000020	8925822
Dissolved Tin (Sn)	mg/L	<0.00020	8925822	<0.00020	<0.00020	<0.00020	0.00020	8925822
Dissolved Titanium (Ti)	mg/L	<0.00050	8925822	<0.00050	<0.00050	<0.00050	0.00050	8925822
Dissolved Uranium (U)	mg/L	0.00347	8925822	0.00208	0.00583	0.00188	0.0000020	8925822
Dissolved Vanadium (V)	mg/L	<0.00020	8925822	<0.00020	<0.00020	<0.00020	0.00020	8925822
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TA9095		TA9096	TA9097	TA9098		
Sampling Date		2018/03/01 11:20		2018/03/01 11:00	2018/03/01 12:10	2018/03/01 12:20		
COC Number		08450578		08450578	08450578	08450578		
	UNITS	KZ-18	QC Batch	KZ-37	KZ-2	KZ-13	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00172	8929670	0.0125	0.0304	0.00210	0.00010	8925822
Dissolved Zirconium (Zr)	mg/L	<0.00010	8925822	<0.00010	<0.00010	<0.00010	0.00010	8925822
Dissolved Calcium (Ca)	mg/L	53.8	8925020	73.7	47.6	38.2	0.050	8925020
Dissolved Magnesium (Mg)	mg/L	19.3	8925020	10.1	7.44	4.27	0.050	8925020
Dissolved Potassium (K)	mg/L	0.730	8925020	1.63	2.45	2.27	0.050	8925020
Dissolved Sodium (Na)	mg/L	1.01	8925020	1.65	1.19	1.33	0.050	8925020
Dissolved Sulphur (S)	mg/L	7.3	8925020	9.9	22.6	6.0	3.0	8925020

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TA9099		TA9100		TA9101		
Sampling Date		2018/03/01 11:50		2018/03/01 09:40		2018/03/02 10:40		
COC Number		08450578		08450579		08450579		
	UNITS	DUP	QC Batch	FIELD BLANK	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO3)	mg/L	150	8925006	<0.50	8925006	<0.50	0.50	8925006
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8926616	<0.0000020	8926616	<0.0000020	0.0000020	8926616
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00175	8925822	<0.00050	8925822	<0.00050	0.00050	8925822
Dissolved Antimony (Sb)	mg/L	0.000028	8925822	<0.000020	8925822	<0.000020	0.000020	8925822
Dissolved Arsenic (As)	mg/L	0.000089	8925822	<0.000020	8925822	<0.000020	0.000020	8925822
Dissolved Barium (Ba)	mg/L	0.0818	8925822	<0.000020	8925822	<0.000020	0.000020	8925822
Dissolved Beryllium (Be)	mg/L	<0.000010	8925822	<0.000010	8925822	<0.000010	0.000010	8925822
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8925822	<0.0000050	8925822	<0.0000050	0.0000050	8925822
Dissolved Boron (B)	mg/L	<0.010	8925822	<0.010	8925822	<0.010	0.010	8925822
Dissolved Cadmium (Cd)	mg/L	0.000243	8925822	<0.0000050	8929670	<0.0000050	0.0000050	8925822
Dissolved Chromium (Cr)	mg/L	<0.00010	8925822	<0.00010	8925822	<0.00010	0.00010	8925822
Dissolved Cobalt (Co)	mg/L	0.0000078	8925822	<0.0000050	8925822	<0.0000050	0.0000050	8925822
Dissolved Copper (Cu)	mg/L	0.000260	8925822	<0.000050	8925822	<0.000050	0.000050	8925822
Dissolved Iron (Fe)	mg/L	<0.0010	8925822	<0.0010	8925822	<0.0010	0.0010	8925822
Dissolved Lead (Pb)	mg/L	0.0000312	8929670	<0.0000050	8929670	<0.0000050	0.0000050	8925822
Dissolved Lithium (Li)	mg/L	0.00165	8925822	<0.00050	8925822	<0.00050	0.00050	8925822
Dissolved Manganese (Mn)	mg/L	0.000263	8925822	<0.000050	8925822	<0.000050	0.000050	8925822
Dissolved Molybdenum (Mo)	mg/L	0.000768	8925822	<0.000050	8925822	<0.000050	0.000050	8925822
Dissolved Nickel (Ni)	mg/L	0.000344	8925822	<0.000020	8925822	<0.000020	0.000020	8925822
Dissolved Phosphorus (P)	mg/L	0.0023	8925822	<0.0020	8929670	<0.0020	0.0020	8925822
Dissolved Selenium (Se)	mg/L	0.00259	8925822	<0.000040	8925822	<0.000040	0.000040	8925822
Dissolved Silicon (Si)	mg/L	2.37	8925822	<0.050	8925822	<0.050	0.050	8925822
Dissolved Silver (Ag)	mg/L	<0.0000050	8925822	<0.0000050	8925822	<0.0000050	0.0000050	8925822
Dissolved Strontium (Sr)	mg/L	0.163	8925822	<0.000050	8925822	<0.000050	0.000050	8925822
Dissolved Thallium (Tl)	mg/L	0.0000038	8925822	<0.0000020	8929670	<0.0000020	0.0000020	8925822
Dissolved Tin (Sn)	mg/L	<0.00020	8925822	<0.00020	8925822	<0.00020	0.00020	8925822
Dissolved Titanium (Ti)	mg/L	<0.00050	8925822	<0.00050	8925822	<0.00050	0.00050	8925822
Dissolved Uranium (U)	mg/L	0.00586	8925822	<0.0000020	8929670	<0.0000020	0.0000020	8925822
Dissolved Vanadium (V)	mg/L	<0.00020	8925822	<0.00020	8925822	<0.00020	0.00020	8925822

RDL = Reportable Detection Limit

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TA9099		TA9100		TA9101		
Sampling Date		2018/03/01 11:50		2018/03/01 09:40		2018/03/02 10:40		
COC Number		08450578		08450579		08450579		
	UNITS	DUP	QC Batch	FIELD BLANK	QC Batch	TRIP BLANK	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.0307	8925822	<0.00010	8925822	<0.00010	0.00010	8925822
Dissolved Zirconium (Zr)	mg/L	<0.00010	8925822	<0.00010	8925822	<0.00010	0.00010	8925822
Dissolved Calcium (Ca)	mg/L	47.5	8925020	<0.050	8925020	<0.050	0.050	8925020
Dissolved Magnesium (Mg)	mg/L	7.57	8925020	<0.050	8925020	<0.050	0.050	8925020
Dissolved Potassium (K)	mg/L	2.47	8925020	<0.050	8925020	<0.050	0.050	8925020
Dissolved Sodium (Na)	mg/L	1.16	8925020	<0.050	8925020	<0.050	0.050	8925020
Dissolved Sulphur (S)	mg/L	23.5	8925020	<3.0	8925020	<3.0	3.0	8925020
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TA9092	TA9093	TA9094	TA9095	TA9096		
Sampling Date		2018/03/01 09:30	2018/03/01 10:05	2018/03/01 11:30	2018/03/01 11:20	2018/03/01 11:00		
COC Number		08450578	08450578	08450578	08450578	08450578		
	UNITS	KZ-26	KZ-15	KZ-9	KZ-18	KZ-37	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	370	303	275	210	221	0.50	8924919
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8926578
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00135	0.00665	0.00264	0.00738	0.00542	0.00050	8926933
Total Antimony (Sb)	mg/L	0.000068	0.000030	0.000030	0.000040	0.000033	0.000020	8926933
Total Arsenic (As)	mg/L	0.000793	0.000539	0.000132	0.00110	0.000360	0.000020	8926933
Total Barium (Ba)	mg/L	0.105	0.108	0.172	0.0595	0.0999	0.000020	8926933
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8926933
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8926933
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8926933
Total Cadmium (Cd)	mg/L	0.0000491	0.0000743	0.0000489	0.0000470	0.0000651	0.0000050	8926933
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00029	0.00018	<0.00010	0.00010	8926933
Total Cobalt (Co)	mg/L	0.0000182	0.0000682	0.0000084	0.0000406	0.000189	0.0000050	8926933
Total Copper (Cu)	mg/L	0.000556	0.000245	0.000206	0.000088	0.000228	0.000050	8926933
Total Iron (Fe)	mg/L	0.0083	0.0879	0.0171	0.0587	0.384	0.0010	8926933
Total Lead (Pb)	mg/L	0.0000190	0.0000244	0.0000163	0.0000079	0.0000173	0.0000050	8926933
Total Lithium (Li)	mg/L	0.00849	0.00471	0.00189	0.00228	0.00486	0.00050	8926933
Total Manganese (Mn)	mg/L	0.00680	0.0797	0.00300	0.0181	0.139	0.000050	8926933
Total Molybdenum (Mo)	mg/L	0.000915	0.00165	0.00138	0.00201	0.000932	0.000050	8926933
Total Nickel (Ni)	mg/L	0.000579	0.00132	0.000155	0.000380	0.000547	0.000020	8926933
Total Phosphorus (P)	mg/L	0.0259	0.0069	0.0083	0.0686	0.0163	0.0020	8926933
Total Selenium (Se)	mg/L	0.00110	0.00159	0.00327	0.00140	0.00114	0.000040	8926933
Total Silicon (Si)	mg/L	6.09	4.20	3.49	3.33	3.91	0.050	8926933
Total Silver (Ag)	mg/L	0.0000051	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8926933
Total Strontium (Sr)	mg/L	0.333	0.298	0.298	0.205	0.253	0.000050	8926933
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8926933
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8926933
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8926933
Total Uranium (U)	mg/L	0.00402	0.00602	0.00294	0.00318	0.00185	0.0000020	8926933
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8926933

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TA9092	TA9093	TA9094	TA9095	TA9096		
Sampling Date		2018/03/01 09:30	2018/03/01 10:05	2018/03/01 11:30	2018/03/01 11:20	2018/03/01 11:00		
COC Number		08450578	08450578	08450578	08450578	08450578		
	UNITS	**KZ-26**	**KZ-15**	**KZ-9**	**KZ-18**	**KZ-37**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.00371	0.00890	0.00435	0.00170	0.0119	0.00010	8926933
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8926933
Total Calcium (Ca)	mg/L	97.1	85.9	91.0	52.0	71.6	0.050	8925021
Total Magnesium (Mg)	mg/L	31.0	21.5	11.6	19.5	10.3	0.050	8925021
Total Potassium (K)	mg/L	2.71	1.51	1.47	0.704	1.60	0.050	8925021
Total Sodium (Na)	mg/L	2.86	1.73	1.35	1.02	1.64	0.050	8925021
Total Sulphur (S)	mg/L	19.7	14.4	17.8	7.6	10.0	3.0	8925021

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TA9097	TA9098	TA9099	TA9100	TA9101		
Sampling Date		2018/03/01 12:10	2018/03/01 12:20	2018/03/01 11:50	2018/03/01 09:40	2018/03/02 10:40		
COC Number		08450578	08450578	08450578	08450579	08450579		
	UNITS	KZ-2	KZ-13	DUP	FIELD BLANK	TRIP BLANK	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	146	115	147	<0.50	<0.50	0.50	8924919
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	<0.0000020	<0.0000020	0.0000020	8926578
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00527	0.00659	0.00292	<0.00050	<0.00050	0.00050	8926933
Total Antimony (Sb)	mg/L	0.000027	0.000042	0.000028	<0.000020	<0.000020	0.000020	8926933
Total Arsenic (As)	mg/L	0.000073	0.000223	0.000071	<0.000020	<0.000020	0.000020	8926933
Total Barium (Ba)	mg/L	0.0806	0.127	0.0778	<0.000020	<0.000020	0.000020	8926933
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000010	8926933
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8926933
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	8926933
Total Cadmium (Cd)	mg/L	0.000243	0.0000306	0.000244	<0.0000050	<0.0000050	0.0000050	8926933
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8926933
Total Cobalt (Co)	mg/L	0.0000118	0.0000479	0.0000105	<0.0000050	<0.0000050	0.0000050	8926933
Total Copper (Cu)	mg/L	0.000546	0.000373	0.000489	<0.000050	<0.000050	0.000050	8926933
Total Iron (Fe)	mg/L	0.0112	0.156	0.0030	<0.0010	<0.0010	0.0010	8926933
Total Lead (Pb)	mg/L	0.000417	0.0000107	0.0000339	<0.0000050	<0.0000050	0.0000050	8926933
Total Lithium (Li)	mg/L	0.00160	0.00216	0.00155	<0.00050	<0.00050	0.00050	8926933
Total Manganese (Mn)	mg/L	0.000367	0.0849	0.000532	<0.000050	<0.000050	0.000050	8926933
Total Molybdenum (Mo)	mg/L	0.000799	0.000893	0.000784	<0.000050	<0.000050	0.000050	8926933
Total Nickel (Ni)	mg/L	0.000300	0.000475	0.000313	<0.000020	<0.000020	0.000020	8926933
Total Phosphorus (P)	mg/L	0.0024	0.0060	0.0030	0.0028	<0.0020	0.0020	8926933
Total Selenium (Se)	mg/L	0.00247	0.000268	0.00250	<0.000040	<0.000040	0.000040	8926933
Total Silicon (Si)	mg/L	2.35	4.16	2.30	<0.050	<0.050	0.050	8926933
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	<0.0000050	0.0000050	8926933
Total Strontium (Sr)	mg/L	0.164	0.117	0.155	<0.000050	<0.000050	0.000050	8926933
Total Thallium (Tl)	mg/L	0.0000031	0.0000021	0.0000036	<0.0000020	<0.0000020	0.0000020	8926933
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8926933
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00050	8926933
Total Uranium (U)	mg/L	0.00517	0.00174	0.00512	<0.0000020	<0.0000020	0.0000020	8926933
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.00020	8926933

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TA9097	TA9098	TA9099	TA9100	TA9101		
Sampling Date		2018/03/01 12:10	2018/03/01 12:20	2018/03/01 11:50	2018/03/01 09:40	2018/03/02 10:40		
COC Number		08450578	08450578	08450578	08450579	08450579		
	UNITS	**KZ-2**	**KZ-13**	**DUP**	**FIELD BLANK**	**TRIP BLANK**	**RDL**	**QC Batch**
Total Zinc (Zn)	mg/L	0.0287	0.00218	0.0271	<0.00010	<0.00010	0.00010	8926933
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00010	8926933
Total Calcium (Ca)	mg/L	46.0	39.0	46.9	<0.050	<0.050	0.050	8925021
Total Magnesium (Mg)	mg/L	7.49	4.39	7.14	<0.050	<0.050	0.050	8925021
Total Potassium (K)	mg/L	2.37	2.30	2.25	<0.050	<0.050	0.050	8925021
Total Sodium (Na)	mg/L	1.13	1.35	0.997	<0.050	<0.050	0.050	8925021
Total Sulphur (S)	mg/L	22.5	6.0	21.6	<3.0	<3.0	3.0	8925021

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: TA9092
Sample ID: KZ-26
Matrix: Water

Collected: 2018/03/01
Shipped:
Received: 2018/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8927073	2018/03/06	2018/03/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8927217	2018/03/06	2018/03/06	
Chloride - Low Level	KONE/COL	8927840	N/A	2018/03/05	
Cyanide SAD (strong acid dissociable)	TECH/COL	8926511	N/A	2018/03/06	
Cyanide WAD (weak acid dissociable)	TECH/COL	8926522	N/A	2018/03/06	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8926753	N/A	2018/03/06	
Conductance - Low Level	AT/ALK	8927215	2018/03/06	2018/03/06	
Fluoride - Low Level	ISE/ISE	8926707	N/A	2018/03/06	
Hardness Total (calculated as CaCO3)	CALC	8924919	N/A	2018/03/08	
Hardness (calculated as CaCO3)	CALC	8925006	N/A	2018/03/07	
Mercury (Dissolved) by CVAF	CV/AF	8926616	N/A	2018/03/06	
Mercury (Total) by CVAF	CV/AF	8926578	2018/03/06	2018/03/06	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8925020	N/A	2018/03/07	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8925822	N/A	2018/03/07	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8925021	N/A	2018/03/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8926933	N/A	2018/03/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8926856	N/A	2018/03/06	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8925076	N/A	2018/03/03	
Nitrite (N) (low level)	TRAA/COL	8925077	N/A	2018/03/03	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8925022	N/A	2018/03/06	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/03	
pH Water	AT/ALK	8927211	2018/03/06	2018/03/06	
Sulphate - Low Level	KONE/COL	8927843	N/A	2018/03/05	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8926918	2018/03/03	2018/03/06	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8925062	2018/03/03	2018/03/06	
Total Suspended Solids-Low Level	BAL/BAL	8926628	2018/03/06	2018/03/07	

Maxxam ID: TA9093
Sample ID: KZ-15
Matrix: Water

Collected: 2018/03/01
Shipped:
Received: 2018/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8927073	2018/03/06	2018/03/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8927217	2018/03/06	2018/03/06	
Chloride - Low Level	KONE/COL	8927840	N/A	2018/03/05	
Cyanide SAD (strong acid dissociable)	TECH/COL	8926511	N/A	2018/03/06	
Cyanide WAD (weak acid dissociable)	TECH/COL	8926522	N/A	2018/03/06	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8926753	N/A	2018/03/06	
Conductance - Low Level	AT/ALK	8927215	2018/03/06	2018/03/06	
Fluoride - Low Level	ISE/ISE	8926707	N/A	2018/03/06	
Hardness Total (calculated as CaCO3)	CALC	8924919	N/A	2018/03/08	
Hardness (calculated as CaCO3)	CALC	8925006	N/A	2018/03/07	
Mercury (Dissolved) by CVAF	CV/AF	8926616	N/A	2018/03/06	
Mercury (Total) by CVAF	CV/AF	8926578	2018/03/06	2018/03/06	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: TA9093
Sample ID: KZ-15
Matrix: Water

Collected: 2018/03/01
Shipped:
Received: 2018/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8925020	N/A	2018/03/07	Name Redacted
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8925822	N/A	2018/03/07	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8925021	N/A	2018/03/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8926933	N/A	2018/03/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8926856	N/A	2018/03/06	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8925076	N/A	2018/03/03	
Nitrite (N) (low level)	TRAA/COL	8925077	N/A	2018/03/03	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8925022	N/A	2018/03/06	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/03	
pH Water	AT/ALK	8927211	2018/03/06	2018/03/06	
Sulphate - Low Level	KONE/COL	8927843	N/A	2018/03/05	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8926918	2018/03/03	2018/03/06	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8926921	2018/03/03	2018/03/06	
Total Suspended Solids-Low Level	BAL/BAL	8926628	2018/03/06	2018/03/07	

Maxxam ID: TA9094
Sample ID: KZ-9
Matrix: Water

Collected: 2018/03/01
Shipped:
Received: 2018/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8927073	2018/03/06	2018/03/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8927217	2018/03/06	2018/03/06	
Chloride - Low Level	KONE/COL	8927840	N/A	2018/03/05	
Cyanide SAD (strong acid dissociable)	TECH/COL	8926511	N/A	2018/03/06	
Cyanide WAD (weak acid dissociable)	TECH/COL	8926522	N/A	2018/03/06	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8926753	N/A	2018/03/06	
Conductance - Low Level	AT/ALK	8927215	2018/03/06	2018/03/06	
Fluoride - Low Level	ISE/ISE	8926707	N/A	2018/03/06	
Hardness Total (calculated as CaCO3)	CALC	8924919	N/A	2018/03/08	
Hardness (calculated as CaCO3)	CALC	8925006	N/A	2018/03/07	
Mercury (Dissolved) by CVAF	CV/AF	8926616	N/A	2018/03/06	
Mercury (Total) by CVAF	CV/AF	8926578	2018/03/06	2018/03/06	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8925020	N/A	2018/03/07	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8925822	N/A	2018/03/07	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8925021	N/A	2018/03/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8926933	N/A	2018/03/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8926856	N/A	2018/03/06	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8925076	N/A	2018/03/03	
Nitrite (N) (low level)	TRAA/COL	8925077	N/A	2018/03/03	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8925022	N/A	2018/03/06	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/03	
pH Water	AT/ALK	8927211	2018/03/06	2018/03/06	
Sulphate - Low Level	KONE/COL	8927843	N/A	2018/03/05	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8926918	2018/03/03	2018/03/06	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: TA9094
Sample ID: KZ-9
Matrix: Water

Collected: 2018/03/01
Shipped:
Received: 2018/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus - Low Level Unpreserved	KONE/COL	8925062	2018/03/03	2018/03/06	Name Redacted
Total Suspended Solids-Low Level	BAL/BAL	8926628	2018/03/06	2018/03/07	

Maxxam ID: TA9095
Sample ID: KZ-18
Matrix: Water

Collected: 2018/03/01
Shipped:
Received: 2018/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8927073	2018/03/06	2018/03/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8927217	2018/03/06	2018/03/06	
Chloride - Low Level	KONE/COL	8927840	N/A	2018/03/05	
Cyanide SAD (strong acid dissociable)	TECH/COL	8926511	N/A	2018/03/06	
Cyanide WAD (weak acid dissociable)	TECH/COL	8926522	N/A	2018/03/06	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8926753	N/A	2018/03/06	
Conductance - Low Level	AT/ALK	8927215	2018/03/06	2018/03/06	
Fluoride - Low Level	ISE/ISE	8926707	N/A	2018/03/06	
Hardness Total (calculated as CaCO3)	CALC	8924919	N/A	2018/03/08	
Hardness (calculated as CaCO3)	CALC	8925006	N/A	2018/03/07	
Mercury (Dissolved) by CVAF	CV/AF	8926616	N/A	2018/03/06	
Mercury (Total) by CVAF	CV/AF	8926578	2018/03/06	2018/03/06	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8925020	N/A	2018/03/07	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8925822	N/A	2018/03/07	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8925021	N/A	2018/03/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8926933	N/A	2018/03/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8926856	N/A	2018/03/06	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8925076	N/A	2018/03/03	
Nitrite (N) (low level)	TRAA/COL	8925077	N/A	2018/03/03	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8925022	N/A	2018/03/06	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/03	
pH Water	AT/ALK	8927211	2018/03/06	2018/03/06	
Sulphate - Low Level	KONE/COL	8927843	N/A	2018/03/05	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8926918	2018/03/03	2018/03/06	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8925062	2018/03/03	2018/03/06	
Total Suspended Solids-Low Level	BAL/BAL	8926628	2018/03/06	2018/03/07	

Maxxam ID: TA9096
Sample ID: KZ-37
Matrix: Water

Collected: 2018/03/01
Shipped:
Received: 2018/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8927073	2018/03/06	2018/03/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8927217	2018/03/06	2018/03/06	
Chloride - Low Level	KONE/COL	8927840	N/A	2018/03/05	
Cyanide SAD (strong acid dissociable)	TECH/COL	8926511	N/A	2018/03/06	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: TA9096
Sample ID: KZ-37
Matrix: Water

Collected: 2018/03/01
Shipped:
Received: 2018/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide WAD (weak acid dissociable)	TECH/COL	8926522	N/A	2018/03/06	Name Redacted
Carbon (DOC) - field filtered/preserved	TRAA/COL	8926753	N/A	2018/03/06	
Conductance - Low Level	AT/ALK	8927215	2018/03/06	2018/03/06	
Fluoride - Low Level	ISE/ISE	8926707	N/A	2018/03/06	
Hardness Total (calculated as CaCO3)	CALC	8924919	N/A	2018/03/08	
Hardness (calculated as CaCO3)	CALC	8925006	N/A	2018/03/07	
Mercury (Dissolved) by CVAF	CV/AF	8926616	N/A	2018/03/06	
Mercury (Total) by CVAF	CV/AF	8926578	2018/03/06	2018/03/06	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8925020	N/A	2018/03/07	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8925822	N/A	2018/03/07	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8925021	N/A	2018/03/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8926933	N/A	2018/03/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8926856	N/A	2018/03/06	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8925076	N/A	2018/03/03	
Nitrite (N) (low level)	TRAA/COL	8925077	N/A	2018/03/03	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8925022	N/A	2018/03/06	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/03	
pH Water	AT/ALK	8927211	2018/03/06	2018/03/06	
Sulphate - Low Level	KONE/COL	8927843	N/A	2018/03/05	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8926918	2018/03/03	2018/03/06	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8926921	2018/03/03	2018/03/06	
Total Suspended Solids-Low Level	BAL/BAL	8926628	2018/03/06	2018/03/07	

Maxxam ID: TA9097
Sample ID: KZ-2
Matrix: Water

Collected: 2018/03/01
Shipped:
Received: 2018/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8927073	2018/03/06	2018/03/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8927217	2018/03/06	2018/03/06	
Chloride - Low Level	KONE/COL	8927840	N/A	2018/03/05	
Cyanide SAD (strong acid dissociable)	TECH/COL	8926511	N/A	2018/03/06	
Cyanide WAD (weak acid dissociable)	TECH/COL	8926522	N/A	2018/03/06	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8926753	N/A	2018/03/06	
Conductance - Low Level	AT/ALK	8927215	2018/03/06	2018/03/06	
Fluoride - Low Level	ISE/ISE	8926707	N/A	2018/03/06	
Hardness Total (calculated as CaCO3)	CALC	8924919	N/A	2018/03/08	
Hardness (calculated as CaCO3)	CALC	8925006	N/A	2018/03/07	
Mercury (Dissolved) by CVAF	CV/AF	8926616	N/A	2018/03/06	
Mercury (Total) by CVAF	CV/AF	8926578	2018/03/06	2018/03/06	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8925020	N/A	2018/03/07	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8925822	N/A	2018/03/07	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8925021	N/A	2018/03/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8926933	N/A	2018/03/07	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: TA9097
Sample ID: KZ-2
Matrix: Water

Collected: 2018/03/01
Shipped:
Received: 2018/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Ammonia-N Low Level (Preserved)	KONE/COL	8926856	N/A	2018/03/06	Name Redacted
Nitrate+Nitrite (N) (low level)	TRAA/COL	8925076	N/A	2018/03/03	
Nitrite (N) (low level)	TRAA/COL	8925077	N/A	2018/03/03	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8925022	N/A	2018/03/06	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/03	
pH Water	AT/ALK	8927211	2018/03/06	2018/03/06	
Sulphate - Low Level	KONE/COL	8927843	N/A	2018/03/05	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8926918	2018/03/03	2018/03/06	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8926921	2018/03/03	2018/03/06	
Total Suspended Solids-Low Level	BAL/BAL	8926628	2018/03/06	2018/03/07	

Maxxam ID: TA9097 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2018/03/01
Shipped:
Received: 2018/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8926511	N/A	2018/03/06	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8926522	N/A	2018/03/06	

Maxxam ID: TA9098
Sample ID: KZ-13
Matrix: Water

Collected: 2018/03/01
Shipped:
Received: 2018/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8927073	2018/03/06	2018/03/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8927217	2018/03/06	2018/03/06	
Chloride - Low Level	KONE/COL	8927840	N/A	2018/03/05	
Cyanide SAD (strong acid dissociable)	TECH/COL	8926511	N/A	2018/03/06	
Cyanide WAD (weak acid dissociable)	TECH/COL	8926522	N/A	2018/03/06	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8926753	N/A	2018/03/06	
Conductance - Low Level	AT/ALK	8927215	2018/03/06	2018/03/06	
Fluoride - Low Level	ISE/ISE	8926707	N/A	2018/03/06	
Hardness Total (calculated as CaCO3)	CALC	8924919	N/A	2018/03/08	
Hardness (calculated as CaCO3)	CALC	8925006	N/A	2018/03/07	
Mercury (Dissolved) by CVAF	CV/AF	8926616	N/A	2018/03/06	
Mercury (Total) by CVAF	CV/AF	8926578	2018/03/06	2018/03/06	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8925020	N/A	2018/03/07	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8925822	N/A	2018/03/07	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8925021	N/A	2018/03/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8926933	N/A	2018/03/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8926856	N/A	2018/03/06	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8925076	N/A	2018/03/03	
Nitrite (N) (low level)	TRAA/COL	8925077	N/A	2018/03/03	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8925022	N/A	2018/03/06	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: TA9098
Sample ID: KZ-13
Matrix: Water

Collected: 2018/03/01
Shipped:
Received: 2018/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/03	Name Redacted
pH Water	AT/ALK	8927211	2018/03/06	2018/03/06	
Sulphate - Low Level	KONE/COL	8927843	N/A	2018/03/05	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8926918	2018/03/03	2018/03/06	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8925062	2018/03/03	2018/03/06	
Total Suspended Solids-Low Level	BAL/BAL	8930307	2018/03/06	2018/03/09	

Maxxam ID: TA9099
Sample ID: DUP
Matrix: Water

Collected: 2018/03/01
Shipped:
Received: 2018/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8927073	2018/03/06	2018/03/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8927217	2018/03/06	2018/03/06	
Chloride - Low Level	KONE/COL	8927840	N/A	2018/03/05	
Cyanide SAD (strong acid dissociable)	TECH/COL	8926511	N/A	2018/03/06	
Cyanide WAD (weak acid dissociable)	TECH/COL	8926522	N/A	2018/03/06	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8926753	N/A	2018/03/06	
Conductance - Low Level	AT/ALK	8927215	2018/03/06	2018/03/06	
Fluoride - Low Level	ISE/ISE	8926707	N/A	2018/03/06	
Hardness Total (calculated as CaCO3)	CALC	8924919	N/A	2018/03/08	
Hardness (calculated as CaCO3)	CALC	8925006	N/A	2018/03/07	
Mercury (Dissolved) by CVAF	CV/AF	8926616	N/A	2018/03/06	
Mercury (Total) by CVAF	CV/AF	8926578	2018/03/06	2018/03/06	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8925020	N/A	2018/03/07	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8925822	N/A	2018/03/07	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8925021	N/A	2018/03/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8926933	N/A	2018/03/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8926856	N/A	2018/03/06	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8925076	N/A	2018/03/03	
Nitrite (N) (low level)	TRAA/COL	8925077	N/A	2018/03/03	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8925022	N/A	2018/03/06	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/03	
pH Water	AT/ALK	8927211	2018/03/06	2018/03/06	
Sulphate - Low Level	KONE/COL	8927843	N/A	2018/03/05	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8926918	2018/03/03	2018/03/06	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8925062	2018/03/03	2018/03/06	
Total Suspended Solids-Low Level	BAL/BAL	8926628	2018/03/06	2018/03/07	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: TA9100
Sample ID: FIELD BLANK
Matrix: Water

Collected: 2018/03/01
Shipped:
Received: 2018/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8927073	2018/03/06	2018/03/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8927217	2018/03/06	2018/03/06	
Chloride - Low Level	KONE/COL	8927840	N/A	2018/03/05	
Cyanide SAD (strong acid dissociable)	TECH/COL	8926511	N/A	2018/03/06	
Cyanide WAD (weak acid dissociable)	TECH/COL	8926522	N/A	2018/03/06	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8926753	N/A	2018/03/06	
Conductance - Low Level	AT/ALK	8927215	2018/03/06	2018/03/06	
Fluoride - Low Level	ISE/ISE	8926707	N/A	2018/03/06	
Hardness Total (calculated as CaCO3)	CALC	8924919	N/A	2018/03/08	
Hardness (calculated as CaCO3)	CALC	8925006	N/A	2018/03/07	
Mercury (Dissolved) by CVAF	CV/AF	8926616	N/A	2018/03/06	
Mercury (Total) by CVAF	CV/AF	8926578	2018/03/06	2018/03/06	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8925020	N/A	2018/03/07	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8925822	N/A	2018/03/06	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8925021	N/A	2018/03/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8926933	N/A	2018/03/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8926856	N/A	2018/03/06	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8925076	N/A	2018/03/03	
Nitrite (N) (low level)	TRAA/COL	8925077	N/A	2018/03/03	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8925022	N/A	2018/03/06	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/03	
pH Water	AT/ALK	8927211	2018/03/06	2018/03/06	
Sulphate - Low Level	KONE/COL	8927843	N/A	2018/03/05	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8926918	2018/03/03	2018/03/06	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8926921	2018/03/03	2018/03/06	
Total Suspended Solids-Low Level	BAL/BAL	8926628	2018/03/06	2018/03/07	

Maxxam ID: TA9101
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2018/03/02
Shipped:
Received: 2018/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8927073	2018/03/06	2018/03/06	Name Redacted
Alkalinity - Low Level	AT/ALK	8927217	2018/03/06	2018/03/06	
Chloride - Low Level	KONE/COL	8927840	N/A	2018/03/05	
Cyanide SAD (strong acid dissociable)	TECH/COL	8926511	N/A	2018/03/06	
Cyanide WAD (weak acid dissociable)	TECH/COL	8926522	N/A	2018/03/06	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8926753	N/A	2018/03/06	
Conductance - Low Level	AT/ALK	8927215	2018/03/06	2018/03/06	
Fluoride - Low Level	ISE/ISE	8926707	N/A	2018/03/06	
Hardness Total (calculated as CaCO3)	CALC	8924919	N/A	2018/03/08	
Hardness (calculated as CaCO3)	CALC	8925006	N/A	2018/03/07	
Mercury (Dissolved) by CVAF	CV/AF	8926616	N/A	2018/03/06	
Mercury (Total) by CVAF	CV/AF	8926578	2018/03/06	2018/03/06	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: TA9101
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2018/03/02
Shipped:
Received: 2018/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8925020	N/A	2018/03/07	Name Redacted
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8925822	N/A	2018/03/06	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8925021	N/A	2018/03/08	
Elements by ICPMS Low Level (total)	ICP/CRCM	8926933	N/A	2018/03/07	
Ammonia-N Low Level (Preserved)	KONE/COL	8926856	N/A	2018/03/06	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8925076	N/A	2018/03/03	
Nitrite (N) (low level)	TRAA/COL	8925077	N/A	2018/03/03	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8925022	N/A	2018/03/06	
pH Water	AT/ALK	8927211	2018/03/06	2018/03/06	
Sulphate - Low Level	KONE/COL	8927843	N/A	2018/03/05	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8926918	2018/03/03	2018/03/06	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8926921	2018/03/03	2018/03/06	
Total Suspended Solids-Low Level	BAL/BAL	8926628	2018/03/06	2018/03/07	

Maxxam ID: TA9101 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2018/03/02
Shipped:
Received: 2018/03/02

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8926753	N/A	2018/03/06	Name Redacted
Mercury (Dissolved) by CVAF	CV/AF	8926616	N/A	2018/03/06	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	0.3°C
Package 2	0.3°C

Sample KZ-13 Total Suspended Solids reportable detection limit has been raised due to insufficent sample volume for rework. Rework required due to tear in filter during original analysis.

Sample TA9093 [KZ-15] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.}

Sample TA9096 [KZ-37] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.}

Sample TA9097 [KZ-2] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.}

Sample TA9100 [FIELD BLANK] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.}

Sample TA9101 [TRIP BLANK] : Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.}

Sample TA9092, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample TA9095, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample TA9099, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample TA9100, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8925062	Total Phosphorus (P)	2018/03/06			95	80 - 120	<0.0020	mg/L		
8925076	Nitrate plus Nitrite (N)	2018/03/03			106	80 - 120	<0.0020	mg/L		
8925077	Nitrite (N)	2018/03/03			102	80 - 120	<0.0020	mg/L		
8925822	Dissolved Aluminum (Al)	2018/03/07	104	80 - 120	105	80 - 120	<0.00050	mg/L	NC	20
8925822	Dissolved Antimony (Sb)	2018/03/07	100	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8925822	Dissolved Arsenic (As)	2018/03/07	104	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8925822	Dissolved Barium (Ba)	2018/03/07	99	80 - 120	102	80 - 120	<0.000020	mg/L	2.2	20
8925822	Dissolved Beryllium (Be)	2018/03/07	97	80 - 120	98	80 - 120	<0.000010	mg/L	NC	20
8925822	Dissolved Bismuth (Bi)	2018/03/07	102	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8925822	Dissolved Boron (B)	2018/03/07	92	80 - 120	93	80 - 120	<0.010	mg/L	NC	20
8925822	Dissolved Cadmium (Cd)	2018/03/07	96	80 - 120	95	80 - 120	<0.0000050	mg/L	NC	20
8925822	Dissolved Chromium (Cr)	2018/03/07	106	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8925822	Dissolved Cobalt (Co)	2018/03/07	104	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8925822	Dissolved Copper (Cu)	2018/03/07	102	80 - 120	100	80 - 120	<0.000050	mg/L	0.094	20
8925822	Dissolved Iron (Fe)	2018/03/07	101	80 - 120	102	80 - 120	<0.0010	mg/L	NC	20
8925822	Dissolved Lead (Pb)	2018/03/07	101	80 - 120	103	80 - 120	<0.0000050	mg/L	2.1	20
8925822	Dissolved Lithium (Li)	2018/03/07	96	80 - 120	96	80 - 120	<0.00050	mg/L	NC	20
8925822	Dissolved Manganese (Mn)	2018/03/07	104	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8925822	Dissolved Molybdenum (Mo)	2018/03/07	100	80 - 120	97	80 - 120	<0.000050	mg/L	NC	20
8925822	Dissolved Nickel (Ni)	2018/03/07	104	80 - 120	101	80 - 120	<0.000020	mg/L	1.4	20
8925822	Dissolved Phosphorus (P)	2018/03/06	100	80 - 120	97	80 - 120	<0.0020	mg/L		
8925822	Dissolved Selenium (Se)	2018/03/07	99	80 - 120	98	80 - 120	<0.000040	mg/L	NC	20
8925822	Dissolved Silicon (Si)	2018/03/07	95	80 - 120	96	80 - 120	<0.050	mg/L	NC	20
8925822	Dissolved Silver (Ag)	2018/03/07	97	80 - 120	93	80 - 120	<0.0000050	mg/L	NC	20
8925822	Dissolved Strontium (Sr)	2018/03/07	99	80 - 120	96	80 - 120	<0.000050	mg/L	5.7	20
8925822	Dissolved Thallium (Tl)	2018/03/07	107	80 - 120	112	80 - 120	<0.0000020	mg/L	NC	20
8925822	Dissolved Tin (Sn)	2018/03/07	95	80 - 120	96	80 - 120	<0.00020	mg/L	NC	20
8925822	Dissolved Titanium (Ti)	2018/03/07	102	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8925822	Dissolved Uranium (U)	2018/03/07	102	80 - 120	105	80 - 120	<0.0000020	mg/L	NC	20
8925822	Dissolved Vanadium (V)	2018/03/07	105	80 - 120	102	80 - 120	<0.00020	mg/L	NC	20
8925822	Dissolved Zinc (Zn)	2018/03/07	106	80 - 120	104	80 - 120	<0.00010	mg/L	0.90	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8925822	Dissolved Zirconium (Zr)	2018/03/07	100	80 - 120	96	80 - 120	<0.00010	mg/L	NC	20
8926511	Strong Acid Dissoc. Cyanide (CN)	2018/03/06	102	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8926522	Weak Acid Dissoc. Cyanide (CN)	2018/03/06	104	80 - 120	100	80 - 120	<0.00050	mg/L	NC	20
8926578	Total Mercury (Hg)	2018/03/06	96	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8926616	Dissolved Mercury (Hg)	2018/03/06	101	80 - 120	97	80 - 120	<0.0000020	mg/L	NC	20
8926628	Total Suspended Solids	2018/03/07			108	80 - 120	<1.0	mg/L		
8926707	Fluoride (F)	2018/03/06	100	80 - 120	102	80 - 120	0.011, RDL=0.010	mg/L	NC	20
8926753	Dissolved Organic Carbon (C)	2018/03/06	104	80 - 120	110	80 - 120	<0.50	mg/L	NC	20
8926856	Total Ammonia (N)	2018/03/06			101	80 - 120	<0.0050	mg/L		
8926918	Dissolved Phosphorus (P)	2018/03/06	84	80 - 120	91	80 - 120	<0.0020	mg/L	12	20
8926921	Total Phosphorus (P)	2018/03/06			91	80 - 120	<0.0020	mg/L		
8926933	Total Aluminum (Al)	2018/03/07	101	80 - 120	103	80 - 120	<0.00050	mg/L		
8926933	Total Antimony (Sb)	2018/03/07	98	80 - 120	107	80 - 120	<0.000020	mg/L		
8926933	Total Arsenic (As)	2018/03/07	95	80 - 120	106	80 - 120	<0.000020	mg/L		
8926933	Total Barium (Ba)	2018/03/07	95	80 - 120	99	80 - 120	<0.000020	mg/L		
8926933	Total Beryllium (Be)	2018/03/07	94	80 - 120	102	80 - 120	<0.000010	mg/L		
8926933	Total Bismuth (Bi)	2018/03/07	98	80 - 120	101	80 - 120	<0.0000050	mg/L		
8926933	Total Boron (B)	2018/03/07	97	80 - 120	102	80 - 120	<0.010	mg/L		
8926933	Total Cadmium (Cd)	2018/03/07	94	80 - 120	104	80 - 120	<0.0000050	mg/L		
8926933	Total Chromium (Cr)	2018/03/07	93	80 - 120	104	80 - 120	<0.00010	mg/L		
8926933	Total Cobalt (Co)	2018/03/07	92	80 - 120	101	80 - 120	<0.0000050	mg/L		
8926933	Total Copper (Cu)	2018/03/07	90	80 - 120	100	80 - 120	<0.000050	mg/L		
8926933	Total Iron (Fe)	2018/03/07	95	80 - 120	110	80 - 120	<0.0010	mg/L		
8926933	Total Lead (Pb)	2018/03/07	95	80 - 120	98	80 - 120	<0.0000050	mg/L		
8926933	Total Lithium (Li)	2018/03/07	98	80 - 120	101	80 - 120	<0.00050	mg/L		
8926933	Total Manganese (Mn)	2018/03/07	96	80 - 120	102	80 - 120	<0.000050	mg/L		
8926933	Total Molybdenum (Mo)	2018/03/07	100	80 - 120	105	80 - 120	<0.000050	mg/L		
8926933	Total Nickel (Ni)	2018/03/07	90	80 - 120	102	80 - 120	<0.000020	mg/L		
8926933	Total Phosphorus (P)	2018/03/07	97	80 - 120	104	80 - 120	<0.0020	mg/L		
8926933	Total Selenium (Se)	2018/03/07	93	80 - 120	108	80 - 120	<0.000040	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8926933	Total Silicon (Si)	2018/03/07	103	80 - 120	105	80 - 120	<0.050	mg/L		
8926933	Total Silver (Ag)	2018/03/07	95	80 - 120	100	80 - 120	<0.0000050	mg/L		
8926933	Total Strontium (Sr)	2018/03/07	97	80 - 120	102	80 - 120	<0.000050	mg/L		
8926933	Total Thallium (Tl)	2018/03/07	100	80 - 120	102	80 - 120	<0.0000020	mg/L		
8926933	Total Tin (Sn)	2018/03/07	98	80 - 120	104	80 - 120	<0.00020	mg/L		
8926933	Total Titanium (Ti)	2018/03/07	96	80 - 120	104	80 - 120	<0.00050	mg/L		
8926933	Total Uranium (U)	2018/03/07	94	80 - 120	95	80 - 120	<0.0000020	mg/L		
8926933	Total Vanadium (V)	2018/03/07	94	80 - 120	103	80 - 120	<0.00020	mg/L		
8926933	Total Zinc (Zn)	2018/03/07	89	80 - 120	106	80 - 120	<0.00010	mg/L		
8926933	Total Zirconium (Zr)	2018/03/07	98	80 - 120	107	80 - 120	<0.00010	mg/L		
8927073	Acidity (pH 4.5)	2018/03/06					<1.0	mg/L	NC	20
8927073	Acidity (pH 8.3)	2018/03/06			99	80 - 120	<1.0	mg/L	2.3	20
8927211	pH	2018/03/06			101	97 - 103			0.26	20
8927215	Conductivity	2018/03/06			101	80 - 120	<1.0	uS/cm		
8927217	Alkalinity (PP as CaCO3)	2018/03/06					<0.50	mg/L		
8927217	Alkalinity (Total as CaCO3)	2018/03/06			97	80 - 120	<0.50	mg/L		
8927217	Bicarbonate (HCO3)	2018/03/06					<0.50	mg/L		
8927217	Carbonate (CO3)	2018/03/06					<0.50	mg/L		
8927217	Hydroxide (OH)	2018/03/06					<0.50	mg/L		
8927840	Dissolved Chloride (Cl)	2018/03/05	100	80 - 120	97	80 - 120	<0.50	mg/L	1.4	20
8927843	Dissolved Sulphate (SO4)	2018/03/05			97	80 - 120	<0.50	mg/L		
8929670	Dissolved Cadmium (Cd)	2018/03/09			102	80 - 120	<0.0000050	mg/L		
8929670	Dissolved Lead (Pb)	2018/03/09			93	80 - 120	<0.0000050	mg/L		
8929670	Dissolved Phosphorus (P)	2018/03/09			110	80 - 120	<0.0020	mg/L		
8929670	Dissolved Thallium (Tl)	2018/03/09			96	80 - 120	<0.0000020	mg/L		
8929670	Dissolved Uranium (U)	2018/03/09			82	80 - 120	<0.0000020	mg/L		
8929670	Dissolved Zinc (Zn)	2018/03/09			102	80 - 120	<0.00010	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8930307	Total Suspended Solids	2018/03/09			95	80 - 120	<1.0	mg/L		

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B815882
Report Date: 2018/03/12

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Name Redacted Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

08450578

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY RECORD

BBY FCD-00077/05

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #:

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions	Rush Confirmation #:
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler	
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)	
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485	

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-26		1-Mar-18	9:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
2	KZ-15		1-Mar-18	10:05	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3	KZ-9		1-Mar-18	11:30	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
4	KZ-18		1-Mar-18	11:20	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5	KZ-37		1-Mar-18	11:00	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
6	KZ-2		1-Mar-18	12:10	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
7	KZ-13		1-Mar-18	12:20	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
8	DUP		1-Mar-18	11:50	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	

LABORATORY USE ONLY

CUSTODY SEAL (Y) / N		COOLER TEMPERATURES
Present	Intact	
Y	Y	0.1.0
Y	Y	0.0.0

COOLING MEDIA PRESENT Y / N

COMMENTS

RSE

Signature Redacted

@1040

Ø 1 Ø

1 Ø Ø

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	3/2/2018	9:00	Signature Redacted	2018/03/03	10:37

B815882_COC

Maxxam
A Bureau Veritas Group Company

08450579

CHAIN OF CUSTODY RECORD

BBY FCD-00077/05

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #:

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL Present Y / Intact Y

COOLER TEMPERATURES: 0.1.0 / 0.0.0

COOLING MEDIA PRESENT Y / N

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	Field Blank		1-Mar-18	9:40	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
2	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

COMMENTS

RECEIVED IN WHITEHORSE

BY: Signature Redacted @ 10:40

2018-03-02

TEMP. 0.1.1 / 1.0.0

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	MAXXAM JOB #
Signature Redacted	3/2/2018	9:00	Signature Redacted	2018/03/03	10:37	B815882

Maxxam
A Bureau Veritas Group Company

Success Through Science®

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08450272, 08450273

Attention: KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2018/03/16
Report #: R2529174
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B817666
Received: 2018/03/08, 11:00

Sample Matrix: Water
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	10	2018/03/09	2018/03/09	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Low Level	10	2018/03/10	2018/03/10	BBY6SOP-00026	SM 22 2320 B m
Chloride - Low Level	10	N/A	2018/03/12	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	10	N/A	2018/03/12	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	10	N/A	2018/03/12	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (1)	10	N/A	2018/03/12	BBY6SOP-00003	SM 22 5310 C m
Conductance - Low Level	10	2018/03/10	2018/03/10	BBY6SOP-00026	SM 22 2510 B m
Fluoride - Low Level	10	N/A	2018/03/13	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3) (2)	9	N/A	2018/03/13	BBY WI-00033	Auto Calc
Hardness Total (calculated as CaCO3) (2)	1	N/A	2018/03/14	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	10	N/A	2018/03/12	BBY WI-00033	Auto Calc
Mercury (Dissolved) by CVAF	5	N/A	2018/03/12	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Dissolved) by CVAF	5	N/A	2018/03/13	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total) by CVAF	10	2018/03/12	2018/03/12	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	9	N/A	2018/03/12	BBY WI-00033	Auto Calc
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	1	N/A	2018/03/15	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (dissolved)	8	N/A	2018/03/10	BBY7SOP-00002	EPA 6020b R2 m
Elements by ICPMS Low Level (dissolved)	1	N/A	2018/03/12	BBY7SOP-00002	EPA 6020b R2 m
Elements by ICPMS Low Level (dissolved)	1	N/A	2018/03/15	BBY7SOP-00002	EPA 6020b R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	9	N/A	2018/03/13	BBY WI-00033	Auto Calc
Na, K, Ca, Mg, S by CRC ICPMS (total)	1	N/A	2018/03/14	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (total)	9	N/A	2018/03/12	BBY7SOP-00002	EPA 6020b R2 m
Elements by ICPMS Low Level (total)	1	N/A	2018/03/14	BBY7SOP-00002	EPA 6020b R2 m
Ammonia-N Low Level (Preserved)	10	N/A	2018/03/13	BBY6SOP-00009	EPA 350.1 m
Nitrate+Nitrite (N) (low level)	10	N/A	2018/03/10	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrite (N) (low level)	10	N/A	2018/03/10	BBY6SOP-00010	SM 22 4500-NO3- I m
Nitrogen - Nitrate (as N) Low Level Calc	10	N/A	2018/03/10	BBY WI-00033	Auto Calc
Filter and HNO3 Preserve for Metals	5	N/A	2018/03/10	BBY7 WI-00004	BCMOE Reqs 08/14
Filter and HNO3 Preserve for Metals	4	N/A	2018/03/12	BBY7 WI-00004	BCMOE Reqs 08/14

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08450272, 08450273

Attention: KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2018/03/16
Report #: R2529174
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B817666
Received: 2018/03/08, 11:00

Sample Matrix: Water
Samples Received: 10

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
pH Water (3)	10	2018/03/10	2018/03/10	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate - Low Level	7	N/A	2018/03/12	BBY6SOP-00017	SM 22 4500-SO42- E m
Sulphate - Low Level	3	N/A	2018/03/13	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	10	2018/03/10	2018/03/10	BBY6SOP-00013	SM 22 4500-P E m
Total Phosphorus - Low Level Unpreserved	10	2018/03/10	2018/03/10	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	10	2018/03/12	2018/03/13	BBY6SOP-00034	SM 22 2540 D

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) DOC present in the sample should be considered as non-purgeable DOC.
(2) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(3) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08450272, 08450273

Attention: KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2018/03/16
Report #: R2529174
Version: 1 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B817666
Received: 2018/03/08, 11:00

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone & Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		TB6991		TB6992		TB6993		TB6994		
Sampling Date		2018/03/07 09:25		2018/03/07 10:05		2018/03/07 10:55		2018/03/07 10:45		
COC Number		08450272		08450272		08450272		08450272		
	UNITS	KZ-26	QC Batch	KZ-15	QC Batch	KZ-9	QC Batch	KZ-18	RDL	QC Batch
Calculated Parameters										
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Nitrate (N)	mg/L	0.0602	8930496	0.194	8930496	0.717	8930496	0.244	0.0020	8930496
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00162	8932008	0.00077	8932008	0.00085	8932008	0.00070	0.00050	8932008
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8932010	0.00088	8932010	0.00077	8932010	0.00069	0.00050	8932010
Fluoride (F)	mg/L	0.140	8932906	0.130	8932906	0.083	8932906	0.091	0.010	8932906
Dissolved Organic Carbon (C)	mg/L	2.49	8931814	0.96	8931812	1.90	8931814	<0.50	0.50	8931814
Acidity (pH 4.5)	mg/L	<1.0	8930791	<1.0	8930791	<1.0	8930791	<1.0	1.0	8930791
Alkalinity (Total as CaCO3)	mg/L	312	8931172	271	8931172	274	8931172	211	0.50	8931172
Acidity (pH 8.3)	mg/L	9.9	8930791	14.3	8930791	1.4	8930791	12.3	1.0	8930791
Alkalinity (PP as CaCO3)	mg/L	3.85	8931172	<0.50	8931172	4.27	8931172	<0.50	0.50	8931172
Bicarbonate (HCO3)	mg/L	372	8931172	331	8931172	323	8931172	258	0.50	8931172
Carbonate (CO3)	mg/L	4.62	8931172	<0.50	8931172	5.12	8931172	<0.50	0.50	8931172
Hydroxide (OH)	mg/L	<0.50	8931172	<0.50	8931172	<0.50	8931172	<0.50	0.50	8931172
Anions										
Dissolved Sulphate (SO4)	mg/L	61.0	8933512	42.8	8932378	67.3	8933512	22.3	0.50	8932378
Dissolved Chloride (Cl)	mg/L	0.89	8932377	0.75	8932377	8.5	8932377	0.63	0.50	8932377
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0112	8931197	0.0039	8931197	0.0114	8931197	0.0654	0.0020	8931197
Total Ammonia (N)	mg/L	0.022	8933079	0.025	8933079	0.022	8933079	0.021	0.0050	8933079
Nitrate plus Nitrite (N)	mg/L	0.0602	8931164	0.194	8931164	0.717	8931164	0.244	0.0020	8931164
Nitrite (N)	mg/L	<0.0020	8931165	<0.0020	8931165	<0.0020	8931165	<0.0020	0.0020	8931165
Total Phosphorus (P)	mg/L	0.0112	8931198	0.0045	8931198	0.0134	8931198	0.0646	0.0020	8931198
Physical Properties										
Conductivity	uS/cm	653	8931170	571	8931170	632	8931170	424	1.0	8931170
pH	pH	8.34	8931168	8.14	8931168	8.35	8931168	8.09		8931168
Physical Properties										
Total Suspended Solids	mg/L	2.7	8932009	<1.0	8932009	11.3	8932009	<1.0	1.0	8932009

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		TB6995		TB6996		TB6997		TB6998		
Sampling Date		2018/03/07 10:35		2018/03/07 11:45		2018/03/07 12:15		2018/03/07 10:50		
COC Number		08450272		08450272		08450272		08450272		
	UNITS	KZ-37	QC Batch	KZ-2	QC Batch	KZ-13	QC Batch	DUP	RDL	QC Batch
Calculated Parameters										
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Nitrate (N)	mg/L	0.196	8930496	0.179	8930496	0.109	8930496	0.242	0.0020	8930496
Misc. Inorganics										
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00078	8932008	0.00075	8932008	0.00096	8932008	0.00073	0.00050	8932008
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00087	8932010	0.00082	8932010	0.00102	8932010	0.00074	0.00050	8932010
Fluoride (F)	mg/L	0.110	8932906	0.053	8932906	0.062	8932906	0.088	0.010	8932906
Dissolved Organic Carbon (C)	mg/L	<0.50	8931814	<0.50	8931814	3.26	8931812	<0.50	0.50	8931814
Acidity (pH 4.5)	mg/L	<1.0	8930791	<1.0	8930791	<1.0	8930791	<1.0	1.0	8930791
Alkalinity (Total as CaCO3)	mg/L	204	8931172	89.2	8931172	107	8931172	209	0.50	8931172
Acidity (pH 8.3)	mg/L	31.6	8930791	<1.0	8930791	2.3	8930791	12.7	1.0	8930791
Alkalinity (PP as CaCO3)	mg/L	<0.50	8931172	<0.50	8931172	<0.50	8931172	<0.50	0.50	8931172
Bicarbonate (HCO3)	mg/L	249	8931172	109	8931172	130	8931172	255	0.50	8931172
Carbonate (CO3)	mg/L	<0.50	8931172	<0.50	8931172	<0.50	8931172	<0.50	0.50	8931172
Hydroxide (OH)	mg/L	<0.50	8931172	<0.50	8931172	<0.50	8931172	<0.50	0.50	8931172
Anions										
Dissolved Sulphate (SO4)	mg/L	29.5	8932378	65.3	8933512	18.2	8932378	22.3	0.50	8932378
Dissolved Chloride (Cl)	mg/L	0.84	8932377	0.70	8932377	0.76	8932377	0.55	0.50	8932377
Nutrients										
Dissolved Phosphorus (P)	mg/L	0.0088	8931197	<0.0020	8931197	0.0078	8931195	0.0664	0.0020	8931195
Total Ammonia (N)	mg/L	0.031	8933079	0.0050	8933079	0.063	8933079	0.018	0.0050	8933079
Nitrate plus Nitrite (N)	mg/L	0.196	8931164	0.179	8931164	0.109	8931164	0.242	0.0020	8931164
Nitrite (N)	mg/L	<0.0020	8931165	<0.0020	8931165	<0.0020	8931165	<0.0020	0.0020	8931165
Total Phosphorus (P)	mg/L	0.0078	8931198	<0.0020	8931198	0.0087	8931196	0.0613	0.0020	8931196
Physical Properties										
Conductivity	uS/cm	436	8931170	308	8931170	238	8931170	424	1.0	8931170
pH	pH	7.81	8931168	8.00	8931168	8.04	8931168	8.05		8931168
Physical Properties										
Total Suspended Solids	mg/L	1.0	8932009	<1.0	8932009	<1.0	8932009	<1.0	1.0	8932009

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		TB6999		TB7000		
Sampling Date		2018/03/07 09:35		2018/03/08 11:00		
COC Number		08450273		08450273		
	UNITS	FIELD BLANK	QC Batch	TRIP BLANK	RDL	QC Batch
Calculated Parameters						
Filter and HNO3 Preservation	N/A	FIELD	ONSITE			
Nitrate (N)	mg/L	<0.0020	8930496	<0.0020	0.0020	8930496
Misc. Inorganics						
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00072	8932008	0.00074	0.00050	8932008
Weak Acid Dissoc. Cyanide (CN)	mg/L	0.00083	8932010	0.00066	0.00050	8932010
Fluoride (F)	mg/L	0.010	8932906	0.011	0.010	8932906
Dissolved Organic Carbon (C)	mg/L	<0.50	8931812	<0.50	0.50	8931812
Acidity (pH 4.5)	mg/L	<1.0	8930791	<1.0	1.0	8930791
Alkalinity (Total as CaCO3)	mg/L	<0.50	8931172	<0.50	0.50	8931172
Acidity (pH 8.3)	mg/L	<1.0	8930791	<1.0	1.0	8930791
Alkalinity (PP as CaCO3)	mg/L	<0.50	8931172	<0.50	0.50	8931172
Bicarbonate (HCO3)	mg/L	<0.50	8931172	<0.50	0.50	8931172
Carbonate (CO3)	mg/L	<0.50	8931172	<0.50	0.50	8931172
Hydroxide (OH)	mg/L	<0.50	8931172	<0.50	0.50	8931172
Anions						
Dissolved Sulphate (SO4)	mg/L	<0.50	8932378	<0.50	0.50	8932378
Dissolved Chloride (Cl)	mg/L	0.54	8932377	0.53	0.50	8932377
Nutrients						
Dissolved Phosphorus (P)	mg/L	<0.0020	8931197	<0.0020	0.0020	8931195
Total Ammonia (N)	mg/L	<0.0050	8933079	<0.0050	0.0050	8933079
Nitrate plus Nitrite (N)	mg/L	<0.0020	8931164	<0.0020	0.0020	8931164
Nitrite (N)	mg/L	<0.0020	8931165	<0.0020	0.0020	8931165
Total Phosphorus (P)	mg/L	<0.0020	8931198	<0.0020	0.0020	8931196
Physical Properties						
Conductivity	uS/cm	1.0	8931170	1.1	1.0	8931170
pH	pH	4.48	8931168	4.57		8931168
Physical Properties						
Total Suspended Solids	mg/L	<1.0	8932009	<1.0	1.0	8932009
RDL = Reportable Detection Limit						

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TB6991	TB6992		TB6993		
Sampling Date		2018/03/07 09:25	2018/03/07 10:05		2018/03/07 10:55		
COC Number		08450272	08450272		08450272		
	UNITS	KZ-26	KZ-15	QC Batch	KZ-9	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO3)	mg/L	364	318	8929860	324	0.50	8929860
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8931953	<0.0000020	0.0000020	8932112
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00086	0.00114	8930456	0.00066	0.00050	8930456
Dissolved Antimony (Sb)	mg/L	0.000073	0.000039	8930456	0.000044	0.000020	8930456
Dissolved Arsenic (As)	mg/L	0.000588	0.000359	8930456	0.000107	0.000020	8930456
Dissolved Barium (Ba)	mg/L	0.108	0.111	8930456	0.218	0.000020	8930456
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	8930456	<0.000010	0.000010	8930456
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8930456	<0.0000050	0.0000050	8930456
Dissolved Boron (B)	mg/L	<0.010	<0.010	8930456	<0.010	0.010	8930456
Dissolved Cadmium (Cd)	mg/L	0.0000810	0.0000825	8930456	0.0000471 (1)	0.0000050	8934582
Dissolved Chromium (Cr)	mg/L	<0.00010	<0.00010	8930456	0.00048	0.00010	8930456
Dissolved Cobalt (Co)	mg/L	0.0000139	0.0000445	8930456	0.0000120	0.0000050	8930456
Dissolved Copper (Cu)	mg/L	0.000526	0.000300	8930456	0.000229	0.000050	8930456
Dissolved Iron (Fe)	mg/L	0.0017	0.0099	8930456	0.0038	0.0010	8930456
Dissolved Lead (Pb)	mg/L	0.0000232	0.0000209	8930456	0.0000216	0.0000050	8930456
Dissolved Lithium (Li)	mg/L	0.00908	0.00534	8930456	0.00294	0.00050	8930456
Dissolved Manganese (Mn)	mg/L	0.00459	0.0649	8930456	0.0105	0.000050	8930456
Dissolved Molybdenum (Mo)	mg/L	0.000950	0.00165	8930456	0.00193 (1)	0.000050	8934582
Dissolved Nickel (Ni)	mg/L	0.000530	0.00123	8930456	0.000149	0.000020	8930456
Dissolved Phosphorus (P)	mg/L	0.0099	0.0043	8930456	0.0088	0.0020	8930456
Dissolved Selenium (Se)	mg/L	0.00115	0.00174	8930456	0.00472	0.000040	8930456
Dissolved Silicon (Si)	mg/L	5.85	4.34	8930456	4.98	0.050	8930456
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	8930456	<0.0000050	0.0000050	8930456
Dissolved Strontium (Sr)	mg/L	0.312	0.296	8930456	0.347	0.000050	8930456
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8930456	<0.0000020	0.0000020	8930456
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	8930456	<0.00020	0.00020	8930456
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	8930456	<0.00050	0.00050	8930456
Dissolved Uranium (U)	mg/L	0.00388	0.00606	8930456	0.00380	0.0000020	8930456
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	8930456	<0.00020	0.00020	8930456

RDL = Reportable Detection Limit

(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TB6991	TB6992		TB6993		
Sampling Date		2018/03/07 09:25	2018/03/07 10:05		2018/03/07 10:55		
COC Number		08450272	08450272		08450272		
	UNITS	KZ-26	KZ-15	QC Batch	KZ-9	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00455	0.00955	8930456	0.00410	0.00010	8930456
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	8930456	<0.00010	0.00010	8930456
Dissolved Calcium (Ca)	mg/L	93.2	90.1	8929861	102	0.050	8929861
Dissolved Magnesium (Mg)	mg/L	31.9	22.6	8929861	17.1	0.050	8929861
Dissolved Potassium (K)	mg/L	2.31	1.64	8929861	2.74	0.050	8929861
Dissolved Sodium (Na)	mg/L	2.76	1.81	8929861	6.92	0.050	8929861
Dissolved Sulphur (S)	mg/L	20.7	15.8	8929861	23.2	3.0	8929861
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TB6994		TB6995		TB6996		
Sampling Date		2018/03/07 10:45		2018/03/07 10:35		2018/03/07 11:45		
COC Number		08450272		08450272		08450272		
	UNITS	KZ-18	QC Batch	KZ-37	QC Batch	KZ-2	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO3)	mg/L	234	8929860	231	8929860	157	0.50	8929860
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8931953	<0.0000020	8932112	<0.0000020	0.0000020	8932112
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00218	8930456	0.00228	8930456	0.00161	0.00050	8930456
Dissolved Antimony (Sb)	mg/L	0.000044	8930456	0.000027	8930456	0.000029	0.000020	8930456
Dissolved Arsenic (As)	mg/L	0.00109	8930456	0.000291	8930456	0.000082	0.000020	8930456
Dissolved Barium (Ba)	mg/L	0.0615	8930456	0.105	8930456	0.0804	0.000020	8930456
Dissolved Beryllium (Be)	mg/L	<0.000010	8930456	<0.000010	8930456	<0.000010	0.000010	8930456
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8930456	<0.0000050	8930456	<0.0000050	0.0000050	8930456
Dissolved Boron (B)	mg/L	<0.010	8930456	<0.010	8930456	<0.010	0.010	8930456
Dissolved Cadmium (Cd)	mg/L	0.0000571	8930456	0.0000877	8930456	0.000265	0.0000050	8930456
Dissolved Chromium (Cr)	mg/L	0.00018	8930456	<0.00010	8930456	<0.00010	0.00010	8930456
Dissolved Cobalt (Co)	mg/L	0.0000393	8930456	0.000185	8930456	0.0000070	0.0000050	8930456
Dissolved Copper (Cu)	mg/L	0.000112	8930456	0.000173	8930456	0.000486	0.000050	8930456
Dissolved Iron (Fe)	mg/L	0.0632	8930456	0.278	8930456	<0.0010	0.0010	8930456
Dissolved Lead (Pb)	mg/L	0.0000146	8930456	0.0000081	8930456	0.0000219	0.0000050	8930456
Dissolved Lithium (Li)	mg/L	0.00256	8930456	0.00548	8930456	0.00169	0.00050	8930456
Dissolved Manganese (Mn)	mg/L	0.0199	8930456	0.149	8930456	<0.000050	0.000050	8930456
Dissolved Molybdenum (Mo)	mg/L	0.00200	8930456	0.000866	8930456	0.000786	0.000050	8930456
Dissolved Nickel (Ni)	mg/L	0.000389	8930456	0.000596	8930456	0.000286	0.000020	8930456
Dissolved Phosphorus (P)	mg/L	0.0693	8930456	0.0087	8930456	0.0029	0.0020	8930456
Dissolved Selenium (Se)	mg/L	0.00159	8930456	0.00127	8930456	0.00271	0.000040	8930456
Dissolved Silicon (Si)	mg/L	3.62	8930456	4.10	8930456	2.42	0.050	8930456
Dissolved Silver (Ag)	mg/L	<0.0000050	8930456	<0.0000050	8930456	<0.0000050	0.0000050	8930456
Dissolved Strontium (Sr)	mg/L	0.197	8930456	0.247	8930456	0.161	0.000050	8930456
Dissolved Thallium (Tl)	mg/L	<0.0000020	8930456	<0.0000020	8930456	0.0000034	0.0000020	8930456
Dissolved Tin (Sn)	mg/L	<0.00020	8930456	<0.00020	8930456	<0.00020	0.00020	8930456
Dissolved Titanium (Ti)	mg/L	<0.00050	8930456	<0.00050	8930456	<0.00050	0.00050	8930456
Dissolved Uranium (U)	mg/L	0.00326	8930456	0.00179	8930456	0.00528	0.0000020	8930456
Dissolved Vanadium (V)	mg/L	<0.00020	8930456	<0.00020	8930456	<0.00020	0.00020	8930456
RDL = Reportable Detection Limit								

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TB6994		TB6995		TB6996		
Sampling Date		2018/03/07 10:45		2018/03/07 10:35		2018/03/07 11:45		
COC Number		08450272		08450272		08450272		
	UNITS	KZ-18	QC Batch	KZ-37	QC Batch	KZ-2	RDL	QC Batch
Dissolved Zinc (Zn)	mg/L	0.00225 (1)	8930456	0.0132	8930456	0.0279	0.00010	8930456
Dissolved Zirconium (Zr)	mg/L	<0.00010	8930456	<0.00010	8930456	<0.00010	0.00010	8930456
Dissolved Calcium (Ca)	mg/L	59.5	8929861	75.0	8929861	49.7	0.050	8933823
Dissolved Magnesium (Mg)	mg/L	20.8	8929861	10.6	8929861	7.90	0.050	8933823
Dissolved Potassium (K)	mg/L	0.776	8929861	1.71	8929861	2.58	0.050	8933823
Dissolved Sodium (Na)	mg/L	1.09	8929861	1.65	8929861	1.02	0.050	8933823
Dissolved Sulphur (S)	mg/L	8.7	8929861	11.7	8929861	23.1	3.0	8933823

RDL = Reportable Detection Limit

(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TB6997	TB6998		TB6999		
Sampling Date		2018/03/07 12:15	2018/03/07 10:50		2018/03/07 09:35		
COC Number		08450272	08450272		08450273		
	UNITS	KZ-13	DUP	QC Batch	FIELD BLANK	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO3)	mg/L	121	225	8929860	<0.50	0.50	8929860
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	<0.0000020	8932112	<0.0000020	0.0000020	8931596
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00329	0.00204	8930456	<0.00050	0.00050	8934582
Dissolved Antimony (Sb)	mg/L	0.000039	0.000038	8930456	<0.000020	0.000020	8934582
Dissolved Arsenic (As)	mg/L	0.000189	0.00102	8930456	<0.000020	0.000020	8934582
Dissolved Barium (Ba)	mg/L	0.127	0.0588	8930456	<0.000020	0.000020	8934582
Dissolved Beryllium (Be)	mg/L	<0.000010	<0.000010	8930456	<0.000010	0.000010	8934582
Dissolved Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	8930456	<0.0000050	0.0000050	8934582
Dissolved Boron (B)	mg/L	<0.010	<0.010	8930456	<0.010	0.010	8934582
Dissolved Cadmium (Cd)	mg/L	0.0000545	0.0000551	8930456	<0.0000050	0.0000050	8934582
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00015	8930456	<0.00010	0.00010	8934582
Dissolved Cobalt (Co)	mg/L	0.0000382	0.0000351	8930456	<0.0000050	0.0000050	8934582
Dissolved Copper (Cu)	mg/L	0.000418	0.000085	8930456	<0.000050	0.000050	8934582
Dissolved Iron (Fe)	mg/L	0.0940	0.0602	8930456	<0.0010	0.0010	8934582
Dissolved Lead (Pb)	mg/L	0.0000234	0.0000069	8930456	<0.0000050	0.0000050	8934582
Dissolved Lithium (Li)	mg/L	0.00217	0.00239	8930456	<0.00050	0.00050	8934582
Dissolved Manganese (Mn)	mg/L	0.0747	0.0188	8930456	<0.000050	0.000050	8934582
Dissolved Molybdenum (Mo)	mg/L	0.000847	0.00189	8930456	<0.000050	0.000050	8934582
Dissolved Nickel (Ni)	mg/L	0.000398	0.000338	8930456	<0.000020	0.000020	8934582
Dissolved Phosphorus (P)	mg/L	0.0028	0.0644	8930456	0.0035	0.0020	8934582
Dissolved Selenium (Se)	mg/L	0.000285	0.00156	8930456	<0.000040	0.000040	8934582
Dissolved Silicon (Si)	mg/L	4.59	3.16	8930456	<0.050	0.050	8934582
Dissolved Silver (Ag)	mg/L	<0.0000050	<0.0000050	8930456	<0.0000050	0.0000050	8934582
Dissolved Strontium (Sr)	mg/L	0.109	0.190	8930456	<0.000050	0.000050	8934582
Dissolved Thallium (Tl)	mg/L	<0.0000020	<0.0000020	8930456	<0.0000020	0.0000020	8934582
Dissolved Tin (Sn)	mg/L	<0.00020	<0.00020	8930456	<0.00020	0.00020	8934582
Dissolved Titanium (Ti)	mg/L	<0.00050	<0.00050	8930456	<0.00050	0.00050	8934582
Dissolved Uranium (U)	mg/L	0.00166	0.00306	8930456	<0.0000020	0.0000020	8934582
Dissolved Vanadium (V)	mg/L	<0.00020	<0.00020	8930456	<0.00020	0.00020	8934582
Dissolved Zinc (Zn)	mg/L	0.00306	0.00193	8930456	<0.00010	0.00010	8934582

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TB6997	TB6998		TB6999		
Sampling Date		2018/03/07 12:15	2018/03/07 10:50		2018/03/07 09:35		
COC Number		08450272	08450272		08450273		
	UNITS	KZ-13	DUP	QC Batch	FIELD BLANK	RDL	QC Batch
Dissolved Zirconium (Zr)	mg/L	<0.00010	<0.00010	8930456	<0.00010	0.00010	8934582
Dissolved Calcium (Ca)	mg/L	41.3	57.7	8929861	<0.050	0.050	8929861
Dissolved Magnesium (Mg)	mg/L	4.34	19.7	8929861	<0.050	0.050	8929861
Dissolved Potassium (K)	mg/L	2.38	0.728	8929861	<0.050	0.050	8929861
Dissolved Sodium (Na)	mg/L	1.35	0.976	8929861	<0.050	0.050	8929861
Dissolved Sulphur (S)	mg/L	5.9	7.6	8929861	<3.0	3.0	8929861
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TB7000		
Sampling Date		2018/03/08 11:00		
COC Number		08450273		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Dissolved Hardness (CaCO3)	mg/L	<0.50	0.50	8929860
Elements				
Dissolved Mercury (Hg)	mg/L	<0.0000020	0.0000020	8931953
Dissolved Metals by ICPMS				
Dissolved Aluminum (Al)	mg/L	<0.00050	0.00050	8930456
Dissolved Antimony (Sb)	mg/L	<0.000020	0.000020	8930456
Dissolved Arsenic (As)	mg/L	<0.000020	0.000020	8930456
Dissolved Barium (Ba)	mg/L	<0.000020	0.000020	8930456
Dissolved Beryllium (Be)	mg/L	<0.000010	0.000010	8930456
Dissolved Bismuth (Bi)	mg/L	<0.0000050	0.0000050	8930456
Dissolved Boron (B)	mg/L	<0.010	0.010	8930456
Dissolved Cadmium (Cd)	mg/L	<0.0000050	0.0000050	8930456
Dissolved Chromium (Cr)	mg/L	<0.00010	0.00010	8930456
Dissolved Cobalt (Co)	mg/L	<0.0000050	0.0000050	8930456
Dissolved Copper (Cu)	mg/L	<0.000050	0.000050	8930456
Dissolved Iron (Fe)	mg/L	<0.0010	0.0010	8930456
Dissolved Lead (Pb)	mg/L	<0.0000050	0.0000050	8930456
Dissolved Lithium (Li)	mg/L	<0.00050	0.00050	8930456
Dissolved Manganese (Mn)	mg/L	<0.000050	0.000050	8930456
Dissolved Molybdenum (Mo)	mg/L	<0.000050	0.000050	8930456
Dissolved Nickel (Ni)	mg/L	<0.000020	0.000020	8930456
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8930456
Dissolved Selenium (Se)	mg/L	<0.000040	0.000040	8930456
Dissolved Silicon (Si)	mg/L	<0.050	0.050	8930456
Dissolved Silver (Ag)	mg/L	<0.0000050	0.0000050	8930456
Dissolved Strontium (Sr)	mg/L	<0.000050	0.000050	8930456
Dissolved Thallium (Tl)	mg/L	<0.0000020	0.0000020	8930456
Dissolved Tin (Sn)	mg/L	<0.00020	0.00020	8930456
Dissolved Titanium (Ti)	mg/L	<0.00050	0.00050	8930456
Dissolved Uranium (U)	mg/L	<0.0000020	0.0000020	8930456
Dissolved Vanadium (V)	mg/L	<0.00020	0.00020	8930456
Dissolved Zinc (Zn)	mg/L	<0.00010	0.00010	8930456
RDL = Reportable Detection Limit				

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TB7000		
Sampling Date		2018/03/08 11:00		
COC Number		08450273		
	UNITS	**TRIP BLANK**	**RDL**	**QC Batch**
Dissolved Zirconium (Zr)	mg/L	<0.00010	0.00010	8930456
Dissolved Calcium (Ca)	mg/L	<0.050	0.050	8929861
Dissolved Magnesium (Mg)	mg/L	<0.050	0.050	8929861
Dissolved Potassium (K)	mg/L	<0.050	0.050	8929861
Dissolved Sodium (Na)	mg/L	<0.050	0.050	8929861
Dissolved Sulphur (S)	mg/L	<3.0	3.0	8929861
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TB6991	TB6992	TB6993		TB6994		
Sampling Date		2018/03/07 09:25	2018/03/07 10:05	2018/03/07 10:55		2018/03/07 10:45		
COC Number		08450272	08450272	08450272		08450272		
	UNITS	KZ-26	KZ-15	KZ-9	QC Batch	KZ-18	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	372	321	346	8929859	226	0.50	8929859
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8931585	<0.0000020	0.0000020	8931541
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00621	0.00369	0.00392	8931627	0.00917	0.00050	8931627
Total Antimony (Sb)	mg/L	0.000071	0.000027	0.000039	8931627	0.000039	0.000020	8931627
Total Arsenic (As)	mg/L	0.000659	0.000543	0.000115	8931627	0.00108	0.000020	8931627
Total Barium (Ba)	mg/L	0.102	0.100	0.185	8931627	0.0568	0.000020	8931627
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8931627	<0.000010	0.000010	8931627
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8931627	<0.0000050	0.0000050	8931627
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	8931627	<0.010	0.010	8931627
Total Cadmium (Cd)	mg/L	0.0000753	0.0000684	0.0000389	8931627	0.0000480	0.0000050	8931627
Total Chromium (Cr)	mg/L	0.00020	<0.00010	0.00061	8931627	0.00015	0.00010	8931627
Total Cobalt (Co)	mg/L	0.0000209	0.0000620	0.0000159	8931627	0.0000460	0.0000050	8931627
Total Copper (Cu)	mg/L	0.000567	0.000238	0.000172	8931627	0.000072	0.000050	8931627
Total Iron (Fe)	mg/L	0.0158	0.0589	0.0261	8931627	0.0863	0.0010	8931627
Total Lead (Pb)	mg/L	0.0000422	0.0000111	0.0000442	8931627	0.0000100	0.0000050	8931627
Total Lithium (Li)	mg/L	0.00811	0.00459	0.00248	8931627	0.00215	0.00050	8931627
Total Manganese (Mn)	mg/L	0.00577	0.0802	0.0116	8931627	0.0200	0.000050	8931627
Total Molybdenum (Mo)	mg/L	0.000862	0.00145	0.00159	8931627	0.00175	0.000050	8931627
Total Nickel (Ni)	mg/L	0.000608	0.00141	0.000161	8931627	0.000357	0.000020	8931627
Total Phosphorus (P)	mg/L	0.0133 (1)	0.0065	0.0083	8931627	0.0672	0.0020	8931627
Total Selenium (Se)	mg/L	0.00120	0.00183	0.00501	8931627	0.00168	0.000040	8931627
Total Silicon (Si)	mg/L	5.86	4.33	4.88	8931627	3.37	0.050	8931627
Total Silver (Ag)	mg/L	0.0000152	<0.0000050	<0.0000050	8931627	<0.0000050	0.0000050	8931627
Total Strontium (Sr)	mg/L	0.319	0.316	0.355	8931627	0.187	0.000050	8931627
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8931627	<0.0000020	0.0000020	8931627
Total Tin (Sn)	mg/L	0.00034	<0.00020	<0.00020	8931627	<0.00020	0.00020	8931627
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8931627	<0.00050	0.00050	8931627
Total Uranium (U)	mg/L	0.00435	0.00667	0.00382	8931627	0.00346	0.0000020	8931627
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8931627	<0.00020	0.00020	8931627

RDL = Reportable Detection Limit
(1) Matrix Spike for (P) outside acceptance criteria (10% of analytes failure allowed).

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TB6991	TB6992	TB6993		TB6994		
Sampling Date		2018/03/07 09:25	2018/03/07 10:05	2018/03/07 10:55		2018/03/07 10:45		
COC Number		08450272	08450272	08450272		08450272		
	UNITS	KZ-26	KZ-15	KZ-9	QC Batch	KZ-18	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00623	0.0101	0.00689	8931627	0.00181	0.00010	8931627
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8931627	<0.00010	0.00010	8931627
Total Calcium (Ca)	mg/L	98.3	90.3	112	8929862	60.2	0.050	8929862
Total Magnesium (Mg)	mg/L	30.8	23.3	15.9	8929862	18.4	0.050	8929862
Total Potassium (K)	mg/L	2.35	1.65	2.37	8929862	0.685	0.050	8929862
Total Sodium (Na)	mg/L	2.70	1.85	5.87	8929862	0.954	0.050	8929862
Total Sulphur (S)	mg/L	21.1	16.9	22.3	8929862	7.9	3.0	8929862

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TB6995		TB6996	TB6997	TB6998		
Sampling Date		2018/03/07 10:35		2018/03/07 11:45	2018/03/07 12:15	2018/03/07 10:50		
COC Number		08450272		08450272	08450272	08450272		
	UNITS	KZ-37	QC Batch	KZ-2	KZ-13	DUP	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	203	8929859	144	112	232	0.50	8929859
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	8931541	<0.0000020	<0.0000020	<0.0000020	0.0000020	8931585
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00659	8931627	0.00236	0.00838	0.0177	0.00050	8931627
Total Antimony (Sb)	mg/L	0.000027	8931627	0.000027	0.000039	0.000037	0.000020	8931627
Total Arsenic (As)	mg/L	0.000394	8931627	0.000074	0.000276	0.00109	0.000020	8931627
Total Barium (Ba)	mg/L	0.101	8931627	0.0735	0.125	0.0613	0.000020	8931627
Total Beryllium (Be)	mg/L	<0.000010	8931627	<0.000010	<0.000010	<0.000010	0.000010	8931627
Total Bismuth (Bi)	mg/L	<0.0000050	8931627	<0.0000050	<0.0000050	<0.0000050	0.0000050	8931627
Total Boron (B)	mg/L	<0.010	8931627	<0.010	<0.010	<0.010	0.010	8931627
Total Cadmium (Cd)	mg/L	0.0000842	8931627	0.000252	0.0000595	0.0000561	0.0000050	8931627
Total Chromium (Cr)	mg/L	<0.00010	8931627	<0.00010	<0.00010	0.00018	0.00010	8931627
Total Cobalt (Co)	mg/L	0.000183	8931627	0.0000090	0.0000498	0.0000467	0.0000050	8931627
Total Copper (Cu)	mg/L	0.000178	8931627	0.000491	0.000499	0.000106	0.000050	8931627
Total Iron (Fe)	mg/L	0.446	8931627	0.0018	0.143	0.110	0.0010	8931627
Total Lead (Pb)	mg/L	0.0000192	8931627	0.0000221	0.0000377	0.0000186	0.0000050	8931627
Total Lithium (Li)	mg/L	0.00537	8931627	0.00154	0.00215	0.00229	0.00050	8931627
Total Manganese (Mn)	mg/L	0.146	8931627	0.000076	0.0926	0.0206	0.000050	8931627
Total Molybdenum (Mo)	mg/L	0.000820	8931627	0.000728	0.000833	0.00188	0.000050	8931627
Total Nickel (Ni)	mg/L	0.000635	8931627	0.000296	0.000494	0.000391	0.000020	8931627
Total Phosphorus (P)	mg/L	0.0106	8931627	<0.0020	0.0091	0.0715	0.0020	8931627
Total Selenium (Se)	mg/L	0.00113	8931627	0.00263	0.000324	0.00158	0.000040	8931627
Total Silicon (Si)	mg/L	3.89	8931627	2.30	4.19	3.90	0.050	8931627
Total Silver (Ag)	mg/L	<0.0000050	8931627	<0.0000050	<0.0000050	<0.0000050	0.0000050	8931627
Total Strontium (Sr)	mg/L	0.241	8931627	0.157	0.125	0.194	0.000050	8931627
Total Thallium (Tl)	mg/L	<0.0000020	8931627	0.0000029	<0.0000020	<0.0000020	0.0000020	8931627
Total Tin (Sn)	mg/L	<0.00020	8931627	<0.00020	<0.00020	<0.00020	0.00020	8931627
Total Titanium (Ti)	mg/L	<0.00050	8931627	<0.00050	<0.00050	0.00110	0.00050	8931627
Total Uranium (U)	mg/L	0.00207	8931627	0.00573	0.00198	0.00337	0.0000020	8931627
Total Vanadium (V)	mg/L	<0.00020	8931627	<0.00020	<0.00020	<0.00020	0.00020	8931627
Total Zinc (Zn)	mg/L	0.0126	8931627	0.0288	0.00321	0.00193	0.00010	8931627

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TB6995		TB6996	TB6997	TB6998		
Sampling Date		2018/03/07 10:35		2018/03/07 11:45	2018/03/07 12:15	2018/03/07 10:50		
COC Number		08450272		08450272	08450272	08450272		
	UNITS	KZ-37	QC Batch	KZ-2	KZ-13	DUP	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	8931627	<0.00010	<0.00010	<0.00010	0.00010	8931627
Total Calcium (Ca)	mg/L	66.1	8929862	45.6	36.8	60.0	0.050	8929862
Total Magnesium (Mg)	mg/L	9.29	8929862	7.31	4.76	20.0	0.050	8929862
Total Potassium (K)	mg/L	1.52	8929862	2.30	2.57	0.727	0.050	8929862
Total Sodium (Na)	mg/L	1.51	8929862	1.00	1.54	1.03	0.050	8929862
Total Sulphur (S)	mg/L	9.6	8929862	23.0	7.3	8.0	3.0	8929862

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TB6999	TB7000		
Sampling Date		2018/03/07 09:35	2018/03/08 11:00		
COC Number		08450273	08450273		
	UNITS	FIELD BLANK	TRIP BLANK	RDL	QC Batch
Calculated Parameters					
Total Hardness (CaCO3)	mg/L	<0.50	<0.50	0.50	8929859
Elements					
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8931585
Total Metals by ICPMS					
Total Aluminum (Al)	mg/L	<0.00050	<0.00050	0.00050	8931627
Total Antimony (Sb)	mg/L	<0.000020	<0.000020	0.000020	8931627
Total Arsenic (As)	mg/L	<0.000020	<0.000020	0.000020	8931627
Total Barium (Ba)	mg/L	<0.000020	<0.000020	0.000020	8931627
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	8931627
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	0.0000050	8931627
Total Boron (B)	mg/L	<0.010	<0.010	0.010	8931627
Total Cadmium (Cd)	mg/L	<0.0000050	<0.0000050	0.0000050	8931627
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00010	8931627
Total Cobalt (Co)	mg/L	<0.0000050	<0.0000050	0.0000050	8931627
Total Copper (Cu)	mg/L	<0.000050	<0.000050	0.000050	8931627
Total Iron (Fe)	mg/L	<0.0010	<0.0010	0.0010	8931627
Total Lead (Pb)	mg/L	<0.0000050	<0.0000050	0.0000050	8931627
Total Lithium (Li)	mg/L	<0.00050	<0.00050	0.00050	8931627
Total Manganese (Mn)	mg/L	<0.000050	<0.000050	0.000050	8931627
Total Molybdenum (Mo)	mg/L	<0.000050	<0.000050	0.000050	8931627
Total Nickel (Ni)	mg/L	<0.000020	<0.000020	0.000020	8931627
Total Phosphorus (P)	mg/L	<0.0020	<0.0020	0.0020	8931627
Total Selenium (Se)	mg/L	<0.000040	<0.000040	0.000040	8931627
Total Silicon (Si)	mg/L	<0.050	<0.050	0.050	8931627
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	0.0000050	8931627
Total Strontium (Sr)	mg/L	<0.000050	<0.000050	0.000050	8931627
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	8931627
Total Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8931627
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00050	8931627
Total Uranium (U)	mg/L	<0.0000020	<0.0000020	0.0000020	8931627
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00020	8931627
Total Zinc (Zn)	mg/L	<0.00010	<0.00010	0.00010	8931627
RDL = Reportable Detection Limit					

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TB6999	TB7000		
Sampling Date		2018/03/07 09:35	2018/03/08 11:00		
COC Number		08450273	08450273		
	UNITS	FIELD BLANK	TRIP BLANK	RDL	QC Batch
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8931627
Total Calcium (Ca)	mg/L	<0.050	<0.050	0.050	8929862
Total Magnesium (Mg)	mg/L	<0.050	<0.050	0.050	8929862
Total Potassium (K)	mg/L	<0.050	<0.050	0.050	8929862
Total Sodium (Na)	mg/L	<0.050	<0.050	0.050	8929862
Total Sulphur (S)	mg/L	<3.0	<3.0	3.0	8929862
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: TB6991
Sample ID: KZ-26
Matrix: Water

Collected: 2018/03/07
Shipped:
Received: 2018/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8930791	2018/03/09	2018/03/09	Name Redacted
Alkalinity - Low Level	AT/ALK	8931172	2018/03/10	2018/03/10	
Chloride - Low Level	KONE/COL	8932377	N/A	2018/03/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8932008	N/A	2018/03/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8932010	N/A	2018/03/12	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8931814	N/A	2018/03/12	
Conductance - Low Level	AT/ALK	8931170	2018/03/10	2018/03/10	
Fluoride - Low Level	ISE/ISE	8932906	N/A	2018/03/13	
Hardness Total (calculated as CaCO3)	CALC	8929859	N/A	2018/03/13	
Hardness (calculated as CaCO3)	CALC	8929860	N/A	2018/03/12	
Mercury (Dissolved) by CVAF	CV/AF	8931953	N/A	2018/03/12	
Mercury (Total) by CVAF	CV/AF	8931585	2018/03/12	2018/03/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8929861	N/A	2018/03/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8930456	N/A	2018/03/10	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8929862	N/A	2018/03/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8931627	N/A	2018/03/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8933079	N/A	2018/03/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8931164	N/A	2018/03/10	
Nitrite (N) (low level)	TRAA/COL	8931165	N/A	2018/03/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8930496	N/A	2018/03/10	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/09	
pH Water	AT/ALK	8931168	2018/03/10	2018/03/10	
Sulphate - Low Level	KONE/COL	8933512	N/A	2018/03/13	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8931197	2018/03/10	2018/03/10	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8931198	2018/03/10	2018/03/10	
Total Suspended Solids-Low Level	BAL/BAL	8932009	2018/03/12	2018/03/13	

Maxxam ID: TB6991 Dup
Sample ID: KZ-26
Matrix: Water

Collected: 2018/03/07
Shipped:
Received: 2018/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide SAD (strong acid dissociable)	TECH/COL	8932008	N/A	2018/03/12	Name Redacted
Cyanide WAD (weak acid dissociable)	TECH/COL	8932010	N/A	2018/03/12	
Elements by ICPMS Low Level (total)	ICP/CRCM	8931627	N/A	2018/03/12	

Maxxam ID: TB6992
Sample ID: KZ-15
Matrix: Water

Collected: 2018/03/07
Shipped:
Received: 2018/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8930791	2018/03/09	2018/03/09	Name Redacted
Alkalinity - Low Level	AT/ALK	8931172	2018/03/10	2018/03/10	
Chloride - Low Level	KONE/COL	8932377	N/A	2018/03/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8932008	N/A	2018/03/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: TB6992
Sample ID: KZ-15
Matrix: Water

Collected: 2018/03/07
Shipped:
Received: 2018/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide WAD (weak acid dissociable)	TECH/COL	8932010	N/A	2018/03/12	Name Redacted
Carbon (DOC) - field filtered/preserved	TRAA/COL	8931812	N/A	2018/03/12	
Conductance - Low Level	AT/ALK	8931170	2018/03/10	2018/03/10	
Fluoride - Low Level	ISE/ISE	8932906	N/A	2018/03/13	
Hardness Total (calculated as CaCO3)	CALC	8929859	N/A	2018/03/13	
Hardness (calculated as CaCO3)	CALC	8929860	N/A	2018/03/12	
Mercury (Dissolved) by CVAF	CV/AF	8931953	N/A	2018/03/12	
Mercury (Total) by CVAF	CV/AF	8931585	2018/03/12	2018/03/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8929861	N/A	2018/03/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8930456	N/A	2018/03/10	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8929862	N/A	2018/03/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8931627	N/A	2018/03/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8933079	N/A	2018/03/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8931164	N/A	2018/03/10	
Nitrite (N) (low level)	TRAA/COL	8931165	N/A	2018/03/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8930496	N/A	2018/03/10	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/09	
pH Water	AT/ALK	8931168	2018/03/10	2018/03/10	
Sulphate - Low Level	KONE/COL	8932378	N/A	2018/03/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8931197	2018/03/10	2018/03/10	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8931198	2018/03/10	2018/03/10	
Total Suspended Solids-Low Level	BAL/BAL	8932009	2018/03/12	2018/03/13	

Maxxam ID: TB6992 Dup
Sample ID: KZ-15
Matrix: Water

Collected: 2018/03/07
Shipped:
Received: 2018/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Fluoride - Low Level	ISE/ISE	8932906	N/A	2018/03/13	Name Redacted

Maxxam ID: TB6993
Sample ID: KZ-9
Matrix: Water

Collected: 2018/03/07
Shipped:
Received: 2018/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8930791	2018/03/09	2018/03/09	Name Redacted
Alkalinity - Low Level	AT/ALK	8931172	2018/03/10	2018/03/10	
Chloride - Low Level	KONE/COL	8932377	N/A	2018/03/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8932008	N/A	2018/03/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8932010	N/A	2018/03/12	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8931814	N/A	2018/03/12	
Conductance - Low Level	AT/ALK	8931170	2018/03/10	2018/03/10	
Fluoride - Low Level	ISE/ISE	8932906	N/A	2018/03/13	
Hardness Total (calculated as CaCO3)	CALC	8929859	N/A	2018/03/13	
Hardness (calculated as CaCO3)	CALC	8929860	N/A	2018/03/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: TB6993
Sample ID: KZ-9
Matrix: Water

Collected: 2018/03/07
Shipped:
Received: 2018/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Mercury (Dissolved) by CVAF	CV/AF	8932112	N/A	2018/03/13	Name Redacted
Mercury (Total) by CVAF	CV/AF	8931585	2018/03/12	2018/03/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8929861	N/A	2018/03/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8930456	N/A	2018/03/10	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8929862	N/A	2018/03/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8931627	N/A	2018/03/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8933079	N/A	2018/03/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8931164	N/A	2018/03/10	
Nitrite (N) (low level)	TRAA/COL	8931165	N/A	2018/03/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8930496	N/A	2018/03/10	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/09	
pH Water	AT/ALK	8931168	2018/03/10	2018/03/10	
Sulphate - Low Level	KONE/COL	8933512	N/A	2018/03/13	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8931197	2018/03/10	2018/03/10	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8931198	2018/03/10	2018/03/10	
Total Suspended Solids-Low Level	BAL/BAL	8932009	2018/03/12	2018/03/13	

Maxxam ID: TB6994
Sample ID: KZ-18
Matrix: Water

Collected: 2018/03/07
Shipped:
Received: 2018/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8930791	2018/03/09	2018/03/09	Name Redacted
Alkalinity - Low Level	AT/ALK	8931172	2018/03/10	2018/03/10	
Chloride - Low Level	KONE/COL	8932377	N/A	2018/03/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8932008	N/A	2018/03/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8932010	N/A	2018/03/12	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8931814	N/A	2018/03/12	
Conductance - Low Level	AT/ALK	8931170	2018/03/10	2018/03/10	
Fluoride - Low Level	ISE/ISE	8932906	N/A	2018/03/13	
Hardness Total (calculated as CaCO3)	CALC	8929859	N/A	2018/03/13	
Hardness (calculated as CaCO3)	CALC	8929860	N/A	2018/03/12	
Mercury (Dissolved) by CVAF	CV/AF	8931953	N/A	2018/03/12	
Mercury (Total) by CVAF	CV/AF	8931541	2018/03/12	2018/03/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8929861	N/A	2018/03/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8930456	N/A	2018/03/10	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8929862	N/A	2018/03/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8931627	N/A	2018/03/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8933079	N/A	2018/03/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8931164	N/A	2018/03/10	
Nitrite (N) (low level)	TRAA/COL	8931165	N/A	2018/03/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8930496	N/A	2018/03/10	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/09	
pH Water	AT/ALK	8931168	2018/03/10	2018/03/10	
Sulphate - Low Level	KONE/COL	8932378	N/A	2018/03/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: TB6994
Sample ID: KZ-18
Matrix: Water

Collected: 2018/03/07
Shipped:
Received: 2018/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8931197	2018/03/10	2018/03/10	Name Redacted
Total Phosphorus - Low Level Unpreserved	KONE/COL	8931198	2018/03/10	2018/03/10	
Total Suspended Solids-Low Level	BAL/BAL	8932009	2018/03/12	2018/03/13	

Maxxam ID: TB6995
Sample ID: KZ-37
Matrix: Water

Collected: 2018/03/07
Shipped:
Received: 2018/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8930791	2018/03/09	2018/03/09	Name Redacted
Alkalinity - Low Level	AT/ALK	8931172	2018/03/10	2018/03/10	
Chloride - Low Level	KONE/COL	8932377	N/A	2018/03/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8932008	N/A	2018/03/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8932010	N/A	2018/03/12	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8931814	N/A	2018/03/12	
Conductance - Low Level	AT/ALK	8931170	2018/03/10	2018/03/10	
Fluoride - Low Level	ISE/ISE	8932906	N/A	2018/03/13	
Hardness Total (calculated as CaCO3)	CALC	8929859	N/A	2018/03/13	
Hardness (calculated as CaCO3)	CALC	8929860	N/A	2018/03/12	
Mercury (Dissolved) by CVAF	CV/AF	8932112	N/A	2018/03/13	
Mercury (Total) by CVAF	CV/AF	8931541	2018/03/12	2018/03/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8929861	N/A	2018/03/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8930456	N/A	2018/03/10	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8929862	N/A	2018/03/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8931627	N/A	2018/03/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8933079	N/A	2018/03/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8931164	N/A	2018/03/10	
Nitrite (N) (low level)	TRAA/COL	8931165	N/A	2018/03/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8930496	N/A	2018/03/10	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/09	
pH Water	AT/ALK	8931168	2018/03/10	2018/03/10	
Sulphate - Low Level	KONE/COL	8932378	N/A	2018/03/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8931197	2018/03/10	2018/03/10	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8931198	2018/03/10	2018/03/10	
Total Suspended Solids-Low Level	BAL/BAL	8932009	2018/03/12	2018/03/13	

Maxxam ID: TB6996
Sample ID: KZ-2
Matrix: Water

Collected: 2018/03/07
Shipped:
Received: 2018/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8930791	2018/03/09	2018/03/09	Name Redacted
Alkalinity - Low Level	AT/ALK	8931172	2018/03/10	2018/03/10	
Chloride - Low Level	KONE/COL	8932377	N/A	2018/03/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8932008	N/A	2018/03/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: TB6996
Sample ID: KZ-2
Matrix: Water

Collected: 2018/03/07
Shipped:
Received: 2018/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Cyanide WAD (weak acid dissociable)	TECH/COL	8932010	N/A	2018/03/12	Name Redacted
Carbon (DOC) - field filtered/preserved	TRAA/COL	8931814	N/A	2018/03/12	
Conductance - Low Level	AT/ALK	8931170	2018/03/10	2018/03/10	
Fluoride - Low Level	ISE/ISE	8932906	N/A	2018/03/13	
Hardness Total (calculated as CaCO3)	CALC	8929859	N/A	2018/03/13	
Hardness (calculated as CaCO3)	CALC	8929860	N/A	2018/03/12	
Mercury (Dissolved) by CVAF	CV/AF	8932112	N/A	2018/03/13	
Mercury (Total) by CVAF	CV/AF	8931585	2018/03/12	2018/03/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8933823	N/A	2018/03/15	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8930456	N/A	2018/03/10	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8929862	N/A	2018/03/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8931627	N/A	2018/03/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8933079	N/A	2018/03/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8931164	N/A	2018/03/10	
Nitrite (N) (low level)	TRAA/COL	8931165	N/A	2018/03/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8930496	N/A	2018/03/10	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/09	
pH Water	AT/ALK	8931168	2018/03/10	2018/03/10	
Sulphate - Low Level	KONE/COL	8933512	N/A	2018/03/13	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8931197	2018/03/10	2018/03/10	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8931198	2018/03/10	2018/03/10	
Total Suspended Solids-Low Level	BAL/BAL	8932009	2018/03/12	2018/03/13	

Maxxam ID: TB6997
Sample ID: KZ-13
Matrix: Water

Collected: 2018/03/07
Shipped:
Received: 2018/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8930791	2018/03/09	2018/03/09	Name Redacted
Alkalinity - Low Level	AT/ALK	8931172	2018/03/10	2018/03/10	
Chloride - Low Level	KONE/COL	8932377	N/A	2018/03/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8932008	N/A	2018/03/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8932010	N/A	2018/03/12	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8931812	N/A	2018/03/12	
Conductance - Low Level	AT/ALK	8931170	2018/03/10	2018/03/10	
Fluoride - Low Level	ISE/ISE	8932906	N/A	2018/03/13	
Hardness Total (calculated as CaCO3)	CALC	8929859	N/A	2018/03/13	
Hardness (calculated as CaCO3)	CALC	8929860	N/A	2018/03/12	
Mercury (Dissolved) by CVAF	CV/AF	8932112	N/A	2018/03/13	
Mercury (Total) by CVAF	CV/AF	8931585	2018/03/12	2018/03/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8929861	N/A	2018/03/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8930456	N/A	2018/03/10	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8929862	N/A	2018/03/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8931627	N/A	2018/03/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8933079	N/A	2018/03/13	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: TB6997
Sample ID: KZ-13
Matrix: Water

Collected: 2018/03/07
Shipped:
Received: 2018/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate+Nitrite (N) (low level)	TRAA/COL	8931164	N/A	2018/03/10	Name Redacted
Nitrite (N) (low level)	TRAA/COL	8931165	N/A	2018/03/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8930496	N/A	2018/03/10	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/09	
pH Water	AT/ALK	8931168	2018/03/10	2018/03/10	
Sulphate - Low Level	KONE/COL	8932378	N/A	2018/03/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8931195	2018/03/10	2018/03/10	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8931196	2018/03/10	2018/03/10	
Total Suspended Solids-Low Level	BAL/BAL	8932009	2018/03/12	2018/03/13	

Maxxam ID: TB6998
Sample ID: DUP
Matrix: Water

Collected: 2018/03/07
Shipped:
Received: 2018/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8930791	2018/03/09	2018/03/09	Name Redacted
Alkalinity - Low Level	AT/ALK	8931172	2018/03/10	2018/03/10	
Chloride - Low Level	KONE/COL	8932377	N/A	2018/03/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8932008	N/A	2018/03/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8932010	N/A	2018/03/12	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8931814	N/A	2018/03/12	
Conductance - Low Level	AT/ALK	8931170	2018/03/10	2018/03/10	
Fluoride - Low Level	ISE/ISE	8932906	N/A	2018/03/13	
Hardness Total (calculated as CaCO3)	CALC	8929859	N/A	2018/03/14	
Hardness (calculated as CaCO3)	CALC	8929860	N/A	2018/03/12	
Mercury (Dissolved) by CVAF	CV/AF	8932112	N/A	2018/03/13	
Mercury (Total) by CVAF	CV/AF	8931585	2018/03/12	2018/03/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8929861	N/A	2018/03/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8930456	N/A	2018/03/10	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8929862	N/A	2018/03/14	
Elements by ICPMS Low Level (total)	ICP/CRCM	8931627	N/A	2018/03/14	
Ammonia-N Low Level (Preserved)	KONE/COL	8933079	N/A	2018/03/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8931164	N/A	2018/03/10	
Nitrite (N) (low level)	TRAA/COL	8931165	N/A	2018/03/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8930496	N/A	2018/03/10	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/09	
pH Water	AT/ALK	8931168	2018/03/10	2018/03/10	
Sulphate - Low Level	KONE/COL	8932378	N/A	2018/03/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8931195	2018/03/10	2018/03/10	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8931196	2018/03/10	2018/03/10	
Total Suspended Solids-Low Level	BAL/BAL	8932009	2018/03/12	2018/03/13	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: TB6998 Dup
Sample ID: DUP
Matrix: Water

Collected: 2018/03/07
Shipped:
Received: 2018/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8931814	N/A	2018/03/12	Name Redacted
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8931195	2018/03/10	2018/03/10	

Maxxam ID: TB6999
Sample ID: FIELD BLANK
Matrix: Water

Collected: 2018/03/07
Shipped:
Received: 2018/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8930791	2018/03/09	2018/03/09	Name Redacted
Alkalinity - Low Level	AT/ALK	8931172	2018/03/10	2018/03/10	
Chloride - Low Level	KONE/COL	8932377	N/A	2018/03/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8932008	N/A	2018/03/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8932010	N/A	2018/03/12	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8931812	N/A	2018/03/12	
Conductance - Low Level	AT/ALK	8931170	2018/03/10	2018/03/10	
Fluoride - Low Level	ISE/ISE	8932906	N/A	2018/03/13	
Hardness Total (calculated as CaCO3)	CALC	8929859	N/A	2018/03/13	
Hardness (calculated as CaCO3)	CALC	8929860	N/A	2018/03/12	
Mercury (Dissolved) by CVAF	CV/AF	8931596	N/A	2018/03/12	
Mercury (Total) by CVAF	CV/AF	8931585	2018/03/12	2018/03/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8929861	N/A	2018/03/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8934582	N/A	2018/03/15	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8929862	N/A	2018/03/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8931627	N/A	2018/03/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8933079	N/A	2018/03/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8931164	N/A	2018/03/10	
Nitrite (N) (low level)	TRAA/COL	8931165	N/A	2018/03/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8930496	N/A	2018/03/10	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/09	
pH Water	AT/ALK	8931168	2018/03/10	2018/03/10	
Sulphate - Low Level	KONE/COL	8932378	N/A	2018/03/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8931197	2018/03/10	2018/03/10	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8931198	2018/03/10	2018/03/10	
Total Suspended Solids-Low Level	BAL/BAL	8932009	2018/03/12	2018/03/13	

Maxxam ID: TB7000
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2018/03/08
Shipped:
Received: 2018/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8930791	2018/03/09	2018/03/09	Name Redacted
Alkalinity - Low Level	AT/ALK	8931172	2018/03/10	2018/03/10	
Chloride - Low Level	KONE/COL	8932377	N/A	2018/03/12	
Cyanide SAD (strong acid dissociable)	TECH/COL	8932008	N/A	2018/03/12	
Cyanide WAD (weak acid dissociable)	TECH/COL	8932010	N/A	2018/03/12	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

TEST SUMMARY

Maxxam ID: TB7000
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2018/03/08
Shipped:
Received: 2018/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8931812	N/A	2018/03/12	Name Redacted
Conductance - Low Level	AT/ALK	8931170	2018/03/10	2018/03/10	
Fluoride - Low Level	ISE/ISE	8932906	N/A	2018/03/13	
Hardness Total (calculated as CaCO3)	CALC	8929859	N/A	2018/03/13	
Hardness (calculated as CaCO3)	CALC	8929860	N/A	2018/03/12	
Mercury (Dissolved) by CVAF	CV/AF	8931953	N/A	2018/03/12	
Mercury (Total) by CVAF	CV/AF	8931585	2018/03/12	2018/03/12	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8929861	N/A	2018/03/12	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8930456	N/A	2018/03/12	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8929862	N/A	2018/03/13	
Elements by ICPMS Low Level (total)	ICP/CRCM	8931627	N/A	2018/03/12	
Ammonia-N Low Level (Preserved)	KONE/COL	8933079	N/A	2018/03/13	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8931164	N/A	2018/03/10	
Nitrite (N) (low level)	TRAA/COL	8931165	N/A	2018/03/10	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8930496	N/A	2018/03/10	
pH Water	AT/ALK	8931168	2018/03/10	2018/03/10	
Sulphate - Low Level	KONE/COL	8932378	N/A	2018/03/12	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8931195	2018/03/10	2018/03/10	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8931196	2018/03/10	2018/03/10	
Total Suspended Solids-Low Level	BAL/BAL	8932009	2018/03/12	2018/03/13	

Maxxam ID: TB7000 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2018/03/08
Shipped:
Received: 2018/03/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8930791	2018/03/09	2018/03/09	Name Redacted
Alkalinity - Low Level	AT/ALK	8931172	2018/03/10	2018/03/10	
Chloride - Low Level	KONE/COL	8932377	N/A	2018/03/12	
Conductance - Low Level	AT/ALK	8931170	2018/03/10	2018/03/10	
Mercury (Dissolved) by CVAF	CV/AF	8931953	N/A	2018/03/12	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8931164	N/A	2018/03/10	
Nitrite (N) (low level)	TRAA/COL	8931165	N/A	2018/03/10	
pH Water	AT/ALK	8931168	2018/03/10	2018/03/10	
Sulphate - Low Level	KONE/COL	8932378	N/A	2018/03/12	

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.0°C
Package 2	2.3°C

Sample TB6993, Elements by ICPMS Low Level (dissolved): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8930456	Dissolved Aluminum (Al)	2018/03/10	94	80 - 120	110	80 - 120	<0.00050	mg/L	NC	20
8930456	Dissolved Antimony (Sb)	2018/03/10	100	80 - 120	99	80 - 120	<0.000020	mg/L	NC	20
8930456	Dissolved Arsenic (As)	2018/03/10	99	80 - 120	101	80 - 120	<0.000020	mg/L	NC	20
8930456	Dissolved Barium (Ba)	2018/03/10	97	80 - 120	100	80 - 120	<0.000020	mg/L	NC	20
8930456	Dissolved Beryllium (Be)	2018/03/10	97	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8930456	Dissolved Bismuth (Bi)	2018/03/10	99	80 - 120	104	80 - 120	<0.0000050	mg/L	NC	20
8930456	Dissolved Boron (B)	2018/03/10	98	80 - 120	104	80 - 120	<0.010	mg/L	NC	20
8930456	Dissolved Cadmium (Cd)	2018/03/10	95	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8930456	Dissolved Chromium (Cr)	2018/03/10	96	80 - 120	99	80 - 120	<0.00010	mg/L	NC	20
8930456	Dissolved Cobalt (Co)	2018/03/10	94	80 - 120	98	80 - 120	<0.0000050	mg/L	NC	20
8930456	Dissolved Copper (Cu)	2018/03/10	90	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
8930456	Dissolved Iron (Fe)	2018/03/10	100	80 - 120	100	80 - 120	<0.0010	mg/L	NC	20
8930456	Dissolved Lead (Pb)	2018/03/10	95	80 - 120	102	80 - 120	<0.0000050	mg/L	NC	20
8930456	Dissolved Lithium (Li)	2018/03/10	96	80 - 120	102	80 - 120	<0.00050	mg/L	NC	20
8930456	Dissolved Manganese (Mn)	2018/03/10	94	80 - 120	100	80 - 120	<0.000050	mg/L	NC	20
8930456	Dissolved Molybdenum (Mo)	2018/03/10	100	80 - 120	99	80 - 120	<0.000050	mg/L	NC	20
8930456	Dissolved Nickel (Ni)	2018/03/10	95	80 - 120	102	80 - 120	<0.000020	mg/L	NC	20
8930456	Dissolved Phosphorus (P)	2018/03/12	98	80 - 120	103	80 - 120	<0.0020	mg/L		
8930456	Dissolved Selenium (Se)	2018/03/10	100	80 - 120	98	80 - 120	<0.000040	mg/L	NC	20
8930456	Dissolved Silicon (Si)	2018/03/10	100	80 - 120	107	80 - 120	<0.050	mg/L	NC	20
8930456	Dissolved Silver (Ag)	2018/03/10	94	80 - 120	96	80 - 120	<0.0000050	mg/L	NC	20
8930456	Dissolved Strontium (Sr)	2018/03/10	97	80 - 120	101	80 - 120	<0.000050	mg/L	NC	20
8930456	Dissolved Thallium (Tl)	2018/03/10	99	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8930456	Dissolved Tin (Sn)	2018/03/10	98	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8930456	Dissolved Titanium (Ti)	2018/03/10	98	80 - 120	98	80 - 120	<0.00050	mg/L	NC	20
8930456	Dissolved Uranium (U)	2018/03/10	96	80 - 120	106	80 - 120	<0.0000020	mg/L	NC	20
8930456	Dissolved Vanadium (V)	2018/03/10	97	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
8930456	Dissolved Zinc (Zn)	2018/03/10	96	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8930456	Dissolved Zirconium (Zr)	2018/03/10	100	80 - 120	98	80 - 120	<0.00010	mg/L	NC	20
8930791	Acidity (pH 4.5)	2018/03/09					<1.0	mg/L	NC	20
8930791	Acidity (pH 8.3)	2018/03/09			100	80 - 120	<1.0	mg/L	NC	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8931164	Nitrate plus Nitrite (N)	2018/03/10	103	80 - 120	104	80 - 120	<0.0020	mg/L	NC	25
8931165	Nitrite (N)	2018/03/10	98	80 - 120	97	80 - 120	<0.0020	mg/L	NC	25
8931168	pH	2018/03/10			102	97 - 103			0	20
8931170	Conductivity	2018/03/10			101	80 - 120	<1.0	uS/cm	0.93	20
8931172	Alkalinity (PP as CaCO3)	2018/03/10					<0.50	mg/L	NC	20
8931172	Alkalinity (Total as CaCO3)	2018/03/10	102	80 - 120	97	80 - 120	<0.50	mg/L	7.7	20
8931172	Bicarbonate (HCO3)	2018/03/10					<0.50	mg/L	NC	20
8931172	Carbonate (CO3)	2018/03/10					<0.50	mg/L	NC	20
8931172	Hydroxide (OH)	2018/03/10					<0.50	mg/L	NC	20
8931195	Dissolved Phosphorus (P)	2018/03/10	NC	80 - 120	93	80 - 120	<0.0020	mg/L	2.2	20
8931196	Total Phosphorus (P)	2018/03/10			93	80 - 120	<0.0020	mg/L		
8931197	Dissolved Phosphorus (P)	2018/03/10			99	80 - 120	<0.0020	mg/L		
8931198	Total Phosphorus (P)	2018/03/10	86	80 - 120	99	80 - 120	<0.0020	mg/L	16	20
8931541	Total Mercury (Hg)	2018/03/12	102	80 - 120	104	80 - 120	<0.0000020	mg/L	NC	20
8931585	Total Mercury (Hg)	2018/03/12	100	80 - 120	102	80 - 120	<0.0000020	mg/L	NC	20
8931596	Dissolved Mercury (Hg)	2018/03/12	101	80 - 120	99	80 - 120	<0.0000020	mg/L	NC	20
8931627	Total Aluminum (Al)	2018/03/12	116	80 - 120	112	80 - 120	<0.00050	mg/L	0.65	20
8931627	Total Antimony (Sb)	2018/03/12	102	80 - 120	98	80 - 120	<0.000020	mg/L	2.4	20
8931627	Total Arsenic (As)	2018/03/12	110	80 - 120	104	80 - 120	<0.000020	mg/L	8.7	20
8931627	Total Barium (Ba)	2018/03/12	NC	80 - 120	96	80 - 120	<0.000020	mg/L	0.37	20
8931627	Total Beryllium (Be)	2018/03/12	105	80 - 120	104	80 - 120	<0.000010	mg/L	NC	20
8931627	Total Bismuth (Bi)	2018/03/12	100	80 - 120	103	80 - 120	<0.0000050	mg/L	NC	20
8931627	Total Boron (B)	2018/03/12	107	80 - 120	106	80 - 120	<0.010	mg/L	NC	20
8931627	Total Cadmium (Cd)	2018/03/12	101	80 - 120	99	80 - 120	<0.0000050	mg/L	3.5	20
8931627	Total Chromium (Cr)	2018/03/12	101	80 - 120	103	80 - 120	<0.00010	mg/L	NC	20
8931627	Total Cobalt (Co)	2018/03/12	100	80 - 120	103	80 - 120	<0.0000050	mg/L	8.5	20
8931627	Total Copper (Cu)	2018/03/12	97	80 - 120	103	80 - 120	<0.000050	mg/L	5.6	20
8931627	Total Iron (Fe)	2018/03/12	100	80 - 120	102	80 - 120	<0.0010	mg/L	0.52	20
8931627	Total Lead (Pb)	2018/03/12	102	80 - 120	100	80 - 120	<0.0000050	mg/L	1.4	20
8931627	Total Lithium (Li)	2018/03/12	94	80 - 120	98	80 - 120	<0.00050	mg/L	0.37	20
8931627	Total Manganese (Mn)	2018/03/12	102	80 - 120	105	80 - 120	<0.000050	mg/L	2.1	20

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8931627	Total Molybdenum (Mo)	2018/03/12	105	80 - 120	99	80 - 120	<0.000050	mg/L	3.2	20
8931627	Total Nickel (Ni)	2018/03/12	99	80 - 120	104	80 - 120	<0.000020	mg/L	7.9	20
8931627	Total Phosphorus (P)	2018/03/12	121 (1)	80 - 120	105	80 - 120	<0.0020	mg/L	9.5	20
8931627	Total Selenium (Se)	2018/03/12	115	80 - 120	106	80 - 120	<0.000040	mg/L	1.5	20
8931627	Total Silicon (Si)	2018/03/12	NC	80 - 120	104	80 - 120	<0.050	mg/L	0.092	20
8931627	Total Silver (Ag)	2018/03/12	101	80 - 120	100	80 - 120	<0.0000050	mg/L	NC	20
8931627	Total Strontium (Sr)	2018/03/12	NC	80 - 120	102	80 - 120	<0.000050	mg/L	0.48	20
8931627	Total Thallium (Tl)	2018/03/12	103	80 - 120	101	80 - 120	<0.0000020	mg/L	NC	20
8931627	Total Tin (Sn)	2018/03/12	101	80 - 120	98	80 - 120	<0.00020	mg/L	0.68	20
8931627	Total Titanium (Ti)	2018/03/12	102	80 - 120	104	80 - 120	<0.00050	mg/L	NC	20
8931627	Total Uranium (U)	2018/03/12	112	80 - 120	110	80 - 120	<0.0000020	mg/L	0.041	20
8931627	Total Vanadium (V)	2018/03/12	102	80 - 120	101	80 - 120	<0.00020	mg/L	NC	20
8931627	Total Zinc (Zn)	2018/03/12	100	80 - 120	105	80 - 120	<0.00010	mg/L	1.3	20
8931627	Total Zirconium (Zr)	2018/03/12	106	80 - 120	101	80 - 120	<0.00010	mg/L	NC	20
8931812	Dissolved Organic Carbon (C)	2018/03/12	97	80 - 120	108	80 - 120	<0.50	mg/L	5.2	20
8931814	Dissolved Organic Carbon (C)	2018/03/12	98	80 - 120	107	80 - 120	<0.50	mg/L	NC	20
8931953	Dissolved Mercury (Hg)	2018/03/12	94	80 - 120	2.6 (1)	80 - 120	<0.0000020	mg/L	NC	20
8932008	Strong Acid Dissoc. Cyanide (CN)	2018/03/12	87	80 - 120	102	80 - 120	<0.00050	mg/L	2.4	20
8932009	Total Suspended Solids	2018/03/13			101	80 - 120	<1.0	mg/L		
8932010	Weak Acid Dissoc. Cyanide (CN)	2018/03/12	106	80 - 120	106	80 - 120	<0.00050	mg/L	NC	20
8932112	Dissolved Mercury (Hg)	2018/03/13	103	80 - 120	98	80 - 120	<0.0000020	mg/L	NC	20
8932377	Dissolved Chloride (Cl)	2018/03/12	113	80 - 120	103	80 - 120	0.50, RDL=0.50	mg/L	6.2	20
8932378	Dissolved Sulphate (SO4)	2018/03/12	115	80 - 120	98	80 - 120	<0.50	mg/L	NC	20
8932906	Fluoride (F)	2018/03/13	NC	80 - 120	100	80 - 120	0.012, RDL=0.010	mg/L	0	20
8933079	Total Ammonia (N)	2018/03/13			103	80 - 120	<0.0050	mg/L		
8933512	Dissolved Sulphate (SO4)	2018/03/13			100	80 - 120	<0.50	mg/L		
8934582	Dissolved Aluminum (Al)	2018/03/14			104	80 - 120	<0.00050	mg/L		
8934582	Dissolved Antimony (Sb)	2018/03/14			101	80 - 120	<0.000020	mg/L		
8934582	Dissolved Arsenic (As)	2018/03/14			101	80 - 120	<0.000020	mg/L		
8934582	Dissolved Barium (Ba)	2018/03/14			97	80 - 120	<0.000020	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8934582	Dissolved Beryllium (Be)	2018/03/14			99	80 - 120	<0.000010	mg/L		
8934582	Dissolved Bismuth (Bi)	2018/03/14			102	80 - 120	<0.0000050	mg/L		
8934582	Dissolved Boron (B)	2018/03/14			103	80 - 120	<0.010	mg/L		
8934582	Dissolved Cadmium (Cd)	2018/03/14			97	80 - 120	<0.0000050	mg/L		
8934582	Dissolved Chromium (Cr)	2018/03/14			94	80 - 120	<0.00010	mg/L		
8934582	Dissolved Cobalt (Co)	2018/03/14			94	80 - 120	<0.0000050	mg/L		
8934582	Dissolved Copper (Cu)	2018/03/14			92	80 - 120	<0.000050	mg/L		
8934582	Dissolved Iron (Fe)	2018/03/14			98	80 - 120	<0.0010	mg/L		
8934582	Dissolved Lead (Pb)	2018/03/14			98	80 - 120	<0.0000050	mg/L		
8934582	Dissolved Lithium (Li)	2018/03/14			100	80 - 120	<0.00050	mg/L		
8934582	Dissolved Manganese (Mn)	2018/03/14			95	80 - 120	<0.000050	mg/L		
8934582	Dissolved Molybdenum (Mo)	2018/03/14			104	80 - 120	<0.000050	mg/L		
8934582	Dissolved Nickel (Ni)	2018/03/14			93	80 - 120	<0.000020	mg/L		
8934582	Dissolved Phosphorus (P)	2018/03/14			100	80 - 120	<0.0020	mg/L		
8934582	Dissolved Selenium (Se)	2018/03/14			94	80 - 120	<0.000040	mg/L		
8934582	Dissolved Silicon (Si)	2018/03/14			109	80 - 120	<0.050	mg/L		
8934582	Dissolved Silver (Ag)	2018/03/14			96	80 - 120	<0.0000050	mg/L		
8934582	Dissolved Strontium (Sr)	2018/03/14			102	80 - 120	<0.000050	mg/L		
8934582	Dissolved Thallium (Tl)	2018/03/14			103	80 - 120	<0.0000020	mg/L		
8934582	Dissolved Tin (Sn)	2018/03/14			101	80 - 120	<0.00020	mg/L		
8934582	Dissolved Titanium (Ti)	2018/03/14			99	80 - 120	<0.00050	mg/L		
8934582	Dissolved Uranium (U)	2018/03/14			100	80 - 120	<0.0000020	mg/L		
8934582	Dissolved Vanadium (V)	2018/03/14			95	80 - 120	<0.00020	mg/L		
8934582	Dissolved Zinc (Zn)	2018/03/14			95	80 - 120	<0.00010	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8934582	Dissolved Zirconium (Zr)	2018/03/14			102	80 - 120	<0.00010	mg/L		

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B817666
Report Date: 2018/03/16

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Name Redacted Scientific Services Manager

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY

08450272

COC #:

BBY FCD-00077/05

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days
Phone:		Phone:	(867) 668-6463	Site #:		[ ] 1 Day [ ] 3 Days
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:
						Rush Confirmation #:

Regulatory Criteria

- [ ] BC CSR Soil
- [ ] BC CSR Water
- [ ] CCME (Specify)
- [ ] Other (Specify)
- [ ] Drinking Water
- [ ] BC Water Quality

Special Instructions

- [ ] Return Cooler
- [ ] Ship Sample Bottles (Please Specify)

USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL				# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-26		7-Mar-18	9:25	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
2	KZ-15		7-Mar-18	10:05	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
3	KZ-9		7-Mar-18	10:55	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
4	KZ-18		7-Mar-18	10:45	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
5	KZ-37		7-Mar-18	10:35	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
6	KZ-2		7-Mar-18	11:45	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
7	KZ-13		7-Mar-18	12:15	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	
8	DUP		7-Mar-18	10:50	Water	x	x	x	x	x	x	x	x	x	x	x	x				11	

LABORATORY USE ONLY

CUSTODY SEAL (Y) N Present	Intact	COOLER TEMPERATURES
✓	✓	2,3,2
✓	✓	2,2,0

COOLING MEDIA PRESENT (Y) / N

COMMENTS

D IN WHITEHORSE

Signature Redacted

@11:00

2018-03-08

TEMP: 3 3 3

2 2 3

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	3/8/2018	9:00	Signature Redacted	2018/03/09	10:30

B817666_COC

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

CHAIN OF CUSTODY

08450273

COC #:

BBY FCD-00077/05

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	Field Blank		7-Mar-18	9:35	Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
2	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x	11	
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
V	V	2,3,2
V	V	2,2,0

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Signature Redacted @1100
2018-03-08

TEMP: 3 / 3 / 3
2 2 3

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	3/8/2018	9:00	Signature Redacted	2018/03/09	10:30

B817666_COC

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08450527, 08450528

Attention: KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2018/04/13
Report #: R2540913
Version: 2 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B820573
Received: 2018/03/19, 09:20

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Acidity pH 4.5 & pH 8.3 (as CaCO3)	4	2018/03/21	2018/03/21	BBY6SOP-00037	SM 22 2310 B m
Acidity pH 4.5 & pH 8.3 (as CaCO3)	11	2018/03/21	2018/03/24	BBY6SOP-00037	SM 22 2310 B m
Alkalinity - Low Level	15	2018/03/21	2018/03/22	BBY6SOP-00026	SM 22 2320 B m
Chloride - Low Level	15	N/A	2018/03/21	BBY6SOP-00011	SM 22 4500-Cl- E m
Cyanide SAD (strong acid dissociable)	15	N/A	2018/03/26	BBY6SOP-00004	SM 22 4500-CN O m
Cyanide WAD (weak acid dissociable)	15	N/A	2018/03/26	BBY6SOP-00004	SM 22 4500-CN O m
Carbon (DOC) - field filtered/preserved (2)	15	N/A	2018/03/21	BBY6SOP-00003	SM 22 5310 C m
Conductance - Low Level	14	2018/03/21	2018/03/22	BBY6SOP-00026	SM 22 2510 B m
Conductance - Low Level	1	2018/03/21	2018/03/23	BBY6SOP-00026	SM 22 2510 B m
Fluoride - Low Level	15	N/A	2018/03/21	BBY6SOP-00048	SM 22 4500-F C m
Hardness Total (calculated as CaCO3) (3)	15	N/A	2018/03/22	BBY WI-00033	Auto Calc
Hardness (calculated as CaCO3)	15	N/A	2018/03/22	BBY WI-00033	Auto Calc
Mercury (Dissolved) by CVAF	15	N/A	2018/03/21	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Mercury (Total) by CVAF	15	2018/03/21	2018/03/21	BBY7SOP-00015	BCMOE BCLM Oct2013 m
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	9	N/A	2018/03/22	BBY WI-00033	Auto Calc
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	6	N/A	2018/03/23	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (dissolved)	15	N/A	2018/03/22	BBY7SOP-00002	EPA 6020b R2 m
Na, K, Ca, Mg, S by CRC ICPMS (total)	7	N/A	2018/03/22	BBY WI-00033	Auto Calc
Na, K, Ca, Mg, S by CRC ICPMS (total)	8	N/A	2018/03/23	BBY WI-00033	Auto Calc
Elements by ICPMS Low Level (total)	15	N/A	2018/03/22	BBY7SOP-00002	EPA 6020b R2 m
Ammonia-N Low Level (Preserved)	15	N/A	2018/03/21	BBY6SOP-00009	EPA 350.1 m
Nitrate+Nitrite (N) (low level)	15	N/A	2018/03/21	BBY6SOP-00010	SM 23 4500-NO3- I m
Nitrite (N) (low level)	15	N/A	2018/03/21	BBY6SOP-00010	SM 23 4500-NO3- I m
Nitrogen - Nitrate (as N) Low Level Calc	15	N/A	2018/03/22	BBY WI-00033	Auto Calc
Filter and HNO3 Preserve for Metals	14	N/A	2018/04/13	BBY7 WI-00004	BCMOE Reqs 08/14
pH Water (4)	14	2018/03/21	2018/03/22	BBY6SOP-00026	SM 22 4500-H+ B m
pH Water (4)	1	2018/03/22	2018/03/23	BBY6SOP-00026	SM 22 4500-H+ B m
Sulphate - Low Level	15	N/A	2018/03/21	BBY6SOP-00017	SM 22 4500-SO42- E m
Phosphorus-P (LL Tot, dissolved) - UF/UP	15	2018/03/21	2018/03/21	BBY6SOP-00013	SM 22 4500-P E m

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08450527, 08450528

Attention: KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2018/04/13
Report #: R2540913
Version: 2 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B820573
Received: 2018/03/19, 09:20

Sample Matrix: Water
Samples Received: 15

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Total Phosphorus - Low Level Unpreserved	15	2018/03/21	2018/03/21	BBY6SOP-00013	SM 22 4500-P E m
Total Suspended Solids-Low Level	8	2018/03/21	2018/03/22	BBY6SOP-00034	SM 22 2540 D
Total Suspended Solids-Low Level	7	2018/03/22	2018/03/23	BBY6SOP-00034	SM 22 2540 D
Arsenic Speciation Water Subcontract (1)	2	N/A	2018/04/13		
Dissolved Selenium Speciation SubC (1)	14	N/A	2018/04/13		

Remarks:

Maxxam Analytics' laboratories are accredited to ISO/IEC 17025:2005 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Maxxam are based upon recognized Provincial, Federal or US method compendia such as CCME, MDDELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Maxxam's profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Maxxam in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected.

Maxxam Analytics' liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Maxxam has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Maxxam, unless otherwise agreed in writing.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Sub Vancouver to Brooks Rand
(2) DOC present in the sample should be considered as non-purgeable DOC.
(3) "Total Hardness" was calculated from Total Ca and Mg concentrations and may be biased high (Hardness, or Dissolved Hardness, calculated from Dissolved Ca and Mg, should be used for compliance if available).
(4) The BC-MOE and APHA Standard Method require pH to be analysed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the BC-MOE/APHA Standard Method holding time.

Your Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Your C.O.C. #: 08450527, 08450528

Attention: KAI WOLOSHYN

ALEXCO ENVIRONMENTAL GROUP INC.
Unit 3 Calcite Business Centre
151 Industrial Road
WHITEHORSE, YT
Canada Y1A 2V3

Report Date: 2018/04/13
Report #: R2540913
Version: 2 - Final

CERTIFICATE OF ANALYSIS

MAXXAM JOB #: B820573
Received: 2018/03/19, 09:20

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Name, Phone and Fax
Redacted

==========

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		TD2528		TD2529		TD2530		
Sampling Date		2018/03/15 17:00		2018/03/15 16:20		2018/03/15 15:50		
COC Number		08450527		08450527		08450527		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	RDL	QC Batch
Parameter								
Subcontract Parameter	N/A	ATTACHED	8959033	ATTACHED	8959033	ATTACHED	N/A	8959033
Calculated Parameters								
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Nitrate (N)	mg/L	0.177	8939458	0.162	8939458	0.190	0.0020	8939458
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00062	8942705	0.00057	8942705	0.00070	0.00050	8942705
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8942706	<0.00050	8942706	<0.00050	0.00050	8942706
Fluoride (F)	mg/L	0.049	8940546	0.073	8940546	0.110	0.010	8940546
Dissolved Organic Carbon (C)	mg/L	<0.50	8940627	0.52	8940627	<0.50	0.50	8940627
Acidity (pH 4.5)	mg/L	<1.0	8940837	<1.0	8940559	<1.0	1.0	8940837
Alkalinity (Total as CaCO3)	mg/L	89.0	8940775	153	8940775	208	0.50	8940775
Acidity (pH 8.3)	mg/L	<1.0	8940837	1.0	8940559	15.1	1.0	8940837
Alkalinity (PP as CaCO3)	mg/L	<0.50	8940775	0.99	8940775	<0.50	0.50	8940775
Bicarbonate (HCO3)	mg/L	109	8940775	184	8940775	254	0.50	8940775
Carbonate (CO3)	mg/L	<0.50	8940775	1.19	8940775	<0.50	0.50	8940775
Hydroxide (OH)	mg/L	<0.50	8940775	<0.50	8940775	<0.50	0.50	8940775
Anions								
Dissolved Sulphate (SO4)	mg/L	66.6	8940996	23.7	8940996	30.5	0.50	8940996
Dissolved Chloride (Cl)	mg/L	1.3	8940994	0.51	8940994	0.70	0.50	8940994
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0027	8940952	0.0028	8940952	0.0041	0.0020	8940952
Total Ammonia (N)	mg/L	0.016	8941595	0.013	8941595	0.040	0.0050	8941595
Nitrate plus Nitrite (N)	mg/L	0.177	8940830	0.162	8940830	0.190	0.0020	8940830
Nitrite (N)	mg/L	<0.0020	8940831	<0.0020	8940831	<0.0020	0.0020	8940831
Total Phosphorus (P)	mg/L	<0.0020	8940953	0.0025	8940953	0.0041	0.0020	8940953
Physical Properties								
Conductivity	uS/cm	305	8940774	328	8940774	447	1.0	8940774
pH	pH	8.04	8940765	8.34	8940765	8.23		8940765
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8940367	<1.0	8940367	1.0	1.0	8940367

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		TD2531		TD2532		TD2533		
Sampling Date		2018/03/15 13:30		2018/03/15 14:10		2018/03/15 14:00		
COC Number		08450527		08450527		08450527		
	UNITS	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Parameter								
Subcontract Parameter	N/A	ATTACHED	8959033	ATTACHED	8959033	ATTACHED	N/A	8959033
Calculated Parameters								
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD		ONSITE
Nitrate (N)	mg/L	0.192	8939458	0.209	8939458	0.212	0.0020	8939458
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00062	8942705	0.00062	8942705	0.00062	0.00050	8942705
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8942706	<0.00050	8942706	0.00052	0.00050	8942706
Fluoride (F)	mg/L	0.130	8940546	0.099	8940546	0.080	0.010	8940546
Dissolved Organic Carbon (C)	mg/L	0.81	8940627	<0.50	8940627	<0.50	0.50	8940627
Acidity (pH 4.5)	mg/L	<1.0	8940559	<1.0	8943524	<1.0	1.0	8943524
Alkalinity (Total as CaCO3)	mg/L	273	8940775	280	8940775	289	0.50	8940775
Acidity (pH 8.3)	mg/L	8.2	8940559	<1.0	8943524	<1.0	1.0	8943524
Alkalinity (PP as CaCO3)	mg/L	4.62	8940775	3.68	8940775	4.96	0.50	8940775
Bicarbonate (HCO3)	mg/L	322	8940775	332	8940775	340	0.50	8940775
Carbonate (CO3)	mg/L	5.54	8940775	4.42	8940775	5.95	0.50	8940775
Hydroxide (OH)	mg/L	<0.50	8940775	<0.50	8940775	<0.50	0.50	8940775
Anions								
Dissolved Sulphate (SO4)	mg/L	43.0	8940996	46.3	8940996	47.4	0.50	8940996
Dissolved Chloride (Cl)	mg/L	0.62	8940994	0.61	8940994	0.58	0.50	8940994
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0037	8940952	0.0042	8940952	0.0026	0.0020	8940955
Total Ammonia (N)	mg/L	0.016	8941595	0.014	8941595	0.010	0.0050	8941595
Nitrate plus Nitrite (N)	mg/L	0.192	8940830	0.209	8940830	0.212	0.0020	8940830
Nitrite (N)	mg/L	<0.0020	8940831	<0.0020	8940831	<0.0020	0.0020	8940831
Total Phosphorus (P)	mg/L	0.0039	8940953	0.0043	8940953	0.0026	0.0020	8940957
Physical Properties								
Conductivity	uS/cm	561	8940774	582	8940774	591	1.0	8940774
pH	pH	8.40	8940765	8.36	8940765	8.43		8940765
Physical Properties								
Total Suspended Solids	mg/L	<1.0	8940367	1.0	8940367	1.1	1.0	8940367

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		TD2534		TD2535		TD2561	TD2562		
Sampling Date		2018/03/15 15:25		2018/03/15 15:30		2018/03/15 12:30	2018/03/15 11:45		
COC Number		08450527		08450527		08450528	08450528		
	UNITS	KZ-18	QC Batch	KZ-19	QC Batch	KZ-21	KZ-22	RDL	QC Batch
Parameter									
Subcontract Parameter	N/A	ATTACHED	8959033	ATTACHED	8959033	ATTACHED	ATTACHED	N/A	8959033
Calculated Parameters									
Filter and HNO3 Preservation	N/A	FIELD	ONSITE	FIELD	ONSITE	FIELD	FIELD		ONSITE
Nitrate (N)	mg/L	0.244	8939458	<0.0020	8939458	0.166	0.211	0.0020	8939458
Misc. Inorganics									
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00060	8942705	0.00053	8942705	0.00073	0.00069	0.00050	8942705
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	8942706	<0.00050	8942706	0.00059	0.00051	0.00050	8942706
Fluoride (F)	mg/L	0.087	8940546	<0.010	8940546	0.220	0.190	0.010	8940546
Dissolved Organic Carbon (C)	mg/L	<0.50	8940627	<0.50	8940627	4.51	1.83	0.50	8940627
Acidity (pH 4.5)	mg/L	<1.0	8943524	<1.0	8943524	<1.0	<1.0	1.0	8943524
Alkalinity (Total as CaCO3)	mg/L	209	8940775	<0.50	8942130	312	317	0.50	8940775
Acidity (pH 8.3)	mg/L	<1.0	8943524	<1.0	8943524	<1.0	<1.0	1.0	8943524
Alkalinity (PP as CaCO3)	mg/L	2.57	8940775	<0.50	8942130	5.26	4.34	0.50	8940775
Bicarbonate (HCO3)	mg/L	249	8940775	<0.50	8942130	368	376	0.50	8940775
Carbonate (CO3)	mg/L	3.08	8940775	<0.50	8942130	6.31	5.21	0.50	8940775
Hydroxide (OH)	mg/L	<0.50	8940775	<0.50	8942130	<0.50	<0.50	0.50	8940775
Anions									
Dissolved Sulphate (SO4)	mg/L	23.1	8940996	<0.50	8940996	43.9	53.5	0.50	8940996
Dissolved Chloride (Cl)	mg/L	<0.50	8940994	<0.50	8940994	1.1	0.60	0.50	8940994
Nutrients									
Dissolved Phosphorus (P)	mg/L	0.0621	8940952	<0.0020	8940955	0.0283	0.0159	0.0020	8940952
Total Ammonia (N)	mg/L	0.014	8941595	0.0070	8941595	0.099	0.061	0.0050	8941595
Nitrate plus Nitrite (N)	mg/L	0.244	8940830	<0.0020	8940830	0.166	0.211	0.0020	8940830
Nitrite (N)	mg/L	<0.0020	8940831	<0.0020	8940831	<0.0020	<0.0020	0.0020	8940831
Total Phosphorus (P)	mg/L	0.0648	8940953	<0.0020	8940957	0.0249	0.0151	0.0020	8940953
Physical Properties									
Conductivity	uS/cm	421	8940774	1.1	8942146	631	650	1.0	8940774
pH	pH	8.36	8940765	5.04	8942138	8.38	8.37		8940765
Physical Properties									
Total Suspended Solids	mg/L	1.8	8940367	<1.0	8940367	3.5	2.9	1.0	8942166

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		TD2563	TD2564	TD2565		TD2566		
Sampling Date		2018/03/15 08:30	2018/03/15 08:45	2018/03/15 14:50		2018/03/15 17:55		
COC Number		08450528	08450528	08450528		08450528		
	UNITS	KZ-26	KZ-28	KZ-37	QC Batch	KZ-13	RDL	QC Batch
Parameter								
Subcontract Parameter	N/A	ATTACHED	ATTACHED	ATTACHED	8959033	ATTACHED	N/A	8959033
Calculated Parameters								
Filter and HNO3 Preservation	N/A	FIELD	FIELD	FIELD	ONSITE	FIELD		ONSITE
Nitrate (N)	mg/L	0.240	0.240	0.198	8939458	0.114	0.0020	8939458
Misc. Inorganics								
Strong Acid Dissoc. Cyanide (CN)	mg/L	0.00065	0.00065	0.00065	8942705	0.00072	0.00050	8942705
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	<0.00050	<0.00050	8942706	<0.00050	0.00050	8942706
Fluoride (F)	mg/L	0.140	0.140	0.110	8940546	0.061	0.010	8940546
Dissolved Organic Carbon (C)	mg/L	1.92	2.13	0.90	8940627	2.18	0.50	8940627
Acidity (pH 4.5)	mg/L	<1.0	<1.0	<1.0	8943524	<1.0	1.0	8943524
Alkalinity (Total as CaCO3)	mg/L	303	304	208	8940775	107	0.50	8940775
Acidity (pH 8.3)	mg/L	<1.0	<1.0	<1.0	8943524	<1.0	1.0	8943524
Alkalinity (PP as CaCO3)	mg/L	10.8	9.35	<0.50	8940775	<0.50	0.50	8940775
Bicarbonate (HCO3)	mg/L	343	348	254	8940775	131	0.50	8940775
Carbonate (CO3)	mg/L	12.9	11.2	<0.50	8940775	<0.50	0.50	8940775
Hydroxide (OH)	mg/L	<0.50	<0.50	<0.50	8940775	<0.50	0.50	8940775
Anions								
Dissolved Sulphate (SO4)	mg/L	54.8	55.5	28.9	8940996	18.6	0.50	8940996
Dissolved Chloride (Cl)	mg/L	0.60	0.60	<0.50	8940994	<0.50	0.50	8940994
Nutrients								
Dissolved Phosphorus (P)	mg/L	0.0039	0.0056	0.0096	8940955	0.0033	0.0020	8940952
Total Ammonia (N)	mg/L	0.0090	0.0060	0.022	8941595	0.031	0.0050	8941595
Nitrate plus Nitrite (N)	mg/L	0.240	0.240	0.198	8940830	0.114	0.0020	8940830
Nitrite (N)	mg/L	<0.0020	<0.0020	<0.0020	8940831	<0.0020	0.0020	8940831
Total Phosphorus (P)	mg/L	0.0039	0.0039	0.0080	8940957	0.0031	0.0020	8940953
Physical Properties								
Conductivity	uS/cm	623	625	435	8940774	242	1.0	8940774
pH	pH	8.51	8.50	8.23	8940765	8.23		8940765
Physical Properties								
Total Suspended Solids	mg/L	<1.0	<1.0	<1.0	8942166	<1.0	1.0	8942166

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		TD2567		
Sampling Date		2018/03/19 09:20		
COC Number		08450528		
	UNITS	TRIP BLANK	RDL	QC Batch
Calculated Parameters				
Nitrate (N)	mg/L	<0.0020	0.0020	8939458
Misc. Inorganics				
Strong Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8942705
Weak Acid Dissoc. Cyanide (CN)	mg/L	<0.00050	0.00050	8942706
Fluoride (F)	mg/L	0.010	0.010	8940546
Dissolved Organic Carbon (C)	mg/L	<0.50	0.50	8940627
Acidity (pH 4.5)	mg/L	<1.0	1.0	8943524
Alkalinity (Total as CaCO3)	mg/L	1.04	0.50	8940775
Acidity (pH 8.3)	mg/L	<1.0	1.0	8943524
Alkalinity (PP as CaCO3)	mg/L	<0.50	0.50	8940775
Bicarbonate (HCO3)	mg/L	1.27	0.50	8940775
Carbonate (CO3)	mg/L	<0.50	0.50	8940775
Hydroxide (OH)	mg/L	<0.50	0.50	8940775
Anions				
Dissolved Sulphate (SO4)	mg/L	<0.50	0.50	8940996
Dissolved Chloride (Cl)	mg/L	<0.50	0.50	8940994
Nutrients				
Dissolved Phosphorus (P)	mg/L	<0.0020	0.0020	8940955
Total Ammonia (N)	mg/L	<0.0050	0.0050	8941595
Nitrate plus Nitrite (N)	mg/L	<0.0020	0.0020	8940830
Nitrite (N)	mg/L	<0.0020	0.0020	8940831
Total Phosphorus (P)	mg/L	<0.0020	0.0020	8940957
Physical Properties				
Conductivity	uS/cm	1.1	1.0	8940774
pH	pH	5.76		8940765
Physical Properties				
Total Suspended Solids	mg/L	<1.0	1.0	8942166
RDL = Reportable Detection Limit				

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TD2528		TD2529		TD2530		
Sampling Date		2018/03/15 17:00		2018/03/15 16:20		2018/03/15 15:50		
COC Number		08450527		08450527		08450527		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO3)	mg/L	147	8938965	164	8938965	221	0.50	8938965
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8940618	<0.0000020	8940618	<0.0000020	0.0000020	8940618
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00223	8940008	0.00441 (1)	8942156	0.00341	0.00050	8940008
Dissolved Antimony (Sb)	mg/L	0.000038	8940008	0.000027	8940008	0.000045	0.000020	8940008
Dissolved Arsenic (As)	mg/L	0.000078	8940008	0.000075	8940008	0.000252	0.000020	8940008
Dissolved Barium (Ba)	mg/L	0.0769	8940008	0.0472	8940008	0.104	0.000020	8940008
Dissolved Beryllium (Be)	mg/L	<0.000010	8940008	<0.000010	8940008	<0.000010	0.000010	8940008
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8940008	<0.0000050	8940008	<0.0000050	0.0000050	8940008
Dissolved Boron (B)	mg/L	<0.010	8940008	<0.010	8940008	<0.010	0.010	8940008
Dissolved Cadmium (Cd)	mg/L	0.000294	8940008	0.000143	8940008	0.000112	0.0000050	8940008
Dissolved Chromium (Cr)	mg/L	<0.00010	8940008	<0.00010	8940008	<0.00010	0.00010	8940008
Dissolved Cobalt (Co)	mg/L	0.0000063	8940008	0.0000140	8940008	0.000200	0.0000050	8940008
Dissolved Copper (Cu)	mg/L	0.000629	8940008	0.000331	8940008	0.000536	0.000050	8940008
Dissolved Iron (Fe)	mg/L	0.0012	8940008	0.0101 (1)	8942156	0.316 (1)	0.0010	8942156
Dissolved Lead (Pb)	mg/L	0.0000286	8940008	0.0000222	8940008	0.0000294	0.0000050	8940008
Dissolved Lithium (Li)	mg/L	0.00150	8940008	0.00061	8940008	0.00514	0.00050	8940008
Dissolved Manganese (Mn)	mg/L	0.000121	8940008	0.00152	8940008	0.162	0.000050	8940008
Dissolved Molybdenum (Mo)	mg/L	0.000754	8940008	0.000787	8940008	0.000718	0.000050	8940008
Dissolved Nickel (Ni)	mg/L	0.000330	8940008	0.000189	8940008	0.000645	0.000020	8940008
Dissolved Phosphorus (P)	mg/L	0.0087	8940008	0.0072	8940008	0.0060	0.0020	8940008
Dissolved Selenium (Se)	mg/L	0.00302	8940008	0.00145	8940008	0.00112	0.000040	8940008
Dissolved Silicon (Si)	mg/L	2.40	8940008	2.85	8940008	3.95	0.050	8940008
Dissolved Silver (Ag)	mg/L	<0.0000050	8940008	<0.0000050	8940008	<0.0000050	0.0000050	8940008
Dissolved Strontium (Sr)	mg/L	0.170	8940008	0.175	8940008	0.263	0.000050	8940008
Dissolved Thallium (Tl)	mg/L	0.0000038	8940008	<0.0000020	8940008	<0.0000020	0.0000020	8940008
Dissolved Tin (Sn)	mg/L	<0.00020	8940008	<0.00020	8940008	<0.00020	0.00020	8940008
Dissolved Titanium (Ti)	mg/L	<0.00050	8940008	<0.00050	8940008	<0.00050	0.00050	8940008
Dissolved Uranium (U)	mg/L	0.00481	8940008	0.00125	8940008	0.00156	0.0000020	8940008

RDL = Reportable Detection Limit

(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TD2528		TD2529		TD2530		
Sampling Date		2018/03/15 17:00		2018/03/15 16:20		2018/03/15 15:50		
COC Number		08450527		08450527		08450527		
	UNITS	KZ-2	QC Batch	KZ-6	QC Batch	KZ-9	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	8940008	<0.00020	8940008	<0.00020	0.00020	8940008
Dissolved Zinc (Zn)	mg/L	0.0330	8940008	0.00944	8940008	0.0182	0.00010	8940008
Dissolved Zirconium (Zr)	mg/L	<0.00010	8940008	<0.00010	8940008	<0.00010	0.00010	8940008
Dissolved Calcium (Ca)	mg/L	46.7	8938966	54.1	8938966	73.9	0.050	8938966
Dissolved Magnesium (Mg)	mg/L	7.42	8938966	7.09	8938966	8.93	0.050	8938966
Dissolved Potassium (K)	mg/L	2.43	8938966	1.11	8938966	2.00	0.050	8938966
Dissolved Sodium (Na)	mg/L	1.29	8938966	0.904	8938966	2.00	0.050	8938966
Dissolved Sulphur (S)	mg/L	21.3	8938966	7.5	8938966	9.8	3.0	8938966

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TD2531		TD2532		TD2533		
Sampling Date		2018/03/15 13:30		2018/03/15 14:10		2018/03/15 14:00		
COC Number		08450527		08450527		08450527		
	UNITS	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO3)	mg/L	302	8938965	319	8938965	325	0.50	8938965
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8940618	<0.0000020	8940618	<0.0000020	0.0000020	8940618
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00099	8940008	0.00109	8940008	0.00104	0.00050	8940008
Dissolved Antimony (Sb)	mg/L	0.000037	8940008	0.000024	8940008	0.000028	0.000020	8940008
Dissolved Arsenic (As)	mg/L	0.000325	8940008	0.000199	8940008	0.000229	0.000020	8940008
Dissolved Barium (Ba)	mg/L	0.0997	8940008	0.102	8940008	0.109	0.000020	8940008
Dissolved Beryllium (Be)	mg/L	<0.000010	8940008	<0.000010	8940008	<0.000010	0.000010	8940008
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8940008	<0.0000050	8940008	<0.0000050	0.0000050	8940008
Dissolved Boron (B)	mg/L	<0.010	8940008	<0.010	8940008	<0.010	0.010	8940008
Dissolved Cadmium (Cd)	mg/L	0.0000673	8940008	0.0000358	8940008	0.0000484 (1)	0.0000050	8942156
Dissolved Chromium (Cr)	mg/L	<0.00010	8940008	<0.00010	8940008	<0.00010	0.00010	8940008
Dissolved Cobalt (Co)	mg/L	0.0000428	8940008	0.0000086	8940008	0.0000078	0.0000050	8940008
Dissolved Copper (Cu)	mg/L	0.000262	8940008	0.000293	8940008	0.000594 (1)	0.000050	8942156
Dissolved Iron (Fe)	mg/L	0.0077	8940008	0.0017	8940008	<0.0010	0.0010	8940008
Dissolved Lead (Pb)	mg/L	<0.0000050	8940008	0.0000061	8940008	0.0000154	0.0000050	8940008
Dissolved Lithium (Li)	mg/L	0.00426	8940008	0.00454	8940008	0.00383	0.00050	8940008
Dissolved Manganese (Mn)	mg/L	0.0591	8940008	0.00277	8940008	0.000586	0.000050	8940008
Dissolved Molybdenum (Mo)	mg/L	0.00145	8940008	0.000374 (2)	8942156	0.000466	0.000050	8940008
Dissolved Nickel (Ni)	mg/L	0.00114	8940008	0.000711	8940008	0.000604	0.000020	8940008
Dissolved Phosphorus (P)	mg/L	0.0060	8940008	0.0110	8940008	0.0053	0.0020	8940008
Dissolved Selenium (Se)	mg/L	0.00159	8940008	0.00166	8940008	0.00172	0.000040	8940008
Dissolved Silicon (Si)	mg/L	4.05	8940008	4.24	8940008	4.25	0.050	8940008
Dissolved Silver (Ag)	mg/L	<0.0000050	8940008	<0.0000050	8940008	<0.0000050	0.0000050	8940008
Dissolved Strontium (Sr)	mg/L	0.292	8940008	0.303	8940008	0.323	0.000050	8940008
Dissolved Thallium (Tl)	mg/L	<0.0000020	8940008	<0.0000020	8940008	<0.0000020	0.0000020	8940008
Dissolved Tin (Sn)	mg/L	<0.00020	8940008	<0.00020	8940008	<0.00020	0.00020	8940008
Dissolved Titanium (Ti)	mg/L	<0.00050	8940008	<0.00050	8940008	<0.00050	0.00050	8940008

RDL = Reportable Detection Limit
(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.
(2) Test repeated.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TD2531		TD2532		TD2533		
Sampling Date		2018/03/15 13:30		2018/03/15 14:10		2018/03/15 14:00		
COC Number		08450527		08450527		08450527		
	UNITS	KZ-15	QC Batch	KZ-16	QC Batch	KZ-17	RDL	QC Batch
Dissolved Uranium (U)	mg/L	0.00543	8940008	0.00281	8940008	0.00336	0.0000020	8940008
Dissolved Vanadium (V)	mg/L	<0.00020	8940008	<0.00020	8940008	<0.00020	0.00020	8940008
Dissolved Zinc (Zn)	mg/L	0.00816	8940008	0.00303	8940008	0.00407 (1)	0.00010	8942156
Dissolved Zirconium (Zr)	mg/L	<0.00010	8940008	<0.00010	8940008	<0.00010	0.00010	8940008
Dissolved Calcium (Ca)	mg/L	85.5	8942110	90.4	8942110	94.8	0.050	8942110
Dissolved Magnesium (Mg)	mg/L	21.5	8942110	22.6	8942110	21.4	0.050	8942110
Dissolved Potassium (K)	mg/L	1.61	8942110	1.81	8942110	1.65	0.050	8942110
Dissolved Sodium (Na)	mg/L	1.75	8942110	1.93	8942110	1.90	0.050	8942110
Dissolved Sulphur (S)	mg/L	13.3	8942110	15.6	8942110	14.7	3.0	8942110

RDL = Reportable Detection Limit

(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TD2534		TD2535		TD2561		
Sampling Date		2018/03/15 15:25		2018/03/15 15:30		2018/03/15 12:30		
COC Number		08450527		08450527		08450528		
	UNITS	KZ-18	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO3)	mg/L	228	8938965	<0.50	8938965	357	0.50	8938965
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8940618	<0.0000020	8940618	<0.0000020	0.0000020	8940211
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00342	8940008	<0.00050	8940008	0.00111	0.00050	8940008
Dissolved Antimony (Sb)	mg/L	0.000048	8940008	<0.000020	8940008	0.000053	0.000020	8940008
Dissolved Arsenic (As)	mg/L	0.00102	8940008	<0.000020	8940008	0.000632	0.000020	8940008
Dissolved Barium (Ba)	mg/L	0.0566	8940008	0.000030 (1)	8942156	0.0780	0.000020	8940008
Dissolved Beryllium (Be)	mg/L	<0.000010	8940008	<0.000010	8940008	<0.000010	0.000010	8940008
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8940008	<0.0000050	8940008	<0.0000050	0.0000050	8940008
Dissolved Boron (B)	mg/L	<0.010	8940008	<0.010	8940008	<0.010	0.010	8940008
Dissolved Cadmium (Cd)	mg/L	0.0000557	8940008	0.0000079	8940008	0.0000480	0.0000050	8940008
Dissolved Chromium (Cr)	mg/L	0.00016	8940008	<0.00010	8940008	<0.00010	0.00010	8940008
Dissolved Cobalt (Co)	mg/L	0.0000436	8940008	<0.0000050	8940008	0.000232	0.0000050	8940008
Dissolved Copper (Cu)	mg/L	0.000444 (2)	8942156	0.000273 (2)	8940008	0.000782	0.000050	8940008
Dissolved Iron (Fe)	mg/L	0.0643	8940008	<0.0010	8940008	0.0479	0.0010	8940008
Dissolved Lead (Pb)	mg/L	0.0000178	8940008	0.0000175 (1)	8940008	0.0000080	0.0000050	8940008
Dissolved Lithium (Li)	mg/L	0.00213	8940008	<0.00050	8940008	0.00817	0.00050	8940008
Dissolved Manganese (Mn)	mg/L	0.0197	8940008	0.000061	8940008	0.223	0.000050	8940008
Dissolved Molybdenum (Mo)	mg/L	0.00182	8940008	<0.000050	8940008	0.00175 (1)	0.000050	8942156
Dissolved Nickel (Ni)	mg/L	0.000332	8940008	<0.000020	8940008	0.00268	0.000020	8940008
Dissolved Phosphorus (P)	mg/L	0.0656	8940008	0.0041 (1)	8942156	0.0066	0.0020	8940008
Dissolved Selenium (Se)	mg/L	0.00147	8940008	<0.000040	8940008	0.000495	0.000040	8940008
Dissolved Silicon (Si)	mg/L	3.37	8940008	<0.050	8940008	6.92	0.050	8940008
Dissolved Silver (Ag)	mg/L	<0.0000050	8940008	<0.0000050	8940008	<0.0000050	0.0000050	8940008
Dissolved Strontium (Sr)	mg/L	0.204	8940008	<0.000050	8940008	0.278	0.000050	8940008
Dissolved Thallium (Tl)	mg/L	<0.0000020	8940008	<0.0000020	8940008	<0.0000020	0.0000020	8940008
Dissolved Tin (Sn)	mg/L	<0.00020	8940008	<0.00020	8940008	<0.00020	0.00020	8940008
Dissolved Titanium (Ti)	mg/L	<0.00050	8940008	<0.00050	8940008	<0.00050	0.00050	8940008

RDL = Reportable Detection Limit
(1) Test repeated.
(2) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TD2534		TD2535		TD2561		
Sampling Date		2018/03/15 15:25		2018/03/15 15:30		2018/03/15 12:30		
COC Number		08450527		08450527		08450528		
	UNITS	KZ-18	QC Batch	KZ-19	QC Batch	KZ-21	RDL	QC Batch
Dissolved Uranium (U)	mg/L	0.00302	8940008	<0.0000020	8940008	0.00318	0.0000020	8940008
Dissolved Vanadium (V)	mg/L	<0.00020	8940008	<0.00020	8940008	<0.00020	0.00020	8940008
Dissolved Zinc (Zn)	mg/L	0.00274	8940008	0.00086 (1)	8940008	0.00681	0.00010	8940008
Dissolved Zirconium (Zr)	mg/L	<0.00010	8940008	<0.00010	8940008	0.00020	0.00010	8940008
Dissolved Calcium (Ca)	mg/L	58.6	8938966	<0.050	8942110	85.8	0.050	8942110
Dissolved Magnesium (Mg)	mg/L	19.9	8938966	<0.050	8942110	34.7	0.050	8942110
Dissolved Potassium (K)	mg/L	0.763	8938966	0.052	8942110	2.79	0.050	8942110
Dissolved Sodium (Na)	mg/L	1.15	8938966	0.093	8942110	2.81	0.050	8942110
Dissolved Sulphur (S)	mg/L	7.9	8938966	<3.0	8942110	15.3	3.0	8942110

RDL = Reportable Detection Limit
(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TD2562		TD2563		TD2564		
Sampling Date		2018/03/15 11:45		2018/03/15 08:30		2018/03/15 08:45		
COC Number		08450528		08450528		08450528		
	UNITS	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Calculated Parameters								
Dissolved Hardness (CaCO3)	mg/L	355	8938965	347	8938965	378	0.50	8938965
Elements								
Dissolved Mercury (Hg)	mg/L	<0.0000020	8940211	<0.0000020	8940211	<0.0000020	0.0000020	8940211
Dissolved Metals by ICPMS								
Dissolved Aluminum (Al)	mg/L	0.00083	8940008	0.00157	8940008	0.00140	0.00050	8940008
Dissolved Antimony (Sb)	mg/L	0.000038	8940008	0.000070	8940008	0.000086	0.000020	8940008
Dissolved Arsenic (As)	mg/L	0.000802	8940008	0.000427	8940008	0.000416	0.000020	8940008
Dissolved Barium (Ba)	mg/L	0.0867	8940008	0.0952	8940008	0.0968	0.000020	8940008
Dissolved Beryllium (Be)	mg/L	<0.000010	8940008	<0.000010	8940008	<0.000010	0.000010	8940008
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8940008	<0.0000050	8940008	<0.0000050	0.0000050	8940008
Dissolved Boron (B)	mg/L	<0.010	8940008	<0.010	8940008	<0.010	0.010	8940008
Dissolved Cadmium (Cd)	mg/L	0.0000261 (1)	8942156	0.0000171	8940008	0.0000228	0.0000050	8940008
Dissolved Chromium (Cr)	mg/L	<0.00010	8940008	<0.00010	8940008	<0.00010	0.00010	8940008
Dissolved Cobalt (Co)	mg/L	0.000190	8940008	0.0000154	8940008	0.0000179	0.0000050	8940008
Dissolved Copper (Cu)	mg/L	0.000406 (1)	8942156	0.000559 (1)	8942156	0.00105 (1)	0.000050	8942156
Dissolved Iron (Fe)	mg/L	0.178	8940008	0.0030	8940008	0.0029	0.0010	8940008
Dissolved Lead (Pb)	mg/L	<0.0000050	8940008	0.0000176	8940008	0.0000319 (1)	0.0000050	8942156
Dissolved Lithium (Li)	mg/L	0.00960	8940008	0.00736	8940008	0.00749	0.00050	8940008
Dissolved Manganese (Mn)	mg/L	0.141	8940008	0.00584	8940008	0.00602	0.000050	8940008
Dissolved Molybdenum (Mo)	mg/L	0.00153	8940008	0.000991	8940008	0.00106	0.000050	8940008
Dissolved Nickel (Ni)	mg/L	0.00193	8940008	0.000805	8940008	0.000830	0.000020	8940008
Dissolved Phosphorus (P)	mg/L	0.0056	8940008	0.0113 (1)	8942156	0.0092	0.0020	8940008
Dissolved Selenium (Se)	mg/L	0.000918	8940008	0.00101	8940008	0.00102	0.000040	8940008
Dissolved Silicon (Si)	mg/L	5.92	8940008	5.39	8940008	5.59	0.050	8940008
Dissolved Silver (Ag)	mg/L	<0.0000050	8940008	<0.0000050	8940008	<0.0000050	0.0000050	8940008
Dissolved Strontium (Sr)	mg/L	0.307	8940008	0.307	8940008	0.309	0.000050	8940008
Dissolved Thallium (Tl)	mg/L	<0.0000020	8940008	<0.0000020	8940008	<0.0000020	0.0000020	8940008
Dissolved Tin (Sn)	mg/L	<0.00020	8940008	<0.00020	8940008	<0.00020	0.00020	8940008
Dissolved Titanium (Ti)	mg/L	<0.00050	8940008	<0.00050	8940008	<0.00050	0.00050	8940008
Dissolved Uranium (U)	mg/L	0.00413	8940008	0.00377	8940008	0.00389	0.0000020	8940008

RDL = Reportable Detection Limit

(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TD2562		TD2563		TD2564		
Sampling Date		2018/03/15 11:45		2018/03/15 08:30		2018/03/15 08:45		
COC Number		08450528		08450528		08450528		
	UNITS	KZ-22	QC Batch	KZ-26	QC Batch	KZ-28	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	8940008	<0.00020	8940008	<0.00020	0.00020	8940008
Dissolved Zinc (Zn)	mg/L	0.00274 (1)	8942156	0.00260 (1)	8942156	0.00506 (1)	0.00010	8942156
Dissolved Zirconium (Zr)	mg/L	0.00040	8940008	<0.00010	8940008	<0.00010	0.00010	8940008
Dissolved Calcium (Ca)	mg/L	89.8	8942110	89.6	8938966	97.8	0.050	8942110
Dissolved Magnesium (Mg)	mg/L	31.8	8942110	30.0	8938966	32.6	0.050	8942110
Dissolved Potassium (K)	mg/L	2.23	8942110	1.97	8938966	2.20	0.050	8942110
Dissolved Sodium (Na)	mg/L	2.67	8942110	2.67	8938966	2.95	0.050	8942110
Dissolved Sulphur (S)	mg/L	16.7	8942110	17.1	8938966	19.6	3.0	8942110

RDL = Reportable Detection Limit
(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TD2565		TD2566	TD2567		
Sampling Date		2018/03/15 14:50		2018/03/15 17:55	2018/03/19 09:20		
COC Number		08450528		08450528	08450528		
	UNITS	KZ-37	QC Batch	KZ-13	TRIP BLANK	RDL	QC Batch
Calculated Parameters							
Dissolved Hardness (CaCO3)	mg/L	236	8938965	119	<0.50	0.50	8938965
Elements							
Dissolved Mercury (Hg)	mg/L	<0.0000020	8940211	<0.0000020	<0.0000020	0.0000020	8940211
Dissolved Metals by ICPMS							
Dissolved Aluminum (Al)	mg/L	0.00317	8940008	0.00313	<0.00050	0.00050	8940008
Dissolved Antimony (Sb)	mg/L	0.000048	8940008	0.000042	<0.000020	0.000020	8940008
Dissolved Arsenic (As)	mg/L	0.000362	8940008	0.000190	<0.000020	0.000020	8940008
Dissolved Barium (Ba)	mg/L	0.0952	8940008	0.129	<0.000020	0.000020	8940008
Dissolved Beryllium (Be)	mg/L	<0.000010	8940008	<0.000010	<0.000010	0.000010	8940008
Dissolved Bismuth (Bi)	mg/L	<0.0000050	8940008	<0.0000050	<0.0000050	0.0000050	8940008
Dissolved Boron (B)	mg/L	<0.010	8940008	<0.010	<0.010	0.010	8940008
Dissolved Cadmium (Cd)	mg/L	0.0000808 (1)	8942156	0.0000478	<0.0000050	0.0000050	8940008
Dissolved Chromium (Cr)	mg/L	<0.00010	8940008	<0.00010	<0.00010	0.00010	8940008
Dissolved Cobalt (Co)	mg/L	0.000174	8940008	0.0000428	<0.0000050	0.0000050	8940008
Dissolved Copper (Cu)	mg/L	0.000940 (1)	8942156	0.000448	<0.000050	0.000050	8940008
Dissolved Iron (Fe)	mg/L	0.223	8940008	0.0703	<0.0010	0.0010	8940008
Dissolved Lead (Pb)	mg/L	0.0000209	8940008	0.0000122	<0.0000050	0.0000050	8940008
Dissolved Lithium (Li)	mg/L	0.00463	8940008	0.00197	<0.00050	0.00050	8940008
Dissolved Manganese (Mn)	mg/L	0.140	8940008	0.0813	<0.000050	0.000050	8940008
Dissolved Molybdenum (Mo)	mg/L	0.000979 (1)	8942156	0.000810	<0.000050	0.000050	8940008
Dissolved Nickel (Ni)	mg/L	0.000612	8940008	0.000432	<0.000020	0.000020	8940008
Dissolved Phosphorus (P)	mg/L	0.0164	8940008	0.0060	0.0021	0.0020	8940008
Dissolved Selenium (Se)	mg/L	0.00115	8940008	0.000292	<0.000040	0.000040	8940008
Dissolved Silicon (Si)	mg/L	4.10	8940008	4.41	<0.050	0.050	8940008
Dissolved Silver (Ag)	mg/L	<0.0000050	8940008	<0.0000050	<0.0000050	0.0000050	8940008
Dissolved Strontium (Sr)	mg/L	0.255	8940008	0.116	<0.000050	0.000050	8940008
Dissolved Thallium (Tl)	mg/L	<0.0000020	8940008	<0.0000020	<0.0000020	0.0000020	8940008
Dissolved Tin (Sn)	mg/L	<0.00020	8940008	<0.00020	<0.00020	0.00020	8940008
Dissolved Titanium (Ti)	mg/L	<0.00050	8940008	<0.00050	<0.00050	0.00050	8940008
Dissolved Uranium (U)	mg/L	0.00192	8940008	0.00160	<0.0000020	0.0000020	8940008

RDL = Reportable Detection Limit

(1) Test repeated.
Dissolved greater than total. Reanalysis yields similar results.

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL DISSOLVED METALS WITH CV HG (WATER)

Maxxam ID		TD2565		TD2566	TD2567		
Sampling Date		2018/03/15 14:50		2018/03/15 17:55	2018/03/19 09:20		
COC Number		08450528		08450528	08450528		
	UNITS	KZ-37	QC Batch	KZ-13	TRIP BLANK	RDL	QC Batch
Dissolved Vanadium (V)	mg/L	<0.00020	8940008	<0.00020	<0.00020	0.00020	8940008
Dissolved Zinc (Zn)	mg/L	0.0128	8940008	0.00375	<0.00010	0.00010	8940008
Dissolved Zirconium (Zr)	mg/L	<0.00010	8940008	<0.00010	<0.00010	0.00010	8940008
Dissolved Calcium (Ca)	mg/L	74.3	8942110	40.2	<0.050	0.050	8938966
Dissolved Magnesium (Mg)	mg/L	12.2	8942110	4.60	<0.050	0.050	8938966
Dissolved Potassium (K)	mg/L	1.80	8942110	2.54	<0.050	0.050	8938966
Dissolved Sodium (Na)	mg/L	1.87	8942110	1.50	<0.050	0.050	8938966
Dissolved Sulphur (S)	mg/L	10.0	8942110	6.3	<3.0	3.0	8938966

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TD2528		TD2529	TD2530		
Sampling Date		2018/03/15 17:00		2018/03/15 16:20	2018/03/15 15:50		
COC Number		08450527		08450527	08450527		
	UNITS	KZ-2	QC Batch	KZ-6	KZ-9	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	158	8939337	144	195	0.50	8939337
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	8940167	<0.0000020	<0.0000020	0.0000020	8940167
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00351	8940013	0.00322	0.00553	0.00050	8940013
Total Antimony (Sb)	mg/L	0.000032	8940013	0.000027	0.000033	0.000020	8940013
Total Arsenic (As)	mg/L	0.000075	8940013	0.000101	0.000316	0.000020	8940013
Total Barium (Ba)	mg/L	0.0737	8940013	0.0474	0.0924	0.000020	8940013
Total Beryllium (Be)	mg/L	<0.000010	8940013	<0.000010	<0.000010	0.000010	8940013
Total Bismuth (Bi)	mg/L	<0.0000050	8940013	<0.0000050	<0.0000050	0.0000050	8940013
Total Boron (B)	mg/L	<0.010	8940013	<0.010	<0.010	0.010	8940013
Total Cadmium (Cd)	mg/L	0.000268	8940013	0.000149	0.000129	0.0000050	8940013
Total Chromium (Cr)	mg/L	<0.00010	8940013	<0.00010	<0.00010	0.00010	8940013
Total Cobalt (Co)	mg/L	0.0000072	8940013	0.0000101	0.000215	0.0000050	8940013
Total Copper (Cu)	mg/L	0.000526	8940013	0.000324	0.000408	0.000050	8940013
Total Iron (Fe)	mg/L	0.0054	8940013	0.0077	0.529	0.0010	8940013
Total Lead (Pb)	mg/L	0.0000351	8940013	0.0000214	0.0000349	0.0000050	8940013
Total Lithium (Li)	mg/L	0.00138	8940013	0.00051	0.00460	0.00050	8940013
Total Manganese (Mn)	mg/L	0.000173	8940013	0.00139	0.164	0.000050	8940013
Total Molybdenum (Mo)	mg/L	0.000663	8940013	0.000738	0.000600	0.000050	8940013
Total Nickel (Ni)	mg/L	0.000291	8940013	0.000175	0.000635	0.000020	8940013
Total Phosphorus (P)	mg/L	0.0037	8940013	0.0058	0.0074	0.0020	8940013
Total Selenium (Se)	mg/L	0.00319	8940013	0.00161	0.00116	0.000040	8940013
Total Silicon (Si)	mg/L	2.59	8940013	3.15	4.21	0.050	8940013
Total Silver (Ag)	mg/L	<0.0000050	8940013	<0.0000050	<0.0000050	0.0000050	8940013
Total Strontium (Sr)	mg/L	0.146	8940013	0.167	0.247	0.000050	8940013
Total Thallium (Tl)	mg/L	0.0000033	8940013	<0.0000020	<0.0000020	0.0000020	8940013
Total Tin (Sn)	mg/L	<0.00020	8940013	<0.00020	<0.00020	0.00020	8940013
Total Titanium (Ti)	mg/L	<0.00050	8940013	<0.00050	<0.00050	0.00050	8940013
Total Uranium (U)	mg/L	0.00481	8940013	0.00128	0.00142	0.0000020	8940013
Total Vanadium (V)	mg/L	<0.00020	8940013	<0.00020	<0.00020	0.00020	8940013
RDL = Reportable Detection Limit							

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TD2528		TD2529	TD2530		
Sampling Date		2018/03/15 17:00		2018/03/15 16:20	2018/03/15 15:50		
COC Number		08450527		08450527	08450527		
	UNITS	KZ-2	QC Batch	KZ-6	KZ-9	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.0329	8940013	0.00923	0.0215	0.00010	8940013
Total Zirconium (Zr)	mg/L	<0.00010	8940013	<0.00010	<0.00010	0.00010	8940013
Total Calcium (Ca)	mg/L	49.9	8942111	45.6	63.2	0.050	8939457
Total Magnesium (Mg)	mg/L	8.13	8942111	7.21	9.06	0.050	8939457
Total Potassium (K)	mg/L	2.60	8942111	1.14	1.93	0.050	8939457
Total Sodium (Na)	mg/L	1.10	8942111	0.922	2.00	0.050	8939457
Total Sulphur (S)	mg/L	24.1	8942111	8.1	10.7	3.0	8939457
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TD2531	TD2532	TD2533		TD2534		
Sampling Date		2018/03/15 13:30	2018/03/15 14:10	2018/03/15 14:00		2018/03/15 15:25		
COC Number		08450527	08450527	08450527		08450527		
	UNITS	KZ-15	KZ-16	KZ-17	QC Batch	KZ-18	RDL	QC Batch
Calculated Parameters								
Total Hardness (CaCO3)	mg/L	316	328	336	8939337	216	0.50	8939337
Elements								
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	<0.0000020	8940167	<0.0000020	0.0000020	8940167
Total Metals by ICPMS								
Total Aluminum (Al)	mg/L	0.00413	0.00242	0.00164	8940013	0.0227	0.00050	8940013
Total Antimony (Sb)	mg/L	0.000023	0.000022	<0.000020	8940013	0.000029	0.000020	8940013
Total Arsenic (As)	mg/L	0.000424	0.000206	0.000226	8940013	0.00119	0.000020	8940013
Total Barium (Ba)	mg/L	0.0890	0.0952	0.102	8940013	0.0510	0.000020	8940013
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	<0.000010	8940013	<0.000010	0.000010	8940013
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	<0.0000050	8940013	<0.0000050	0.0000050	8940013
Total Boron (B)	mg/L	<0.010	<0.010	<0.010	8940013	<0.010	0.010	8940013
Total Cadmium (Cd)	mg/L	0.0000567	0.0000338	0.0000346	8940013	0.0000487	0.0000050	8940013
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	<0.00010	8940013	0.00021	0.00010	8940013
Total Cobalt (Co)	mg/L	0.0000510	0.0000101	0.0000068	8940013	0.0000728	0.0000050	8940013
Total Copper (Cu)	mg/L	0.000219	0.000276	0.000281	8940013	0.000158	0.000050	8940013
Total Iron (Fe)	mg/L	0.0535	0.0052	0.0054	8940013	0.179	0.0010	8940013
Total Lead (Pb)	mg/L	0.0000121	0.0000109	0.0000108	8940013	0.0000257	0.0000050	8940013
Total Lithium (Li)	mg/L	0.00379	0.00410	0.00331	8940013	0.00183	0.00050	8940013
Total Manganese (Mn)	mg/L	0.0629	0.00290	0.00182	8940013	0.0249	0.000050	8940013
Total Molybdenum (Mo)	mg/L	0.00122	0.000316	0.000400	8940013	0.00168	0.000050	8940013
Total Nickel (Ni)	mg/L	0.00114	0.000706	0.000569	8940013	0.000498	0.000020	8940013
Total Phosphorus (P)	mg/L	0.0070	0.0097	0.0041	8940013	0.0840	0.0020	8940013
Total Selenium (Se)	mg/L	0.00180	0.00175	0.00181	8940013	0.00164	0.000040	8940013
Total Silicon (Si)	mg/L	4.62	4.52	4.50	8940013	3.73	0.050	8940013
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	<0.0000050	8940013	<0.0000050	0.0000050	8940013
Total Strontium (Sr)	mg/L	0.262	0.284	0.271	8940013	0.195	0.000050	8940013
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	<0.0000020	8940013	<0.0000020	0.0000020	8940013
Total Tin (Sn)	mg/L	<0.00020	<0.00020	<0.00020	8940013	<0.00020	0.00020	8940013
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	<0.00050	8940013	0.00135	0.00050	8940013
Total Uranium (U)	mg/L	0.00484	0.00276	0.00318	8940013	0.00280	0.0000020	8940013
Total Vanadium (V)	mg/L	<0.00020	<0.00020	<0.00020	8940013	<0.00020	0.00020	8940013

RDL = Reportable Detection Limit

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TD2531	TD2532	TD2533		TD2534		
Sampling Date		2018/03/15 13:30	2018/03/15 14:10	2018/03/15 14:00		2018/03/15 15:25		
COC Number		08450527	08450527	08450527		08450527		
	UNITS	KZ-15	KZ-16	KZ-17	QC Batch	KZ-18	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00797	0.00295	0.00306	8940013	0.00247	0.00010	8940013
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	<0.00010	8940013	<0.00010	0.00010	8940013
Total Calcium (Ca)	mg/L	89.4	93.3	97.5	8942111	51.9	0.050	8939457
Total Magnesium (Mg)	mg/L	22.4	23.1	22.6	8942111	21.0	0.050	8939457
Total Potassium (K)	mg/L	1.62	1.79	1.69	8942111	0.772	0.050	8939457
Total Sodium (Na)	mg/L	1.76	1.91	1.87	8942111	1.06	0.050	8939457
Total Sulphur (S)	mg/L	15.3	16.6	16.5	8942111	8.2	3.0	8939457

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TD2535		TD2561	TD2562		
Sampling Date		2018/03/15 15:30		2018/03/15 12:30	2018/03/15 11:45		
COC Number		08450527		08450528	08450528		
	UNITS	KZ-19	QC Batch	KZ-21	KZ-22	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	<0.50	8939337	379	374	0.50	8939337
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	8940167	<0.0000020	<0.0000020	0.0000020	8940167
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	<0.00050	8940013	0.0136	0.00462	0.00050	8940013
Total Antimony (Sb)	mg/L	<0.000020	8940013	0.000081	0.000029	0.000020	8940013
Total Arsenic (As)	mg/L	<0.000020	8940013	0.00448	0.00304	0.000020	8940013
Total Barium (Ba)	mg/L	<0.000020	8940013	0.0700	0.0797	0.000020	8940013
Total Beryllium (Be)	mg/L	<0.000010	8940013	<0.000010	<0.000010	0.000010	8940013
Total Bismuth (Bi)	mg/L	<0.0000050	8940013	<0.0000050	<0.0000050	0.0000050	8940013
Total Boron (B)	mg/L	<0.010	8940013	<0.010	<0.010	0.010	8940013
Total Cadmium (Cd)	mg/L	<0.0000050	8940013	0.0000868	0.0000202	0.0000050	8940013
Total Chromium (Cr)	mg/L	<0.00010	8940013	0.00016	<0.00010	0.00010	8940013
Total Cobalt (Co)	mg/L	<0.0000050	8940013	0.000279	0.000197	0.0000050	8940013
Total Copper (Cu)	mg/L	<0.000050	8940013	0.00138	0.000275	0.000050	8940013
Total Iron (Fe)	mg/L	<0.0010	8940013	1.51	1.01	0.0010	8940013
Total Lead (Pb)	mg/L	<0.0000050	8940013	0.0000739	0.0000100	0.0000050	8940013
Total Lithium (Li)	mg/L	<0.00050	8940013	0.00679	0.00823	0.00050	8940013
Total Manganese (Mn)	mg/L	<0.000050	8940013	0.220	0.142	0.000050	8940013
Total Molybdenum (Mo)	mg/L	<0.000050	8940013	0.00148	0.00125	0.000050	8940013
Total Nickel (Ni)	mg/L	<0.000020	8940013	0.00272	0.00192	0.000020	8940013
Total Phosphorus (P)	mg/L	0.0030	8940013	0.0367	0.0246	0.0020	8940013
Total Selenium (Se)	mg/L	<0.000040	8940013	0.000635	0.00104	0.000040	8940013
Total Silicon (Si)	mg/L	<0.050	8940013	7.68	6.09	0.050	8940013
Total Silver (Ag)	mg/L	<0.0000050	8940013	<0.0000050	<0.0000050	0.0000050	8940013
Total Strontium (Sr)	mg/L	<0.000050	8940013	0.240	0.269	0.000050	8940013
Total Thallium (Tl)	mg/L	<0.0000020	8940013	<0.0000020	<0.0000020	0.0000020	8940013
Total Tin (Sn)	mg/L	<0.00020	8940013	<0.00020	<0.00020	0.00020	8940013
Total Titanium (Ti)	mg/L	<0.00050	8940013	0.00121	<0.00050	0.00050	8940013
Total Uranium (U)	mg/L	<0.0000020	8940013	0.00277	0.00375	0.0000020	8940013
Total Vanadium (V)	mg/L	<0.00020	8940013	<0.00020	<0.00020	0.00020	8940013
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TD2535		TD2561	TD2562		
Sampling Date		2018/03/15 15:30		2018/03/15 12:30	2018/03/15 11:45		
COC Number		08450527		08450528	08450528		
	UNITS	KZ-19	QC Batch	KZ-21	KZ-22	RDL	QC Batch
Total Zinc (Zn)	mg/L	<0.00010	8940013	0.0160	0.00220	0.00010	8940013
Total Zirconium (Zr)	mg/L	<0.00010	8940013	0.00028	0.00035	0.00010	8940013
Total Calcium (Ca)	mg/L	<0.050	8939457	92.2	93.3	0.050	8942111
Total Magnesium (Mg)	mg/L	<0.050	8939457	36.2	34.1	0.050	8942111
Total Potassium (K)	mg/L	<0.050	8939457	3.12	2.26	0.050	8942111
Total Sodium (Na)	mg/L	<0.050	8939457	3.10	2.73	0.050	8942111
Total Sulphur (S)	mg/L	<3.0	8939457	16.6	19.0	3.0	8942111
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TD2563		TD2564	TD2565		
Sampling Date		2018/03/15 08:30		2018/03/15 08:45	2018/03/15 14:50		
COC Number		08450528		08450528	08450528		
	UNITS	KZ-26	QC Batch	KZ-28	KZ-37	RDL	QC Batch
Calculated Parameters							
Total Hardness (CaCO3)	mg/L	306	8939337	360	235	0.50	8939337
Elements							
Total Mercury (Hg)	mg/L	<0.0000020	8940167	<0.0000020	<0.0000020	0.0000020	8940167
Total Metals by ICPMS							
Total Aluminum (Al)	mg/L	0.00066	8940013	0.00198	0.00715	0.00050	8940013
Total Antimony (Sb)	mg/L	0.000049	8940013	0.000057	0.000022	0.000020	8940013
Total Arsenic (As)	mg/L	0.000455	8940013	0.000451	0.000430	0.000020	8940013
Total Barium (Ba)	mg/L	0.0860	8940013	0.0993	0.0800	0.000020	8940013
Total Beryllium (Be)	mg/L	<0.000010	8940013	<0.000010	<0.000010	0.000010	8940013
Total Bismuth (Bi)	mg/L	<0.0000050	8940013	<0.0000050	<0.0000050	0.0000050	8940013
Total Boron (B)	mg/L	<0.010	8940013	<0.010	<0.010	0.010	8940013
Total Cadmium (Cd)	mg/L	0.0000150	8940013	0.0000195	0.0000574	0.0000050	8940013
Total Chromium (Cr)	mg/L	<0.00010	8940013	<0.00010	<0.00010	0.00010	8940013
Total Cobalt (Co)	mg/L	0.0000130	8940013	0.0000128	0.000174	0.0000050	8940013
Total Copper (Cu)	mg/L	0.000299	8940013	0.000290	0.000156	0.000050	8940013
Total Iron (Fe)	mg/L	0.0146	8940013	0.0187	0.384	0.0010	8940013
Total Lead (Pb)	mg/L	<0.0000050	8940013	<0.0000050	0.0000136	0.0000050	8940013
Total Lithium (Li)	mg/L	0.00659	8940013	0.00758	0.00381	0.00050	8940013
Total Manganese (Mn)	mg/L	0.00578	8940013	0.00557	0.132	0.000050	8940013
Total Molybdenum (Mo)	mg/L	0.000867	8940013	0.00101	0.000749	0.000050	8940013
Total Nickel (Ni)	mg/L	0.000691	8940013	0.000687	0.000566	0.000020	8940013
Total Phosphorus (P)	mg/L	0.0087	8942157	0.0065	0.0175	0.0020	8940013
Total Selenium (Se)	mg/L	0.00110	8940013	0.00109	0.00143	0.000040	8940013
Total Silicon (Si)	mg/L	5.78	8940013	5.63	4.79	0.050	8940013
Total Silver (Ag)	mg/L	<0.0000050	8940013	<0.0000050	<0.0000050	0.0000050	8940013
Total Strontium (Sr)	mg/L	0.276	8940013	0.278	0.224	0.000050	8940013
Total Thallium (Tl)	mg/L	<0.0000020	8940013	<0.0000020	<0.0000020	0.0000020	8940013
Total Tin (Sn)	mg/L	<0.00020	8940013	<0.00020	<0.00020	0.00020	8940013
Total Titanium (Ti)	mg/L	<0.00050	8940013	<0.00050	0.00059	0.00050	8940013
Total Uranium (U)	mg/L	0.00355	8940013	0.00409	0.00162	0.0000020	8940013
Total Vanadium (V)	mg/L	<0.00020	8940013	<0.00020	<0.00020	0.00020	8940013
RDL = Reportable Detection Limit							

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TD2563		TD2564	TD2565		
Sampling Date		2018/03/15 08:30		2018/03/15 08:45	2018/03/15 14:50		
COC Number		08450528		08450528	08450528		
	UNITS	KZ-26	QC Batch	KZ-28	KZ-37	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00138	8940013	0.00141	0.0109	0.00010	8940013
Total Zirconium (Zr)	mg/L	<0.00010	8940013	<0.00010	<0.00010	0.00010	8940013
Total Calcium (Ca)	mg/L	74.4	8939457	92.5	74.5	0.050	8942111
Total Magnesium (Mg)	mg/L	29.1	8939457	31.4	11.9	0.050	8942111
Total Potassium (K)	mg/L	1.83	8939457	1.96	1.74	0.050	8942111
Total Sodium (Na)	mg/L	2.46	8939457	2.70	1.67	0.050	8942111
Total Sulphur (S)	mg/L	17.5	8939457	19.6	10.3	3.0	8942111

RDL = Reportable Detection Limit

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TD2566	TD2567		
Sampling Date		2018/03/15 17:55	2018/03/19 09:20		
COC Number		08450528	08450528		
	UNITS	KZ-13	TRIP BLANK	RDL	QC Batch
Calculated Parameters					
Total Hardness (CaCO3)	mg/L	107	<0.50	0.50	8939337
Elements					
Total Mercury (Hg)	mg/L	<0.0000020	<0.0000020	0.0000020	8940167
Total Metals by ICPMS					
Total Aluminum (Al)	mg/L	0.00649	<0.00050	0.00050	8940013
Total Antimony (Sb)	mg/L	0.000049	<0.000020	0.000020	8940013
Total Arsenic (As)	mg/L	0.000225	<0.000020	0.000020	8940013
Total Barium (Ba)	mg/L	0.120	<0.000020	0.000020	8940013
Total Beryllium (Be)	mg/L	<0.000010	<0.000010	0.000010	8940013
Total Bismuth (Bi)	mg/L	<0.0000050	<0.0000050	0.0000050	8940013
Total Boron (B)	mg/L	<0.010	<0.010	0.010	8940013
Total Cadmium (Cd)	mg/L	0.0000642	<0.0000050	0.0000050	8940013
Total Chromium (Cr)	mg/L	<0.00010	<0.00010	0.00010	8940013
Total Cobalt (Co)	mg/L	0.0000388	<0.0000050	0.0000050	8940013
Total Copper (Cu)	mg/L	0.000576	<0.000050	0.000050	8940013
Total Iron (Fe)	mg/L	0.114	<0.0010	0.0010	8940013
Total Lead (Pb)	mg/L	0.0000196	<0.0000050	0.0000050	8940013
Total Lithium (Li)	mg/L	0.00190	<0.00050	0.00050	8940013
Total Manganese (Mn)	mg/L	0.0745	<0.000050	0.000050	8940013
Total Molybdenum (Mo)	mg/L	0.000741	<0.000050	0.000050	8940013
Total Nickel (Ni)	mg/L	0.000411	<0.000020	0.000020	8940013
Total Phosphorus (P)	mg/L	0.0067	<0.0020	0.0020	8940013
Total Selenium (Se)	mg/L	0.000316	<0.000040	0.000040	8940013
Total Silicon (Si)	mg/L	4.74	<0.050	0.050	8940013
Total Silver (Ag)	mg/L	<0.0000050	<0.0000050	0.0000050	8940013
Total Strontium (Sr)	mg/L	0.103	<0.000050	0.000050	8940013
Total Thallium (Tl)	mg/L	<0.0000020	<0.0000020	0.0000020	8940013
Total Tin (Sn)	mg/L	<0.00020	<0.00020	0.00020	8940013
Total Titanium (Ti)	mg/L	<0.00050	<0.00050	0.00050	8940013
Total Uranium (U)	mg/L	0.00152	<0.0000020	0.0000020	8940013
Total Vanadium (V)	mg/L	<0.00020	<0.00020	0.00020	8940013
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

LOW LEVEL TOTAL METALS WITH CV HG (WATER)

Maxxam ID		TD2566	TD2567		
Sampling Date		2018/03/15 17:55	2018/03/19 09:20		
COC Number		08450528	08450528		
	UNITS	KZ-13	TRIP BLANK	RDL	QC Batch
Total Zinc (Zn)	mg/L	0.00386	<0.00010	0.00010	8940013
Total Zirconium (Zr)	mg/L	<0.00010	<0.00010	0.00010	8940013
Total Calcium (Ca)	mg/L	36.1	<0.050	0.050	8939457
Total Magnesium (Mg)	mg/L	4.10	<0.050	0.050	8939457
Total Potassium (K)	mg/L	2.30	<0.050	0.050	8939457
Total Sodium (Na)	mg/L	1.31	<0.050	0.050	8939457
Total Sulphur (S)	mg/L	5.8	<3.0	3.0	8939457
RDL = Reportable Detection Limit					

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: TD2528
Sample ID: KZ-2
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8940837	2018/03/21	2018/03/21	Name Redacted
Alkalinity - Low Level	AT/ALK	8940775	2018/03/21	2018/03/22	
Chloride - Low Level	KONE/COL	8940994	N/A	2018/03/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8942705	N/A	2018/03/26	
Cyanide WAD (weak acid dissociable)	TECH/COL	8942706	N/A	2018/03/26	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8940627	N/A	2018/03/21	
Conductance - Low Level	AT/ALK	8940774	2018/03/21	2018/03/22	
Fluoride - Low Level	ISE/ISE	8940546	N/A	2018/03/21	
Hardness Total (calculated as CaCO3)	CALC	8939337	N/A	2018/03/22	
Hardness (calculated as CaCO3)	CALC	8938965	N/A	2018/03/22	
Mercury (Dissolved) by CVAF	CV/AF	8940618	N/A	2018/03/21	
Mercury (Total) by CVAF	CV/AF	8940167	2018/03/21	2018/03/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8938966	N/A	2018/03/22	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8940008	N/A	2018/03/22	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8942111	N/A	2018/03/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8940013	N/A	2018/03/22	
Ammonia-N Low Level (Preserved)	KONE/COL	8941595	N/A	2018/03/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8940830	N/A	2018/03/21	
Nitrite (N) (low level)	TRAA/COL	8940831	N/A	2018/03/21	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8939458	N/A	2018/03/22	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/20	
pH Water	AT/ALK	8940765	2018/03/21	2018/03/22	
Sulphate - Low Level	KONE/COL	8940996	N/A	2018/03/21	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8940952	2018/03/21	2018/03/21	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8940953	2018/03/21	2018/03/21	
Total Suspended Solids-Low Level	BAL/BAL	8940367	2018/03/21	2018/03/22	
Dissolved Selenium Speciation SubC	PREP	8959033	N/A	2018/04/13	

Maxxam ID: TD2528 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8940837	2018/03/21	2018/03/21	Name Redacted
Alkalinity - Low Level	AT/ALK	8940775	2018/03/21	2018/03/22	
Chloride - Low Level	KONE/COL	8940994	N/A	2018/03/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8942705	N/A	2018/03/26	
Cyanide WAD (weak acid dissociable)	TECH/COL	8942706	N/A	2018/03/26	
Conductance - Low Level	AT/ALK	8940774	2018/03/21	2018/03/22	
Mercury (Dissolved) by CVAF	CV/AF	8940618	N/A	2018/03/21	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8940008	N/A	2018/03/22	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8940830	N/A	2018/03/21	
Nitrite (N) (low level)	TRAA/COL	8940831	N/A	2018/03/21	
pH Water	AT/ALK	8940765	2018/03/21	2018/03/22	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: TD2528 Dup
Sample ID: KZ-2
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Sulphate - Low Level	KONE/COL	8940996	N/A	2018/03/21	Name Redacted
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8940952	2018/03/21	2018/03/21	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8940953	2018/03/21	2018/03/21	

Maxxam ID: TD2529
Sample ID: KZ-6
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8940559	2018/03/21	2018/03/21	Name Redacted
Alkalinity - Low Level	AT/ALK	8940775	2018/03/21	2018/03/22	
Chloride - Low Level	KONE/COL	8940994	N/A	2018/03/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8942705	N/A	2018/03/26	
Cyanide WAD (weak acid dissociable)	TECH/COL	8942706	N/A	2018/03/26	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8940627	N/A	2018/03/21	
Conductance - Low Level	AT/ALK	8940774	2018/03/21	2018/03/22	
Fluoride - Low Level	ISE/ISE	8940546	N/A	2018/03/21	
Hardness Total (calculated as CaCO3)	CALC	8939337	N/A	2018/03/22	
Hardness (calculated as CaCO3)	CALC	8938965	N/A	2018/03/22	
Mercury (Dissolved) by CVAF	CV/AF	8940618	N/A	2018/03/21	
Mercury (Total) by CVAF	CV/AF	8940167	2018/03/21	2018/03/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8938966	N/A	2018/03/22	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8942156	N/A	2018/03/22	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8939457	N/A	2018/03/22	
Elements by ICPMS Low Level (total)	ICP/CRCM	8940013	N/A	2018/03/22	
Ammonia-N Low Level (Preserved)	KONE/COL	8941595	N/A	2018/03/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8940830	N/A	2018/03/21	
Nitrite (N) (low level)	TRAA/COL	8940831	N/A	2018/03/21	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8939458	N/A	2018/03/22	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/20	
pH Water	AT/ALK	8940765	2018/03/21	2018/03/22	
Sulphate - Low Level	KONE/COL	8940996	N/A	2018/03/21	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8940952	2018/03/21	2018/03/21	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8940953	2018/03/21	2018/03/21	
Total Suspended Solids-Low Level	BAL/BAL	8940367	2018/03/21	2018/03/22	
Dissolved Selenium Speciation SubC	PREP	8959033	N/A	2018/04/13	

Maxxam ID: TD2530
Sample ID: KZ-9
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8940837	2018/03/21	2018/03/21	Name Redacted
Alkalinity - Low Level	AT/ALK	8940775	2018/03/21	2018/03/22	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: TD2530
Sample ID: KZ-9
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride - Low Level	KONE/COL	8940994	N/A	2018/03/21	Name Redacted
Cyanide SAD (strong acid dissociable)	TECH/COL	8942705	N/A	2018/03/26	
Cyanide WAD (weak acid dissociable)	TECH/COL	8942706	N/A	2018/03/26	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8940627	N/A	2018/03/21	
Conductance - Low Level	AT/ALK	8940774	2018/03/21	2018/03/22	
Fluoride - Low Level	ISE/ISE	8940546	N/A	2018/03/21	
Hardness Total (calculated as CaCO3)	CALC	8939337	N/A	2018/03/22	
Hardness (calculated as CaCO3)	CALC	8938965	N/A	2018/03/22	
Mercury (Dissolved) by CVAF	CV/AF	8940618	N/A	2018/03/21	
Mercury (Total) by CVAF	CV/AF	8940167	2018/03/21	2018/03/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8938966	N/A	2018/03/22	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8940008	N/A	2018/03/22	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8939457	N/A	2018/03/22	
Elements by ICPMS Low Level (total)	ICP/CRCM	8940013	N/A	2018/03/22	
Ammonia-N Low Level (Preserved)	KONE/COL	8941595	N/A	2018/03/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8940830	N/A	2018/03/21	
Nitrite (N) (low level)	TRAA/COL	8940831	N/A	2018/03/21	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8939458	N/A	2018/03/22	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/20	
pH Water	AT/ALK	8940765	2018/03/21	2018/03/22	
Sulphate - Low Level	KONE/COL	8940996	N/A	2018/03/21	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8940952	2018/03/21	2018/03/21	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8940953	2018/03/21	2018/03/21	
Total Suspended Solids-Low Level	BAL/BAL	8940367	2018/03/21	2018/03/22	
Dissolved Selenium Speciation SubC	PREP	8959033	N/A	2018/04/13	

Maxxam ID: TD2531
Sample ID: KZ-15
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8940559	2018/03/21	2018/03/21	Name Redacted
Alkalinity - Low Level	AT/ALK	8940775	2018/03/21	2018/03/22	
Chloride - Low Level	KONE/COL	8940994	N/A	2018/03/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8942705	N/A	2018/03/26	
Cyanide WAD (weak acid dissociable)	TECH/COL	8942706	N/A	2018/03/26	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8940627	N/A	2018/03/21	
Conductance - Low Level	AT/ALK	8940774	2018/03/21	2018/03/22	
Fluoride - Low Level	ISE/ISE	8940546	N/A	2018/03/21	
Hardness Total (calculated as CaCO3)	CALC	8939337	N/A	2018/03/22	
Hardness (calculated as CaCO3)	CALC	8938965	N/A	2018/03/22	
Mercury (Dissolved) by CVAF	CV/AF	8940618	N/A	2018/03/21	
Mercury (Total) by CVAF	CV/AF	8940167	2018/03/21	2018/03/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8942110	N/A	2018/03/22	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: TD2531
Sample ID: KZ-15
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8940008	N/A	2018/03/22	Name Redacted
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8942111	N/A	2018/03/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8940013	N/A	2018/03/22	
Ammonia-N Low Level (Preserved)	KONE/COL	8941595	N/A	2018/03/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8940830	N/A	2018/03/21	
Nitrite (N) (low level)	TRAA/COL	8940831	N/A	2018/03/21	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8939458	N/A	2018/03/22	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/20	
pH Water	AT/ALK	8940765	2018/03/21	2018/03/22	
Sulphate - Low Level	KONE/COL	8940996	N/A	2018/03/21	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8940952	2018/03/21	2018/03/21	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8940953	2018/03/21	2018/03/21	
Total Suspended Solids-Low Level	BAL/BAL	8940367	2018/03/21	2018/03/22	
Arsenic Speciation Water Subcontract	PREP	8959029	N/A	2018/04/13	
Dissolved Selenium Speciation SubC	PREP	8959033	N/A	2018/04/13	

Maxxam ID: TD2532
Sample ID: KZ-16
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8943524	2018/03/21	2018/03/24	Name Redacted
Alkalinity - Low Level	AT/ALK	8940775	2018/03/21	2018/03/22	
Chloride - Low Level	KONE/COL	8940994	N/A	2018/03/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8942705	N/A	2018/03/26	
Cyanide WAD (weak acid dissociable)	TECH/COL	8942706	N/A	2018/03/26	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8940627	N/A	2018/03/21	
Conductance - Low Level	AT/ALK	8940774	2018/03/21	2018/03/22	
Fluoride - Low Level	ISE/ISE	8940546	N/A	2018/03/21	
Hardness Total (calculated as CaCO3)	CALC	8939337	N/A	2018/03/22	
Hardness (calculated as CaCO3)	CALC	8938965	N/A	2018/03/22	
Mercury (Dissolved) by CVAF	CV/AF	8940618	N/A	2018/03/21	
Mercury (Total) by CVAF	CV/AF	8940167	2018/03/21	2018/03/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8942110	N/A	2018/03/23	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8940008	N/A	2018/03/22	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8942111	N/A	2018/03/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8940013	N/A	2018/03/22	
Ammonia-N Low Level (Preserved)	KONE/COL	8941595	N/A	2018/03/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8940830	N/A	2018/03/21	
Nitrite (N) (low level)	TRAA/COL	8940831	N/A	2018/03/21	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8939458	N/A	2018/03/22	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/20	
pH Water	AT/ALK	8940765	2018/03/21	2018/03/22	
Sulphate - Low Level	KONE/COL	8940996	N/A	2018/03/21	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: TD2532
Sample ID: KZ-16
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8940952	2018/03/21	2018/03/21	Name Redacted
Total Phosphorus - Low Level Unpreserved	KONE/COL	8940953	2018/03/21	2018/03/21	
Total Suspended Solids-Low Level	BAL/BAL	8940367	2018/03/21	2018/03/22	
Dissolved Selenium Speciation SubC	PREP	8959033	N/A	2018/04/13	

Maxxam ID: TD2533
Sample ID: KZ-17
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8943524	2018/03/21	2018/03/24	Name Redacted
Alkalinity - Low Level	AT/ALK	8940775	2018/03/21	2018/03/22	
Chloride - Low Level	KONE/COL	8940994	N/A	2018/03/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8942705	N/A	2018/03/26	
Cyanide WAD (weak acid dissociable)	TECH/COL	8942706	N/A	2018/03/26	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8940627	N/A	2018/03/21	
Conductance - Low Level	AT/ALK	8940774	2018/03/21	2018/03/22	
Fluoride - Low Level	ISE/ISE	8940546	N/A	2018/03/21	
Hardness Total (calculated as CaCO3)	CALC	8939337	N/A	2018/03/22	
Hardness (calculated as CaCO3)	CALC	8938965	N/A	2018/03/22	
Mercury (Dissolved) by CVAF	CV/AF	8940618	N/A	2018/03/21	
Mercury (Total) by CVAF	CV/AF	8940167	2018/03/21	2018/03/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8942110	N/A	2018/03/23	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8940008	N/A	2018/03/22	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8942111	N/A	2018/03/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8940013	N/A	2018/03/22	
Ammonia-N Low Level (Preserved)	KONE/COL	8941595	N/A	2018/03/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8940830	N/A	2018/03/21	
Nitrite (N) (low level)	TRAA/COL	8940831	N/A	2018/03/21	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8939458	N/A	2018/03/22	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/20	
pH Water	AT/ALK	8940765	2018/03/21	2018/03/22	
Sulphate - Low Level	KONE/COL	8940996	N/A	2018/03/21	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8940955	2018/03/21	2018/03/21	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8940957	2018/03/21	2018/03/21	
Total Suspended Solids-Low Level	BAL/BAL	8940367	2018/03/21	2018/03/22	
Dissolved Selenium Speciation SubC	PREP	8959033	N/A	2018/04/13	

Maxxam ID: TD2534
Sample ID: KZ-18
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8943524	2018/03/21	2018/03/24	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: TD2534
Sample ID: KZ-18
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Low Level	AT/ALK	8940775	2018/03/21	2018/03/22	Name Redacted
Chloride - Low Level	KONE/COL	8940994	N/A	2018/03/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8942705	N/A	2018/03/26	
Cyanide WAD (weak acid dissociable)	TECH/COL	8942706	N/A	2018/03/26	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8940627	N/A	2018/03/21	
Conductance - Low Level	AT/ALK	8940774	2018/03/21	2018/03/22	
Fluoride - Low Level	ISE/ISE	8940546	N/A	2018/03/21	
Hardness Total (calculated as CaCO3)	CALC	8939337	N/A	2018/03/22	
Hardness (calculated as CaCO3)	CALC	8938965	N/A	2018/03/22	
Mercury (Dissolved) by CVAF	CV/AF	8940618	N/A	2018/03/21	
Mercury (Total) by CVAF	CV/AF	8940167	2018/03/21	2018/03/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8938966	N/A	2018/03/22	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8940008	N/A	2018/03/22	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8939457	N/A	2018/03/22	
Elements by ICPMS Low Level (total)	ICP/CRCM	8940013	N/A	2018/03/22	
Ammonia-N Low Level (Preserved)	KONE/COL	8941595	N/A	2018/03/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8940830	N/A	2018/03/21	
Nitrite (N) (low level)	TRAA/COL	8940831	N/A	2018/03/21	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8939458	N/A	2018/03/22	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/20	
pH Water	AT/ALK	8940765	2018/03/21	2018/03/22	
Sulphate - Low Level	KONE/COL	8940996	N/A	2018/03/21	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8940952	2018/03/21	2018/03/21	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8940953	2018/03/21	2018/03/21	
Total Suspended Solids-Low Level	BAL/BAL	8940367	2018/03/21	2018/03/22	
Dissolved Selenium Speciation SubC	PREP	8959033	N/A	2018/04/13	

Maxxam ID: TD2535
Sample ID: KZ-19
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8943524	2018/03/21	2018/03/24	Name Redacted
Alkalinity - Low Level	AT/ALK	8942130	2018/03/21	2018/03/22	
Chloride - Low Level	KONE/COL	8940994	N/A	2018/03/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8942705	N/A	2018/03/26	
Cyanide WAD (weak acid dissociable)	TECH/COL	8942706	N/A	2018/03/26	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8940627	N/A	2018/03/21	
Conductance - Low Level	AT/ALK	8942146	2018/03/21	2018/03/23	
Fluoride - Low Level	ISE/ISE	8940546	N/A	2018/03/21	
Hardness Total (calculated as CaCO3)	CALC	8939337	N/A	2018/03/22	
Hardness (calculated as CaCO3)	CALC	8938965	N/A	2018/03/22	
Mercury (Dissolved) by CVAF	CV/AF	8940618	N/A	2018/03/21	
Mercury (Total) by CVAF	CV/AF	8940167	2018/03/21	2018/03/21	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: TD2535
Sample ID: KZ-19
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8942110	N/A	2018/03/23	Name Redacted
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8940008	N/A	2018/03/22	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8939457	N/A	2018/03/22	
Elements by ICPMS Low Level (total)	ICP/CRCM	8940013	N/A	2018/03/22	
Ammonia-N Low Level (Preserved)	KONE/COL	8941595	N/A	2018/03/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8940830	N/A	2018/03/21	
Nitrite (N) (low level)	TRAA/COL	8940831	N/A	2018/03/21	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8939458	N/A	2018/03/22	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/20	
pH Water	AT/ALK	8942138	2018/03/22	2018/03/23	
Sulphate - Low Level	KONE/COL	8940996	N/A	2018/03/21	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8940955	2018/03/21	2018/03/21	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8940957	2018/03/21	2018/03/21	
Total Suspended Solids-Low Level	BAL/BAL	8940367	2018/03/21	2018/03/22	
Dissolved Selenium Speciation SubC	PREP	8959033	N/A	2018/04/13	

Maxxam ID: TD2561
Sample ID: KZ-21
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8943524	2018/03/21	2018/03/24	Name Redacted
Alkalinity - Low Level	AT/ALK	8940775	2018/03/21	2018/03/22	
Chloride - Low Level	KONE/COL	8940994	N/A	2018/03/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8942705	N/A	2018/03/26	
Cyanide WAD (weak acid dissociable)	TECH/COL	8942706	N/A	2018/03/26	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8940627	N/A	2018/03/21	
Conductance - Low Level	AT/ALK	8940774	2018/03/21	2018/03/22	
Fluoride - Low Level	ISE/ISE	8940546	N/A	2018/03/21	
Hardness Total (calculated as CaCO3)	CALC	8939337	N/A	2018/03/22	
Hardness (calculated as CaCO3)	CALC	8938965	N/A	2018/03/22	
Mercury (Dissolved) by CVAF	CV/AF	8940211	N/A	2018/03/21	
Mercury (Total) by CVAF	CV/AF	8940167	2018/03/21	2018/03/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8942110	N/A	2018/03/23	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8940008	N/A	2018/03/22	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8942111	N/A	2018/03/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8940013	N/A	2018/03/22	
Ammonia-N Low Level (Preserved)	KONE/COL	8941595	N/A	2018/03/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8940830	N/A	2018/03/21	
Nitrite (N) (low level)	TRAA/COL	8940831	N/A	2018/03/21	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8939458	N/A	2018/03/22	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/20	
pH Water	AT/ALK	8940765	2018/03/21	2018/03/22	
Sulphate - Low Level	KONE/COL	8940996	N/A	2018/03/21	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: TD2561
Sample ID: KZ-21
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8940952	2018/03/21	2018/03/21	Name Redacted
Total Phosphorus - Low Level Unpreserved	KONE/COL	8940953	2018/03/21	2018/03/21	
Total Suspended Solids-Low Level	BAL/BAL	8942166	2018/03/22	2018/03/23	
Dissolved Selenium Speciation SubC	PREP	8959033	N/A	2018/04/13	

Maxxam ID: TD2562
Sample ID: KZ-22
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8943524	2018/03/21	2018/03/24	Name Redacted
Alkalinity - Low Level	AT/ALK	8940775	2018/03/21	2018/03/22	
Chloride - Low Level	KONE/COL	8940994	N/A	2018/03/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8942705	N/A	2018/03/26	
Cyanide WAD (weak acid dissociable)	TECH/COL	8942706	N/A	2018/03/26	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8940627	N/A	2018/03/21	
Conductance - Low Level	AT/ALK	8940774	2018/03/21	2018/03/22	
Fluoride - Low Level	ISE/ISE	8940546	N/A	2018/03/21	
Hardness Total (calculated as CaCO3)	CALC	8939337	N/A	2018/03/22	
Hardness (calculated as CaCO3)	CALC	8938965	N/A	2018/03/22	
Mercury (Dissolved) by CVAF	CV/AF	8940211	N/A	2018/03/21	
Mercury (Total) by CVAF	CV/AF	8940167	2018/03/21	2018/03/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8942110	N/A	2018/03/22	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8940008	N/A	2018/03/22	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8942111	N/A	2018/03/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8940013	N/A	2018/03/22	
Ammonia-N Low Level (Preserved)	KONE/COL	8941595	N/A	2018/03/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8940830	N/A	2018/03/21	
Nitrite (N) (low level)	TRAA/COL	8940831	N/A	2018/03/21	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8939458	N/A	2018/03/22	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/20	
pH Water	AT/ALK	8940765	2018/03/21	2018/03/22	
Sulphate - Low Level	KONE/COL	8940996	N/A	2018/03/21	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8940952	2018/03/21	2018/03/21	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8940953	2018/03/21	2018/03/21	
Total Suspended Solids-Low Level	BAL/BAL	8942166	2018/03/22	2018/03/23	
Dissolved Selenium Speciation SubC	PREP	8959033	N/A	2018/04/13	

Maxxam ID: TD2563
Sample ID: KZ-26
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8943524	2018/03/21	2018/03/24	Name Redacted

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: TD2563
Sample ID: KZ-26
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity - Low Level	AT/ALK	8940775	2018/03/21	2018/03/22	Name Redacted
Chloride - Low Level	KONE/COL	8940994	N/A	2018/03/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8942705	N/A	2018/03/26	
Cyanide WAD (weak acid dissociable)	TECH/COL	8942706	N/A	2018/03/26	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8940627	N/A	2018/03/21	
Conductance - Low Level	AT/ALK	8940774	2018/03/21	2018/03/22	
Fluoride - Low Level	ISE/ISE	8940546	N/A	2018/03/21	
Hardness Total (calculated as CaCO3)	CALC	8939337	N/A	2018/03/22	
Hardness (calculated as CaCO3)	CALC	8938965	N/A	2018/03/22	
Mercury (Dissolved) by CVAF	CV/AF	8940211	N/A	2018/03/21	
Mercury (Total) by CVAF	CV/AF	8940167	2018/03/21	2018/03/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8938966	N/A	2018/03/22	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8940008	N/A	2018/03/22	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8939457	N/A	2018/03/22	
Elements by ICPMS Low Level (total)	ICP/CRCM	8940013	N/A	2018/03/22	
Ammonia-N Low Level (Preserved)	KONE/COL	8941595	N/A	2018/03/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8940830	N/A	2018/03/21	
Nitrite (N) (low level)	TRAA/COL	8940831	N/A	2018/03/21	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8939458	N/A	2018/03/22	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/20	
pH Water	AT/ALK	8940765	2018/03/21	2018/03/22	
Sulphate - Low Level	KONE/COL	8940996	N/A	2018/03/21	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8940955	2018/03/21	2018/03/21	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8940957	2018/03/21	2018/03/21	
Total Suspended Solids-Low Level	BAL/BAL	8942166	2018/03/22	2018/03/23	
Dissolved Selenium Speciation SubC	PREP	8959033	N/A	2018/04/13	

Maxxam ID: TD2564
Sample ID: KZ-28
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8943524	2018/03/21	2018/03/24	Name Redacted
Alkalinity - Low Level	AT/ALK	8940775	2018/03/21	2018/03/22	
Chloride - Low Level	KONE/COL	8940994	N/A	2018/03/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8942705	N/A	2018/03/26	
Cyanide WAD (weak acid dissociable)	TECH/COL	8942706	N/A	2018/03/26	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8940627	N/A	2018/03/21	
Conductance - Low Level	AT/ALK	8940774	2018/03/21	2018/03/22	
Fluoride - Low Level	ISE/ISE	8940546	N/A	2018/03/21	
Hardness Total (calculated as CaCO3)	CALC	8939337	N/A	2018/03/22	
Hardness (calculated as CaCO3)	CALC	8938965	N/A	2018/03/22	
Mercury (Dissolved) by CVAF	CV/AF	8940211	N/A	2018/03/21	
Mercury (Total) by CVAF	CV/AF	8940167	2018/03/21	2018/03/21	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: TD2564
Sample ID: KZ-28
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8942110	N/A	2018/03/23	Name Redacted
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8940008	N/A	2018/03/22	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8942111	N/A	2018/03/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8940013	N/A	2018/03/22	
Ammonia-N Low Level (Preserved)	KONE/COL	8941595	N/A	2018/03/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8940830	N/A	2018/03/21	
Nitrite (N) (low level)	TRAA/COL	8940831	N/A	2018/03/21	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8939458	N/A	2018/03/22	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/20	
pH Water	AT/ALK	8940765	2018/03/21	2018/03/22	
Sulphate - Low Level	KONE/COL	8940996	N/A	2018/03/21	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8940955	2018/03/21	2018/03/21	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8940957	2018/03/21	2018/03/21	
Total Suspended Solids-Low Level	BAL/BAL	8942166	2018/03/22	2018/03/23	
Dissolved Selenium Speciation SubC	PREP	8959033	N/A	2018/04/13	

Maxxam ID: TD2565
Sample ID: KZ-37
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8943524	2018/03/21	2018/03/24	Name Redacted
Alkalinity - Low Level	AT/ALK	8940775	2018/03/21	2018/03/22	
Chloride - Low Level	KONE/COL	8940994	N/A	2018/03/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8942705	N/A	2018/03/26	
Cyanide WAD (weak acid dissociable)	TECH/COL	8942706	N/A	2018/03/26	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8940627	N/A	2018/03/21	
Conductance - Low Level	AT/ALK	8940774	2018/03/21	2018/03/22	
Fluoride - Low Level	ISE/ISE	8940546	N/A	2018/03/21	
Hardness Total (calculated as CaCO3)	CALC	8939337	N/A	2018/03/22	
Hardness (calculated as CaCO3)	CALC	8938965	N/A	2018/03/22	
Mercury (Dissolved) by CVAF	CV/AF	8940211	N/A	2018/03/21	
Mercury (Total) by CVAF	CV/AF	8940167	2018/03/21	2018/03/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8942110	N/A	2018/03/23	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8940008	N/A	2018/03/22	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8942111	N/A	2018/03/23	
Elements by ICPMS Low Level (total)	ICP/CRCM	8940013	N/A	2018/03/22	
Ammonia-N Low Level (Preserved)	KONE/COL	8941595	N/A	2018/03/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8940830	N/A	2018/03/21	
Nitrite (N) (low level)	TRAA/COL	8940831	N/A	2018/03/21	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8939458	N/A	2018/03/22	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/20	
pH Water	AT/ALK	8940765	2018/03/21	2018/03/22	
Sulphate - Low Level	KONE/COL	8940996	N/A	2018/03/21	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: TD2565
Sample ID: KZ-37
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8940955	2018/03/21	2018/03/21	Name Redacted
Total Phosphorus - Low Level Unpreserved	KONE/COL	8940957	2018/03/21	2018/03/21	
Total Suspended Solids-Low Level	BAL/BAL	8942166	2018/03/22	2018/03/23	
Arsenic Speciation Water Subcontract	PREP	8959029	N/A	2018/04/13	
Dissolved Selenium Speciation SubC	PREP	8959033	N/A	2018/04/13	

Maxxam ID: TD2566
Sample ID: KZ-13
Matrix: Water

Collected: 2018/03/15
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8943524	2018/03/21	2018/03/24	Name Redacted
Alkalinity - Low Level	AT/ALK	8940775	2018/03/21	2018/03/22	
Chloride - Low Level	KONE/COL	8940994	N/A	2018/03/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8942705	N/A	2018/03/26	
Cyanide WAD (weak acid dissociable)	TECH/COL	8942706	N/A	2018/03/26	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8940627	N/A	2018/03/21	
Conductance - Low Level	AT/ALK	8940774	2018/03/21	2018/03/22	
Fluoride - Low Level	ISE/ISE	8940546	N/A	2018/03/21	
Hardness Total (calculated as CaCO3)	CALC	8939337	N/A	2018/03/22	
Hardness (calculated as CaCO3)	CALC	8938965	N/A	2018/03/22	
Mercury (Dissolved) by CVAF	CV/AF	8940211	N/A	2018/03/21	
Mercury (Total) by CVAF	CV/AF	8940167	2018/03/21	2018/03/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8938966	N/A	2018/03/22	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8940008	N/A	2018/03/22	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8939457	N/A	2018/03/22	
Elements by ICPMS Low Level (total)	ICP/CRCM	8940013	N/A	2018/03/22	
Ammonia-N Low Level (Preserved)	KONE/COL	8941595	N/A	2018/03/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8940830	N/A	2018/03/21	
Nitrite (N) (low level)	TRAA/COL	8940831	N/A	2018/03/21	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8939458	N/A	2018/03/22	
Filter and HNO3 Preserve for Metals	ICP	ONSITE	N/A	2018/03/20	
pH Water	AT/ALK	8940765	2018/03/21	2018/03/22	
Sulphate - Low Level	KONE/COL	8940996	N/A	2018/03/21	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8940952	2018/03/21	2018/03/21	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8940953	2018/03/21	2018/03/21	
Total Suspended Solids-Low Level	BAL/BAL	8942166	2018/03/22	2018/03/23	
Dissolved Selenium Speciation SubC	PREP	8959033	N/A	2018/04/13	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

TEST SUMMARY

Maxxam ID: TD2567
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2018/03/19
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acidity pH 4.5 & pH 8.3 (as CaCO3)	AT/PH	8943524	2018/03/21	2018/03/24	Name Redacted
Alkalinity - Low Level	AT/ALK	8940775	2018/03/21	2018/03/22	
Chloride - Low Level	KONE/COL	8940994	N/A	2018/03/21	
Cyanide SAD (strong acid dissociable)	TECH/COL	8942705	N/A	2018/03/26	
Cyanide WAD (weak acid dissociable)	TECH/COL	8942706	N/A	2018/03/26	
Carbon (DOC) - field filtered/preserved	TRAA/COL	8940627	N/A	2018/03/21	
Conductance - Low Level	AT/ALK	8940774	2018/03/21	2018/03/22	
Fluoride - Low Level	ISE/ISE	8940546	N/A	2018/03/21	
Hardness Total (calculated as CaCO3)	CALC	8939337	N/A	2018/03/22	
Hardness (calculated as CaCO3)	CALC	8938965	N/A	2018/03/22	
Mercury (Dissolved) by CVAF	CV/AF	8940211	N/A	2018/03/21	
Mercury (Total) by CVAF	CV/AF	8940167	2018/03/21	2018/03/21	
Na, K, Ca, Mg, S by CRC ICPMS (diss.)	CALC	8938966	N/A	2018/03/22	
Elements by ICPMS Low Level (dissolved)	ICP/CRCM	8940008	N/A	2018/03/22	
Na, K, Ca, Mg, S by CRC ICPMS (total)	CALC	8939457	N/A	2018/03/22	
Elements by ICPMS Low Level (total)	ICP/CRCM	8940013	N/A	2018/03/22	
Ammonia-N Low Level (Preserved)	KONE/COL	8941595	N/A	2018/03/21	
Nitrate+Nitrite (N) (low level)	TRAA/COL	8940830	N/A	2018/03/21	
Nitrite (N) (low level)	TRAA/COL	8940831	N/A	2018/03/21	
Nitrogen - Nitrate (as N) Low Level Calc	CALC	8939458	N/A	2018/03/22	
pH Water	AT/ALK	8940765	2018/03/21	2018/03/22	
Sulphate - Low Level	KONE/COL	8940996	N/A	2018/03/21	
Phosphorus-P (LL Tot, dissolved) - UF/UP	KONE/COL	8940955	2018/03/21	2018/03/21	
Total Phosphorus - Low Level Unpreserved	KONE/COL	8940957	2018/03/21	2018/03/21	
Total Suspended Solids-Low Level	BAL/BAL	8942166	2018/03/22	2018/03/23	

Maxxam ID: TD2567 Dup
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2018/03/19
Shipped:
Received: 2018/03/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Carbon (DOC) - field filtered/preserved	TRAA/COL	8940627	N/A	2018/03/21	Name Redacted
Ammonia-N Low Level (Preserved)	KONE/COL	8941595	N/A	2018/03/21	

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	0.3°C
Package 2	1.0°C
Package 3	-0.7°C

Sample TD2528 [KZ-2] : Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample TD2529 [KZ-6] : Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample TD2530 [KZ-9] : Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample TD2531 [KZ-15] : Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample TD2532 [KZ-16] : Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample TD2533 [KZ-17] : Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample TD2534 [KZ-18] : Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample TD2535 [KZ-19] : Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample TD2561 [KZ-21] : Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample TD2562 [KZ-22] : Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample TD2563 [KZ-26] : Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample TD2564 [KZ-28] : Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample TD2565 [KZ-37] : Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample TD2566 [KZ-13] : Sample received past method specified hold time for Nitrate+Nitrite (N) (low level). {Exceedance of hold time increases the uncertainty of test results but does not necessarily imply that results are compromised.} Sample received past method specified hold time for Nitrite (N) (low level). Sample analyzed past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample received past method specified hold time for Phosphorus-P (LL Tot, dissolved) - UF/UP. Sample analyzed past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample received past method specified hold time for Total Phosphorus - Low Level Unpreserved. Sample was analyzed past method specified hold time for Nitrate+Nitrite (N) (low level). Sample was analyzed past method specified hold time for Nitrite (N) (low level).

Sample TD2529, Elements by ICPMS Low Level (dissolved): Test repeated.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

Sample TD2530, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample TD2532, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample TD2533, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample TD2534, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample TD2535, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample TD2561, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample TD2562, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample TD2563, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample TD2564, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample TD2565, Elements by ICPMS Low Level (dissolved): Test repeated.
Sample TD2563, Elements by ICPMS Low Level (total): Test repeated.

Results relate only to the items tested.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

QUALITY ASSURANCE REPORT

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8940008	Dissolved Aluminum (Al)	2018/03/22	104	80 - 120	110	80 - 120	<0.00050	mg/L	7.9	20
8940008	Dissolved Antimony (Sb)	2018/03/22	101	80 - 120	106	80 - 120	<0.000020	mg/L	11	20
8940008	Dissolved Arsenic (As)	2018/03/22	100	80 - 120	102	80 - 120	<0.000020	mg/L	16	20
8940008	Dissolved Barium (Ba)	2018/03/22	NC	80 - 120	103	80 - 120	<0.000020	mg/L	0.54	20
8940008	Dissolved Beryllium (Be)	2018/03/22	98	80 - 120	99	80 - 120	<0.000010	mg/L	NC	20
8940008	Dissolved Bismuth (Bi)	2018/03/22	100	80 - 120	106	80 - 120	<0.0000050	mg/L	NC	20
8940008	Dissolved Boron (B)	2018/03/22	110	80 - 120	109	80 - 120	<0.010	mg/L	NC	20
8940008	Dissolved Cadmium (Cd)	2018/03/22	97	80 - 120	101	80 - 120	<0.0000050	mg/L	4.7	20
8940008	Dissolved Chromium (Cr)	2018/03/22	94	80 - 120	100	80 - 120	<0.00010	mg/L	NC	20
8940008	Dissolved Cobalt (Co)	2018/03/22	94	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8940008	Dissolved Copper (Cu)	2018/03/22	90	80 - 120	98	80 - 120	<0.000050	mg/L	1.9	20
8940008	Dissolved Iron (Fe)	2018/03/22	99	80 - 120	103	80 - 120	<0.0010	mg/L	2.9	20
8940008	Dissolved Lead (Pb)	2018/03/22	98	80 - 120	102	80 - 120	<0.0000050	mg/L	1.4	20
8940008	Dissolved Lithium (Li)	2018/03/22	100	80 - 120	103	80 - 120	<0.00050	mg/L	0.41	20
8940008	Dissolved Manganese (Mn)	2018/03/22	97	80 - 120	103	80 - 120	<0.000050	mg/L	14	20
8940008	Dissolved Molybdenum (Mo)	2018/03/22	101	80 - 120	106	80 - 120	<0.000050	mg/L	2.1	20
8940008	Dissolved Nickel (Ni)	2018/03/22	93	80 - 120	102	80 - 120	<0.000020	mg/L	4.6	20
8940008	Dissolved Phosphorus (P)	2018/03/22	102	80 - 120	103	80 - 120	0.0025, RDL=0.0020 (1)	mg/L	NC	20
8940008	Dissolved Selenium (Se)	2018/03/22	99	80 - 120	101	80 - 120	<0.000040	mg/L	2.6	20
8940008	Dissolved Silicon (Si)	2018/03/22	104	80 - 120	112	80 - 120	<0.050	mg/L	0.063	20
8940008	Dissolved Silver (Ag)	2018/03/22	99	80 - 120	101	80 - 120	<0.0000050	mg/L	NC	20
8940008	Dissolved Strontium (Sr)	2018/03/22	NC	80 - 120	101	80 - 120	<0.000050	mg/L	3.8	20
8940008	Dissolved Thallium (Tl)	2018/03/22	102	80 - 120	107	80 - 120	<0.0000020	mg/L	5.1	20
8940008	Dissolved Tin (Sn)	2018/03/22	99	80 - 120	104	80 - 120	<0.00020	mg/L	NC	20
8940008	Dissolved Titanium (Ti)	2018/03/22	94	80 - 120	99	80 - 120	<0.00050	mg/L	NC	20
8940008	Dissolved Uranium (U)	2018/03/22	94	80 - 120	97	80 - 120	<0.0000020	mg/L	1.9	20
8940008	Dissolved Vanadium (V)	2018/03/22	96	80 - 120	100	80 - 120	<0.00020	mg/L	NC	20
8940008	Dissolved Zinc (Zn)	2018/03/22	94	80 - 120	101	80 - 120	<0.00010	mg/L	0.15	20
8940008	Dissolved Zirconium (Zr)	2018/03/22	102	80 - 120	102	80 - 120	<0.00010	mg/L	NC	20
8940013	Total Aluminum (Al)	2018/03/22	91	80 - 120	92	80 - 120	<0.00050	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8940013	Total Antimony (Sb)	2018/03/22	119	80 - 120	92	80 - 120	<0.000020	mg/L		
8940013	Total Arsenic (As)	2018/03/22	NC	80 - 120	96	80 - 120	<0.000020	mg/L	4.7	20
8940013	Total Barium (Ba)	2018/03/22	97	80 - 120	89	80 - 120	<0.000020	mg/L		
8940013	Total Beryllium (Be)	2018/03/22	81	80 - 120	90	80 - 120	<0.000010	mg/L		
8940013	Total Bismuth (Bi)	2018/03/22	86	80 - 120	91	80 - 120	<0.0000050	mg/L		
8940013	Total Boron (B)	2018/03/22	NC	80 - 120	90	80 - 120	<0.010	mg/L		
8940013	Total Cadmium (Cd)	2018/03/22	88	80 - 120	91	80 - 120	<0.0000050	mg/L		
8940013	Total Chromium (Cr)	2018/03/22	87	80 - 120	93	80 - 120	<0.00010	mg/L		
8940013	Total Cobalt (Co)	2018/03/22	84	80 - 120	92	80 - 120	<0.0000050	mg/L		
8940013	Total Copper (Cu)	2018/03/22	81	80 - 120	92	80 - 120	<0.000050	mg/L		
8940013	Total Iron (Fe)	2018/03/22	88	80 - 120	96	80 - 120	<0.0010	mg/L		
8940013	Total Lead (Pb)	2018/03/22	89	80 - 120	91	80 - 120	<0.0000050	mg/L		
8940013	Total Lithium (Li)	2018/03/22	79 (2)	80 - 120	94	80 - 120	<0.00050	mg/L		
8940013	Total Manganese (Mn)	2018/03/22	89	80 - 120	94	80 - 120	<0.000050	mg/L		
8940013	Total Molybdenum (Mo)	2018/03/22	104	80 - 120	92	80 - 120	<0.000050	mg/L		
8940013	Total Nickel (Ni)	2018/03/22	83	80 - 120	95	80 - 120	<0.000020	mg/L		
8940013	Total Phosphorus (P)	2018/03/22	106	80 - 120	97	80 - 120	<0.0020	mg/L		
8940013	Total Selenium (Se)	2018/03/22	124 (2)	80 - 120	105	80 - 120	<0.000040	mg/L		
8940013	Total Silicon (Si)	2018/03/22	NC	80 - 120	110	80 - 120	<0.050	mg/L		
8940013	Total Silver (Ag)	2018/03/22	86	80 - 120	89	80 - 120	<0.0000050	mg/L		
8940013	Total Strontium (Sr)	2018/03/22	NC	80 - 120	94	80 - 120	<0.000050	mg/L		
8940013	Total Thallium (Tl)	2018/03/22	90	80 - 120	92	80 - 120	<0.0000020	mg/L		
8940013	Total Tin (Sn)	2018/03/22	91	80 - 120	91	80 - 120	<0.00020	mg/L		
8940013	Total Titanium (Ti)	2018/03/22	90	80 - 120	94	80 - 120	<0.00050	mg/L		
8940013	Total Uranium (U)	2018/03/22	95	80 - 120	91	80 - 120	<0.0000020	mg/L		
8940013	Total Vanadium (V)	2018/03/22	91	80 - 120	93	80 - 120	<0.00020	mg/L		
8940013	Total Zinc (Zn)	2018/03/22	84	80 - 120	94	80 - 120	<0.00010	mg/L		
8940013	Total Zirconium (Zr)	2018/03/22	100	80 - 120	95	80 - 120	<0.00010	mg/L		
8940167	Total Mercury (Hg)	2018/03/21	103	80 - 120	96	80 - 120	<0.0000020	mg/L	NC	20
8940211	Dissolved Mercury (Hg)	2018/03/21	96	80 - 120	90	80 - 120	<0.0000020	mg/L	NC	20
8940367	Total Suspended Solids	2018/03/22			101	80 - 120	<1.0	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8940546	Fluoride (F)	2018/03/21	106	80 - 120	106	80 - 120	<0.010	mg/L	0	20
8940559	Acidity (pH 4.5)	2018/03/21					<1.0	mg/L	NC	20
8940559	Acidity (pH 8.3)	2018/03/21			100	80 - 120	<1.0	mg/L	NC	20
8940618	Dissolved Mercury (Hg)	2018/03/21	90	80 - 120	103	80 - 120	<0.0000020	mg/L	NC	20
8940627	Dissolved Organic Carbon (C)	2018/03/21	112	80 - 120	114	80 - 120	<0.50	mg/L	NC	20
8940765	pH	2018/03/22			102	97 - 103			0.74	20
8940774	Conductivity	2018/03/22			100	80 - 120	1.1, RDL=1.0	uS/cm	0.66	20
8940775	Alkalinity (PP as CaCO3)	2018/03/22					<0.50	mg/L	NC	20
8940775	Alkalinity (Total as CaCO3)	2018/03/22	NC	80 - 120	96	80 - 120	0.59, RDL=0.50	mg/L	0.87	20
8940775	Bicarbonate (HCO3)	2018/03/22					0.72, RDL=0.50	mg/L	0.87	20
8940775	Carbonate (CO3)	2018/03/22					<0.50	mg/L	NC	20
8940775	Hydroxide (OH)	2018/03/22					<0.50	mg/L	NC	20
8940830	Nitrate plus Nitrite (N)	2018/03/21	103	80 - 120	110	80 - 120	<0.0020	mg/L	0.45	25
8940831	Nitrite (N)	2018/03/21	99	80 - 120	102	80 - 120	<0.0020	mg/L	NC	25
8940837	Acidity (pH 4.5)	2018/03/21					<1.0	mg/L	NC	20
8940837	Acidity (pH 8.3)	2018/03/21			101	80 - 120	<1.0	mg/L	NC	20
8940952	Dissolved Phosphorus (P)	2018/03/21	101	80 - 120	100	80 - 120	<0.0020	mg/L	NC	20
8940953	Total Phosphorus (P)	2018/03/21	103	80 - 120	100	80 - 120	<0.0020	mg/L	NC	20
8940955	Dissolved Phosphorus (P)	2018/03/21			96	80 - 120	<0.0020	mg/L		
8940957	Total Phosphorus (P)	2018/03/21			96	80 - 120	<0.0020	mg/L		
8940994	Dissolved Chloride (Cl)	2018/03/21	113	80 - 120	103	80 - 120	<0.50	mg/L	NC	20
8940996	Dissolved Sulphate (SO4)	2018/03/21	NC	80 - 120	96	80 - 120	0.50, RDL=0.50	mg/L	0.35	20
8941595	Total Ammonia (N)	2018/03/21	110	80 - 120	104	80 - 120	<0.0050	mg/L	NC	20
8942130	Alkalinity (PP as CaCO3)	2018/03/22					<0.50	mg/L	NC	20
8942130	Alkalinity (Total as CaCO3)	2018/03/22			91	80 - 120	<0.50	mg/L	0.0069	20
8942130	Bicarbonate (HCO3)	2018/03/22					<0.50	mg/L	0.0069	20
8942130	Carbonate (CO3)	2018/03/22					<0.50	mg/L	NC	20
8942130	Hydroxide (OH)	2018/03/22					<0.50	mg/L	NC	20
8942138	pH	2018/03/23			101	97 - 103			0.13	20
8942146	Conductivity	2018/03/23			100	80 - 120	<1.0	uS/cm	0.44	20
8942156	Dissolved Aluminum (Al)	2018/03/22			110	80 - 120	<0.00050	mg/L		

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

QUALITY ASSURANCE REPORT(CONT'D)

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

			Matrix Spike		Spiked Blank		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8942156	Dissolved Barium (Ba)	2018/03/22			100	80 - 120	<0.000020	mg/L		
8942156	Dissolved Cadmium (Cd)	2018/03/22			100	80 - 120	<0.0000050	mg/L		
8942156	Dissolved Copper (Cu)	2018/03/22			98	80 - 120	<0.000050	mg/L		
8942156	Dissolved Iron (Fe)	2018/03/22			103	80 - 120	<0.0010	mg/L		
8942156	Dissolved Lead (Pb)	2018/03/22			98	80 - 120	<0.0000050	mg/L		
8942156	Dissolved Molybdenum (Mo)	2018/03/22			100	80 - 120	<0.000050	mg/L		
8942156	Dissolved Phosphorus (P)	2018/03/22			104	80 - 120	0.0022, RDL=0.0020 (1)	mg/L		
8942156	Dissolved Zinc (Zn)	2018/03/22			101	80 - 120	<0.00010	mg/L		
8942157	Total Phosphorus (P)	2018/03/22			105	80 - 120	<0.0020	mg/L		
8942166	Total Suspended Solids	2018/03/23			94	80 - 120	<1.0	mg/L		
8942705	Strong Acid Dissoc. Cyanide (CN)	2018/03/26	106	80 - 120	101	80 - 120	<0.00050	mg/L	8.4	20
8942706	Weak Acid Dissoc. Cyanide (CN)	2018/03/26	105	80 - 120	101	80 - 120	<0.00050	mg/L	NC	20
8943524	Acidity (pH 4.5)	2018/03/24					<1.0	mg/L	1.2	20
8943524	Acidity (pH 8.3)	2018/03/24			99	80 - 120	<1.0	mg/L	0.86	20

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Method Blank exceeds acceptance limits for Phosphorus - 2X RDL acceptable for low level metals determination.

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam Job #: B820573
Report Date: 2018/04/13

ALEXCO ENVIRONMENTAL GROUP INC.
Client Project #: BMC-15-01
Site Location: KUDZ ZE KAYAH
Sampler Initials: AMP

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by the following individual(s).

Name Redacted Scientific Services Manager

Signature Redacted

Redacted

Maxxam has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per section 5.10.2 of ISO/IEC 17025:2005(E), signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Maxxam
A Bureau Veritas Group Company

CHAIN OF CUSTODY

08450527

BBY FCD-00077/05

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5. Toll Free (800) 665-8566

COC #:

Page 1 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:		Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	SELENIUM	ARSENIC		# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE
1	KZ-2		15-Mar-18	17:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x			11	
3	KZ-6		15-Mar-18	16:20	Water	x	x	x	x	x	x	x	x	x	x	x	x	x			11	
4	KZ-9		15-Mar-18	15:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x			11	
6	KZ-15		15-Mar-18	13:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	x		11	
7	KZ-16		15-Mar-18	14:10	Water	x	x	x	x	x	x	x	x	x	x	x	x	x			11	
8	KZ-17		15-Mar-18	14:00	Water	x	x	x	x	x	x	x	x	x	x	x	x	x			11	
9	KZ-18		15-Mar-18	15:25	Water	x	x	x	x	x	x	x	x	x	x	x	x	x			11	
10	KZ-19		15-Mar-18	15:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x			11	

LABORATORY USE ONLY

CUSTODY SEAL Y / N		COOLER TEMPERATURES
Present	Intact	
YES	YES	5.4.2
YES	YES	2.3.3
YES	YES	2.4.3

COOLING MEDIA PRESENT Y / N

COMMENTS

RECEIVED IN WHITEHORSE
BY: Signature Redacted 20920
2018-03-19
TEMP: 0 / 1 / 0
-1 -1 0

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	3/19/2018	9:00	Signature Redacted	2018/03/20	11:10

B820573_COC

Maxxam
A Bureau Veritas Group Company

Burnaby: 4606 Canada Way, Burnaby, BC V5G 1K5, Toll Free (800) 665-8566

CHAIN OF CUSTODY

08450528

BBY FCD-00077/05

COC #:

Page 2 2

Invoice Information		Report Information (if differs from invoice)		Project Information (where applicable)		Turnaround Time (TAT) Required
Company Name:	BMC MINERALS LTD.	Company Name:	ALEXCO ENVIRONMENTAL	Quotation #:	B50743	[x] Regular TAT 5 days (Most analyses)
Contact Name:		Contact Name:	KAI WOLOSHYN	P.O. #/ AFE#:		PLEASE PROVIDE ADVANCE NOTICE FOR RUSH PROJECTS
Address:	530-1130 WEST PENDER ST	Address:	UNIT 3 151 INDUSTRIAL RD	Project #:	BMC-15-01	Rush TAT (Surcharges will be applied)
	Vancouver, BC PC: V6E 4A4		Whitehorse, YK PC: V1A 2V3	Site Location:	Kudz Ze Kayah	[ ] Same Day [ ] 2 Days [ ] 1 Day [ ] 3 Days
Phone:		Phone:	(867) 668-6463	Site #:		
Email:		Email:	kwoloshyn@alexcoresource.com	Sampled By:	Signature Redacted	Date Required:

Regulatory Criteria	Special Instructions
[ ] BC CSR Soil [ ] BC CSR Water	[ ] Return Cooler
[ ] CCME (Specify) [ ] Other (Specify)	[ ] Ship Sample Bottles (Please Specify)
[ ] Drinking Water [ ] BC Water Quality	USE SCENARIO # 12485

SAMPLES MUST BE KEPT COOL (< 10 °C) FROM TIME OF SAMPLING UNTIL DELIVERY TO MAXXAM

Analysis Requested

Rush Confirmation #:

LABORATORY USE ONLY

CUSTODY SEAL (Y / N): Present: YES, Intact: YES

COOLER TEMPERATURES: 5.4.2 / 2.3.3 / 2.4.3

COOLING MEDIA PRESENT (Y / N)

	Sample Identification	Lab Identification	Date Sampled (YYYY/MM/DD)	Time Sampled (HH:MM)	Matrix	TOTAL LOW LEVEL METALS INCL. MERCURY	DISSOLVED LOW LEVEL METALS INCL. MERCURY	LOW LEVEL TSS	ANIONS (Cl, F, SO4, NO2, NO3)	AMMONIA	CYANIDE (SAD & WAD)	CONDUCTIVITY	pH	ALKALINITY & ACIDITY	DOC	TOTAL PHOSPHORUS - LOW LEVEL	DISSOLVED PHOSPHORUS - LOW LEVEL	SELENIUM	ARSENIC		# OF CONTAINERS SUBMITTED	HOLD - DO NOT ANALYZE	COMMENTS
1	KZ-21		15-Mar-18	12:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x			11		RECEIVED IN WHITEHORSE BY: Signature Redacted 0920 2018-03-15
2	KZ-22		15-Mar-18	11:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x			11		
3	KZ-26		15-Mar-18	8:30	Water	x	x	x	x	x	x	x	x	x	x	x	x	x			11		
4	KZ-28		15-Mar-18	8:45	Water	x	x	x	x	x	x	x	x	x	x	x	x	x			11		
5	KZ-37		15-Mar-18	14:50	Water	x	x	x	x	x	x	x	x	x	x	x	x	x	x		11		TEMP. 0.1.0 / 1.1.1 / -1.-1.0
6	KZ-13		15-Mar-18	17:55	Water	x	x	x	x	x	x	x	x	x	x	x	x	x			11		
7	Trip Blank				Water	x	x	x	x	x	x	x	x	x	x	x	x	x			11		
8																							
9																							
10																							

RELINQUISHED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (Signature/Print)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
Signature Redacted	3/19/2018	9:00	Signature Redacted	2018/03/20	11:10

B820573_COC

BROOKS APPLIED LABS
18804 North Creek Parkway, Ste 100, Bothell, WA 98011 • USA • T: 206 632 6206 F: 206 632 6017 • info@brooksapplied.com

April 12, 2018

Maxxam Analytics - Burnaby
ATTN: Name
4606 Canada Way
Burnaby, BC V5G 1K5
Email Redacted

RE: Project MAX-BR1802 Client Project ID: B820573

Dear Name ,

On March 21, 2018, Brooks Applied Labs (BAL) received ten (10) water samples in a sealed cooler. The samples were logged-in for dissolved selenium speciation, selenite [Se(IV)] and selenate [Se(VI)] and dissolved arsenite [*(As(III)*], arsenate [*As(V)*], monomethylarsonic acid [*MMAs*], and dimethylarsinic acid [*DMAs*]. Additionally, inoraganic As was calculated by adding the sums of As(III) and As(V). The samples were filtered in the field by the client. All samples were received, prepared, analyzed, and stored according to BAL SOPs and EPA methodology.

Selenium speciation analysis was performed by ion chromatography coupled to an inductively coupled plasma collision reaction cell mass spectrometer (IC-ICP-CRC-MS). Prior to analysis, an aliquot of each sample was filtered again with a syringe filter (0.45-µm) and injected directly into a sealed autosampler vial. No further sample preparation was performed as any chemical alteration of a sample may shift the equilibrium of the system, resulting in changes in speciation ratios.

Arsenic speciation was preformed using ion chromatography inductively coupled plasma collision reaction cell mass spectrometry (IC-ICP-CRC-MS). Arsenic species are chromatographically separated on an ion exchange column and then quantified using inductively coupled plasma collision reaction cell mass spectrometry (ICP-CRC-MS)

The selenium and arsenic speciation results were *not* method blank corrected as described in the calculations section of the relevant BAL SOP(s) and were evaluated using reporting limits adjusted to account for sample aliquot size. Please refer to the *Sample Results* page for sample-specific MDLs, MRLs, and other details.

If the native sample result and/or the DUP result is not detected (ND) above the MDL, then the associated RPD is not calculated (N/C).

All data was reported without qualification (aside from concentration qualifiers) and all associated quality control sample results met the acceptance criteria. BAL, an accredited laboratory, certifies that the reported results of all analyses for which BAL is NELAP accredited meet all NELAP requirements. For more information please see the *Report Information* page in your report.

Sincerely,

Signature Redacted

Name Redacted
Senior Project Manager
Email Redacted

Report Information

Laboratory Accreditation

BAL is accredited by the *National Environmental Laboratory Accreditation Program* (NELAP) through the State of Florida Department of Health, Bureau of Laboratories (E87982) and is certified to perform many environmental analyses. BAL is also certified by many other states to perform environmental analyses. For a current list of our accreditations/certifications, please visit our website at <http://www.brooksapplied.com/resources/certificates-permits/>. Results reported relate only to the samples listed in the report.

Field Quality Control Samples

Please be notified that certain EPA methods require the collection of field quality control samples of an appropriate type and frequency; failure to do so is considered a deviation from some methods and for compliance purposes should only be done with the approval of regulatory authorities. Please see the specific EPA methods for details regarding required field quality control samples.

Common Abbreviations

AR	as received	**MS**	matrix spike
BAL	Brooks Applied Labs	**MSD**	matrix spike duplicate
BLK	method blank	**ND**	non-detect
BS	blank spike	**NR**	non-reportable
CAL	calibration standard	**N/C**	not calculated
CCB	continuing calibration blank	**PS**	post preparation spike
CCV	continuing calibration verification	**REC**	percent recovery
COC	chain of custody record	**RPD**	relative percent difference
D	dissolved fraction	**SCV**	secondary calibration verification
DUP	duplicate	**SOP**	standard operating procedure
IBL	instrument blank	**SRM**	standard reference material
ICV	initial calibration verification	**T**	total fraction
MDL	method detection limit	**TR**	total recoverable fraction
MRL	method reporting limit		

Definition of Data Qualifiers

(Effective 9/23/09)

E An estimated value due to the presence of interferences. A full explanation is presented in the narrative.
H Holding time and/or preservation requirements not met. Result is estimated.
J Detected by the instrument, the result is > the MDL but ≤ the MRL. Result is reported and considered an estimate.
J-1 Estimated value. A full explanation is presented in the narrative.
J-M Duplicate precision (RPD) for associated QC sample was not within acceptance criteria. Result is estimated.
J-N Spike recovery for associated QC sample was not within acceptance criteria. Result is estimated.
M Duplicate precision (RPD) was not within acceptance criteria. Result is estimated.
N Spike recovery was not within acceptance criteria. Result is estimated.
R Rejected, unusable value. A full explanation is presented in the narrative.
U Result is ≤ the MDL or client requested reporting limit (CRRL). Result reported as the MDL or CRRL.
X Result is not BLK-corrected and is within 10x the absolute value of the highest detectable BLK in the batch. Result is estimated.

These qualifiers are based on those previously utilized by Brooks Applied Labs, those found in the EPA SOW ILM03.0, Exhibit B, Section III, pg. B-18, and the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review; USEPA; January 2010. These supersede all previous qualifiers ever employed by BAL.

Sample Information

Sample	Lab ID	Report Matrix	Type	Sampled	Received
TD2528-KZ-2	1812018-01	Water	Sample	03/15/2018	03/21/2018
TD2529-KZ-6	1812018-02	Water	Sample	03/15/2018	03/21/2018
TD2530-KZ-9	1812018-03	Water	Sample	03/15/2018	03/21/2018
TD2531-KZ-15	1812018-04	Water	Sample	03/15/2018	03/21/2018
TD2532-KZ-16	1812018-05	Water	Sample	03/15/2018	03/21/2018
TD2533-KZ-17	1812018-06	Water	Sample	03/15/2018	03/21/2018
TD2534-KZ-18	1812018-07	Water	Sample	03/15/2018	03/21/2018
TD2535-KZ-19	1812018-08	Water	Sample	03/15/2018	03/21/2018
TD2561-KZ-21	1812018-09	Water	Sample	03/15/2018	03/21/2018
TD2562-KZ-22	1812018-10	Water	Sample	03/15/2018	03/21/2018
TD2563-KZ-26	1812018-11	Water	Sample	03/15/2018	03/21/2018
TD2564-KZ-28	1812018-12	Water	Sample	03/15/2018	03/21/2018
TD2565-KZ-37	1812018-13	Water	Sample	03/15/2018	03/21/2018
TD2566-KZ-13	1812018-14	Water	Sample	03/15/2018	03/21/2018

Batch Summary

Analyte	Lab Matrix	Method	Prepared	Analyzed	Batch	Sequence
As(III)	Water	SOP BAL-4100	03/27/2018	03/28/2018	B180747	1800426
As(Inorg)	Water	Calc	03/27/2018	03/28/2018	[CALC]	N/A
As(V)	Water	SOP BAL-4100	03/27/2018	03/28/2018	B180747	1800426
DMAs	Water	SOP BAL-4100	03/27/2018	03/28/2018	B180747	1800426
MMAs	Water	SOP BAL-4100	03/27/2018	03/28/2018	B180747	1800426
Se(IV)	Water	SOP BAL-4200	04/03/2018	04/03/2018	B180795	1800451
Se(VI)	Water	SOP BAL-4200	04/03/2018	04/03/2018	B180795	1800451

Sample Results

Sample	Analyte	Report Matrix	Basis	Result	Qualifier	MDL	MRL	Unit	Batch	Sequence
TD2528-KZ-2										
1812018-01	Se(IV)	Water	D	≤ 0.175	U	0.175	0.625	µg/L	B180795	1800451
1812018-01	Se(VI)	Water	D	2.79		0.150	0.625	µg/L	B180795	1800451
TD2529-KZ-6										
1812018-02	Se(IV)	Water	D	≤ 0.175	U	0.175	0.625	µg/L	B180795	1800451
1812018-02	Se(VI)	Water	D	1.41		0.150	0.625	µg/L	B180795	1800451
TD2530-KZ-9										
1812018-03	Se(IV)	Water	D	≤ 0.175	U	0.175	0.625	µg/L	B180795	1800451
1812018-03	Se(VI)	Water	D	0.940		0.150	0.625	µg/L	B180795	1800451
TD2531-KZ-15										
1812018-04	As(III)	Water	D	≤ 0.200	U	0.200	1.00	µg/L	B180747	1800426
1812018-04	As(Inorg)	Water	D	0.223	J	0.200	1.00	µg/L	[CALC]	N/A
1812018-04	As(V)	Water	D	0.223	J	0.200	1.00	µg/L	B180747	1800426
1812018-04	DMAs	Water	D	≤ 0.250	U	0.250	1.05	µg/L	B180747	1800426
1812018-04	MMAs	Water	D	≤ 0.450	U	0.450	1.15	µg/L	B180747	1800426
1812018-04	Se(IV)	Water	D	≤ 0.175	U	0.175	0.625	µg/L	B180795	1800451
1812018-04	Se(VI)	Water	D	1.31		0.150	0.625	µg/L	B180795	1800451
TD2532-KZ-16										
1812018-05	Se(IV)	Water	D	≤ 0.175	U	0.175	0.625	µg/L	B180795	1800451
1812018-05	Se(VI)	Water	D	1.42		0.150	0.625	µg/L	B180795	1800451
TD2533-KZ-17										
1812018-06	Se(IV)	Water	D	≤ 0.175	U	0.175	0.625	µg/L	B180795	1800451
1812018-06	Se(VI)	Water	D	1.48		0.150	0.625	µg/L	B180795	1800451
TD2534-KZ-18										
1812018-07	Se(IV)	Water	D	≤ 0.175	U	0.175	0.625	µg/L	B180795	1800451
1812018-07	Se(VI)	Water	D	1.32		0.150	0.625	µg/L	B180795	1800451
TD2535-KZ-19										
1812018-08	Se(IV)	Water	D	≤ 0.175	U	0.175	0.625	µg/L	B180795	1800451
1812018-08	Se(VI)	Water	D	≤ 0.150	U	0.150	0.625	µg/L	B180795	1800451

Sample Results

Sample	Analyte	Report Matrix	Basis	Result	Qualifier	MDL	MRL	Unit	Batch	Sequence
TD2561-KZ-21										
1812018-09	Se(IV)	Water	D	≤ 0.175	U	0.175	0.625	µg/L	B180795	1800451
1812018-09	Se(VI)	Water	D	0.427	J	0.150	0.625	µg/L	B180795	1800451
TD2562-KZ-22										
1812018-10	Se(IV)	Water	D	≤ 0.175	U	0.175	0.625	µg/L	B180795	1800451
1812018-10	Se(VI)	Water	D	0.977		0.150	0.625	µg/L	B180795	1800451
TD2563-KZ-26										
1812018-11	Se(IV)	Water	D	≤ 0.175	U	0.175	0.625	µg/L	B180795	1800451
1812018-11	Se(VI)	Water	D	0.819		0.150	0.625	µg/L	B180795	1800451
TD2564-KZ-28										
1812018-12	Se(IV)	Water	D	≤ 0.175	U	0.175	0.625	µg/L	B180795	1800451
1812018-12	Se(VI)	Water	D	0.846		0.150	0.625	µg/L	B180795	1800451
TD2565-KZ-37										
1812018-13	As(III)	Water	D	≤ 0.200	U	0.200	1.00	µg/L	B180747	1800426
1812018-13	As(Inorg)	Water	D	0.246	J	0.200	1.00	µg/L	[CALC]	N/A
1812018-13	As(V)	Water	D	0.246	J	0.200	1.00	µg/L	B180747	1800426
1812018-13	DMAs	Water	D	≤ 0.250	U	0.250	1.05	µg/L	B180747	1800426
1812018-13	MMAs	Water	D	≤ 0.450	U	0.450	1.15	µg/L	B180747	1800426
1812018-13	Se(IV)	Water	D	≤ 0.175	U	0.175	0.625	µg/L	B180795	1800451
1812018-13	Se(VI)	Water	D	0.989		0.150	0.625	µg/L	B180795	1800451
TD2566-KZ-13										
1812018-14	Se(IV)	Water	D	≤ 0.175	U	0.175	0.625	µg/L	B180795	1800451
1812018-14	Se(VI)	Water	D	0.164	J	0.150	0.625	µg/L	B180795	1800451

Accuracy & Precision Summary

Batch: B180747
Lab Matrix: Water
Method: SOP BAL-4100

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B180747-BS1	**Blank Spike, (1736006)**						
	As(III)		5.010	5.029	µg/L	100% 75-125	
	As(V)		5.000	5.090	µg/L	102% 75-125	
	DMAs		3.198	3.000	µg/L	94% 75-125	
B180747-BS2	**Blank Spike, (1714054)**						
	MMAs		4.634	4.927	µg/L	106% 75-125	
B180747-DUP4	**Duplicate, (1812018-13)**						
	As(III)	ND		ND	µg/L		N/C 25
	As(V)	0.246		0.242	µg/L		2% 25
	DMAs	ND		ND	µg/L		N/C 25
	MMAs	ND		ND	µg/L		N/C 25
B180747-MS4	**Matrix Spike, (1812018-13)**						
	As(III)	ND	50.00	45.49	µg/L	91% 75-125	
	As(V)	0.246	50.00	46.15	µg/L	92% 75-125	
	DMAs	ND	51.00	46.43	µg/L	91% 75-125	
	MMAs	ND	50.00	45.78	µg/L	92% 75-125	
B180747-MSD4	**Matrix Spike Duplicate, (1812018-13)**						
	As(III)	ND	50.00	44.36	µg/L	89% 75-125	3% 25
	As(V)	0.246	50.00	46.45	µg/L	92% 75-125	0.6% 25
	DMAs	ND	51.00	45.89	µg/L	90% 75-125	1% 25
	MMAs	ND	50.00	44.91	µg/L	90% 75-125	2% 25
B180747-DUP5	**Duplicate, (1812019-10)**						
	As(III)	0.157		0.153	µg/L		2% 25
	As(V)	0.260		0.249	µg/L		5% 25
	DMAs	1.415		1.399	µg/L		1% 25
	MMAs	0.271		0.283	µg/L		4% 25

Accuracy & Precision Summary

Batch: B180795
Lab Matrix: Water
Method: SOP BAL-4200

Sample	Analyte	Native	Spike	Result	Units	REC & Limits	RPD & Limits
B180795-BS1	**Blank Spike, (1814001)**						
	Se(IV)		5.000	5.134	µg/L	103% 75-125	
	Se(VI)		4.890	4.819	µg/L	99% 75-125	
B180795-DUP1	**Duplicate, (1812018-07)**						
	Se(IV)	ND		ND	µg/L		N/C 25
	Se(VI)	1.322		1.313	µg/L		0.6% 25
B180795-MS1	**Matrix Spike, (1812018-07)**						
	Se(IV)	ND	125.0	123.7	µg/L	99% 75-125	
	Se(VI)	1.322	125.0	125.1	µg/L	99% 75-125	
B180795-MSD1	**Matrix Spike Duplicate, (1812018-07)**						
	Se(IV)	ND	125.0	122.7	µg/L	98% 75-125	0.8% 25
	Se(VI)	1.322	125.0	125.7	µg/L	100% 75-125	0.4% 25
B180795-DUP3	**Duplicate, (1813035-03)**						
	Se(IV)	ND		ND	µg/L		N/C 25
	Se(VI)	ND		ND	µg/L		N/C 25
B180795-MS3	**Matrix Spike, (1813035-03)**						
	Se(IV)	ND	1250	1218	µg/L	97% 75-125	
	Se(VI)	ND	1250	1181	µg/L	94% 75-125	
B180795-MSD3	**Matrix Spike Duplicate, (1813035-03)**						
	Se(IV)	ND	1250	1227	µg/L	98% 75-125	0.7% 25
	Se(VI)	ND	1250	1193	µg/L	95% 75-125	1% 25

Method Blanks & Reporting Limits

Batch: B180747
Matrix: Water
Method: SOP BAL-4100
Analyte: As(III)

Sample	Result	Units
B180747-BLK1	0.00	µg/L
B180747-BLK2	0.00	µg/L
B180747-BLK3	0.00	µg/L
B180747-BLK4	0.00	µg/L

Average: 0.000
Limit: 0.020
MDL: 0.004
MRL: 0.020

Analyte: As(V)

Sample	Result	Units
B180747-BLK1	0.002	µg/L
B180747-BLK2	0.001	µg/L
B180747-BLK3	0.00	µg/L
B180747-BLK4	0.00	µg/L

Average: 0.001
Limit: 0.020
MDL: 0.004
MRL: 0.020

Analyte: DMAs

Sample	Result	Units
B180747-BLK1	0.00	µg/L
B180747-BLK2	0.00	µg/L
B180747-BLK3	0.00	µg/L
B180747-BLK4	0.00	µg/L

Average: 0.000
Limit: 0.021
MDL: 0.005
MRL: 0.021

Method Blanks & Reporting Limits

Analyte: MMAs

Sample	Result	Units
B180747-BLK1	0.00	µg/L
B180747-BLK2	0.00	µg/L
B180747-BLK3	0.00	µg/L
B180747-BLK4	0.00	µg/L

Average: 0.000
Limit: 0.023

MDL: 0.009
MRL: 0.023

Method Blanks & Reporting Limits

Batch: B180795
Matrix: Water
Method: SOP BAL-4200
Analyte: Se(IV)

Sample	Result	Units
B180795-BLK1	0.00	µg/L
B180795-BLK2	0.00	µg/L
B180795-BLK3	0.00	µg/L
B180795-BLK4	0.00	µg/L

Average: 0.000
Limit: 0.025

MDL: 0.007
MRL: 0.025

Analyte: Se(VI)

Sample	Result	Units
B180795-BLK1	0.00	µg/L
B180795-BLK2	0.00	µg/L
B180795-BLK3	0.00	µg/L
B180795-BLK4	0.00	µg/L

Average: 0.000
Limit: 0.025

MDL: 0.006
MRL: 0.025

Sample Containers

Lab ID: 1812018-01
Sample: TD2528-KZ-2
Report Matrix: Water
Sample Type: Sample
Collected: 03/15/2018
Received: 03/21/2018

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Cent Tube 15mL Se-Sp	15ml	n/a	none	n/a		Cooler - 1812018
B	EXTRA_VOL - Hg	125ml	n/a	none	n/a		Cooler - 1812018

Lab ID: 1812018-02
Sample: TD2529-KZ-6
Report Matrix: Water
Sample Type: Sample
Collected: 03/15/2018
Received: 03/21/2018

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Cent Tube 15mL Se-Sp	15ml	n/a	none	n/a		Cooler - 1812018
B	EXTRA_VOL - Hg	125ml	n/a	none	n/a		Cooler - 1812018

Lab ID: 1812018-03
Sample: TD2530-KZ-9
Report Matrix: Water
Sample Type: Sample
Collected: 03/15/2018
Received: 03/21/2018

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Cent Tube 15mL Se-Sp	15ml	n/a	none	n/a		Cooler - 1812018
B	EXTRA_VOL - Hg	125ml	n/a	none	n/a		Cooler - 1812018

Lab ID: 1812018-04
Sample: TD2531-KZ-15
Report Matrix: Water
Sample Type: Sample
Collected: 03/15/2018
Received: 03/21/2018

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Cent Tube 15mL Se-Sp	15ml	n/a	none	n/a		Cooler - 1812018
B	EXTRA_VOL - Hg	125ml	n/a	none	n/a		Cooler - 1812018
C	Vacutainer	10ml	n/a	EDTA(Client)	n/a		Cooler - 1812018
D	EXTRA_VOL - Hg	10ml	n/a	EDTA(Client)	n/a		Cooler - 1812018

Sample Containers

Lab ID: 1812018-05
Sample: TD2532-KZ-16
Report Matrix: Water
Sample Type: Sample
Collected: 03/15/2018
Received: 03/21/2018

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Cent Tube 15mL Se-Sp	15ml	n/a	none	n/a		Cooler - 1812018
B	EXTRA_VOL - Hg	125ml	n/a	none	n/a		Cooler - 1812018

Lab ID: 1812018-06
Sample: TD2533-KZ-17
Report Matrix: Water
Sample Type: Sample
Collected: 03/15/2018
Received: 03/21/2018

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Cent Tube 15mL Se-Sp	15ml	n/a	none	n/a		Cooler - 1812018
B	EXTRA_VOL - Hg	125ml	n/a	none	n/a		Cooler - 1812018

Lab ID: 1812018-07
Sample: TD2534-KZ-18
Report Matrix: Water
Sample Type: Sample
Collected: 03/15/2018
Received: 03/21/2018

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Cent Tube 15mL Se-Sp	15ml	n/a	none	n/a		Cooler - 1812018
B	EXTRA_VOL - Hg	125ml	n/a	none	n/a		Cooler - 1812018

Lab ID: 1812018-08
Sample: TD2535-KZ-19
Report Matrix: Water
Sample Type: Sample
Collected: 03/15/2018
Received: 03/21/2018

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Cent Tube 15mL Se-Sp	15ml	n/a	none	n/a		Cooler - 1812018
B	EXTRA_VOL - Hg	125ml	n/a	none	n/a		Cooler - 1812018

Sample Containers

Lab ID: 1812018-09
Sample: TD2561-KZ-21
Report Matrix: Water
Sample Type: Sample
Collected: 03/15/2018
Received: 03/21/2018

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Cent Tube 15mL Se-Sp	15ml	n/a	none	n/a		Cooler - 1812018
B	EXTRA_VOL - Hg	125ml	n/a	none	n/a		Cooler - 1812018

Lab ID: 1812018-10
Sample: TD2562-KZ-22
Report Matrix: Water
Sample Type: Sample
Collected: 03/15/2018
Received: 03/21/2018

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Cent Tube 15mL Se-Sp	15ml	n/a	none	n/a		Cooler - 1812018
B	EXTRA_VOL - Hg	125ml	n/a	none	n/a		Cooler - 1812018

Lab ID: 1812018-11
Sample: TD2563-KZ-26
Report Matrix: Water
Sample Type: Sample
Collected: 03/15/2018
Received: 03/21/2018

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Cent Tube 15mL Se-Sp	15ml	n/a	none	n/a		Cooler - 1812018
B	EXTRA_VOL - Hg	125ml	n/a	none	n/a		Cooler - 1812018

Lab ID: 1812018-12
Sample: TD2564-KZ-28
Report Matrix: Water
Sample Type: Sample
Collected: 03/15/2018
Received: 03/21/2018

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Cent Tube 15mL Se-Sp	15ml	n/a	none	n/a		Cooler - 1812018
B	EXTRA_VOL - Hg	125ml	n/a	none	n/a		Cooler - 1812018

Sample Containers

Lab ID: 1812018-13
Sample: TD2565-KZ-37
Report Matrix: Water
Sample Type: Sample
Collected: 03/15/2018
Received: 03/21/2018

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Cent Tube 15mL Se-Sp	15ml	n/a	none	n/a		Cooler - 1812018
B	EXTRA_VOL - Hg	125ml	n/a	none	n/a		Cooler - 1812018
C	Vacutainer	10ml	n/a	EDTA(Client)	n/a		Cooler - 1812018
D	EXTRA_VOL - Hg	10ml	n/a	EDTA(Client)	n/a		Cooler - 1812018

Lab ID: 1812018-14
Sample: TD2566-KZ-13
Report Matrix: Water
Sample Type: Sample
Collected: 03/15/2018
Received: 03/21/2018

Des	Container	Size	Lot	Preservation	P-Lot	pH	Ship. Cont.
A	Cent Tube 15mL Se-Sp	15ml	n/a	none	n/a		Cooler - 1812018
B	EXTRA_VOL - Hg	125ml	n/a	none	n/a		Cooler - 1812018

Shipping Containers

Cooler - 1812018

Received: March 21, 2018 9:30
Tracking No: 608710179840 via FedEx
Coolant Type: Blue Ice
Temperature: 3.2 °C

Description: Cooler
Damaged in transit? No
Returned to client? No
Comments: ir#7

Custody seals present? Yes
Custody seals intact? Yes
COC present? Yes

Maxxam
A Bureau Veritas Group Company

Sent To: **Brooks Rand**
18804 Northcreek Parkway Suite 100
Bothell, WA, 98011
Tel: (206) 632-6206

CHAIN OF CUSTODY RECORD FOR SUBCONTRACTED WORK

COC # B820573-VBRR-01-01

REPORT INFORMATION	
Company:	Maxxam
Address:	4606 Canada Way, Burnaby, British Columbia, V5G 1K5
Contact Name:	Name Redacted
Email:	Email Redacted
Phone:	
Maxxam Project #:	B820573

#	SAMPLE ID	MATRIX	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	SAMPLER INITIALS	# CONT.	Arsenic Speciation Water Subcontract	Dissolved Selenium Speciation SubC									ADDITIONAL SAMPLE INFORMATION
1	TD2528-KZ-2	WATER	2018/03/15	17:00		1		X									(P: 04)
2	TD2529-KZ-6	WATER	2018/03/15	16:20		1		X									(P: 04)
3	TD2530-KZ-9	WATER	2018/03/15	15:50		1		X									(P: 04)
4	TD2531-KZ-15	WATER	2018/03/15	13:30		2	X	X									(P: 04, 12)
5	TD2532-KZ-16	WATER	2018/03/15	14:10		1		X									(P: 04)
6	TD2533-KZ-17	WATER	2018/03/15	14:00		1		X									(P: 04)
7	TD2534-KZ-18	WATER	2018/03/15	15:25		1		X									(P: 04)
8	TD2535-KZ-19	WATER	2018/03/15	15:30		1		X									(P: 04)
9	TD2561-KZ-21	WATER	2018/03/15	12:30		1		X									(P: 04)
10	TD2562-KZ-22	WATER	2018/03/15	11:45		1		X									(P: 04)

REGULATORY CRITERIA

SPECIAL INSTRUCTIONS

Please inform Maxxam immediately if you are not accredited for the requested test(s).
Please return a copy of this form with the report.

TURNAROUND TIME

☐ Rush Required

2018/04/11
Date Required

Please inform us if rush charges will be incurred.

COOLER ID:	YES	NO	Temp: (°C)	1	2	3
Custody Seal Present						
Custody Seal Intact						
Cooling Media Present						

COOLER ID:	YES	NO	Temp: (°C)	1	2	3
Custody Seal Present						
Custody Seal Intact						
Cooling Media Present						

COOLER ID:	YES	NO	Temp: (°C)	1	2	3
Custody Seal Present						
Custody Seal Intact						
Cooling Media Present						

RELINQUISHED BY: (SIGN & PRINT)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (SIGN & PRINT)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
1 Signature Redacted	2018/03/20	15:00	1. Signature Redacted	2018/03/21	09:30
2	2018/03/21	930	2.		

Maxxam
A Bureau Veritas Group Company

Sent To: Brooks Rand
18804 Northcreek Parkway Suite 100
Bothell, WA, 98011
Tel: (206) 632-6206

CHAIN OF CUSTODY RECORD FOR SUBCONTRACTED WORK

COC # B820573-VBRR-02-01

REPORT INFORMATION

Company: Maxxam
Address: [redacted] Way, Burnaby, British Columbia, V5G 1K5
Contact Name: Name Redacted
Email: [redacted]ed
Phone:
Maxxam Project #: B820573

#	SAMPLE ID	MATRIX	DATE SAMPLED (YYYY/MM/DD)	TIME SAMPLED (HH:MM)	SAMPLER INITIALS	# CONT.	Arsenic Speciation Water Subcontract	Dissolved Selenium Speciation SubC									ADDITIONAL SAMPLE INFORMATION
1	TD2563-KZ-26	WATER	2018/03/15	08:30		1		X									(P: 04)
2	TD2564-KZ-28	WATER	2018/03/15	08:45		1		X									(P: 04)
3	TD2565-KZ-37	WATER	2018/03/15	14:50		2	X	X									(P: 04, 12)
4	TD2566-KZ-13	WATER	2018/03/15	17:55		1		X									(P: 04)
5																	
6																	
7																	
8																	
9																	
10																	

REGULATORY CRITERIA

SPECIAL INSTRUCTIONS

Please inform Maxxam immediately if you are not accredited for the requested test(s).
Please return a copy of this form with the report.

TURNAROUND TIME

☐ Rush Required

2018/04/11
Date Required

Please inform us if rush charges will be incurred.

COOLER ID:

	YES	NO	Temp: (°C)	1	2	3
Custody Seal Present						
Custody Seal Intact						
Cooling Media Present						

COOLER ID:

	YES	NO	Temp: (°C)	1	2	3
Custody Seal Present						
Custody Seal Intact						
Cooling Media Present						

COOLER ID:

	YES	NO	Temp: (°C)	1	2	3
Custody Seal Present						
Custody Seal Intact						
Cooling Media Present						

RELINQUISHED BY: (SIGN & PRINT)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)	RECEIVED BY: (SIGN & PRINT)	DATE: (YYYY/MM/DD)	TIME: (HH:MM)
1. Signature Redacted	2018/03/20	15:00	1. Signature Redacted	2018/03/21	09:30
2.	2018/03/21	930	2.		